DANISH FINANCIAL SUPERVISORY AUTHORITY

Banks

Market developments in 2018

Danish Financial Supervisory Authority

Table of contents

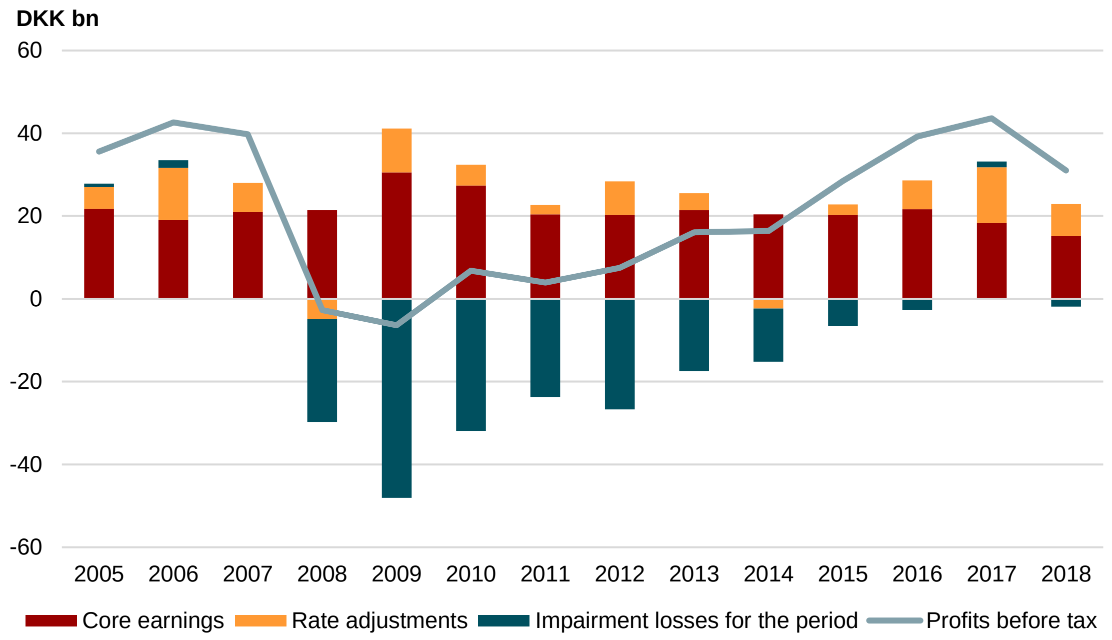
1. Summary

Favourable economic conditions with high levels of employment and low unemployment gave banks a year with healthy profits and low impairments in 2018.

Total profits reached DKK 30 billion, compared to DKK 41 billion the year before. The fall can be ascribed in particular to lower value adjustments (gains) and higher costs for personnel and administration. The fall in value adjustments can be primarily ascribed to fund holdings and bonds issued.

Banks continue to be plagued by low interest rates, which put pressure on basic earnings (see Figure 1). The problems of earning money on core business create the right conditions for a greater risk appetite, and thus higher risk taking in such areas as property-related exposures and home loans in growth areas.

Figure 1: High earnings in Danish banks



Source: Reports to the FSA.

The growth in lending continues to be relatively modest for the sector as a whole. However, the situation is somewhat different for the small and medium-sized banks in Groups 2-4. Group 3 in particular is showing high growth in lending. The rising appetite for risk increases their vulnerability to a general downturn in the economy and falling share prices, including housing prices. There are also indications of an impending stagnation and a possible turnaround in the housing market in Copenhagen.

The likelihood of big price drops on the project property market is also deemed to have grown in 2018. This is a market which has a tendency towards more volatile prices than the housing market as a whole. Project financing is particularly vulnerable to dropping property prices. If property prices drop during the project period, before the property is sold, the project may end up returning a loss. Project financing was (and still is) one of the focus areas for inspections in several small and medium-sized banks. The FSA has encountered high risk willingness in this sector on several occasions. The most recent crisis showed that project financing is a segment with considerable risk.

The FSA expects banks to define clear parameters in their credit policies, and regularly control credit risk carefully. They need to be particularly aware of risk management for new business sectors, and to control new customers and unusual payment patterns.

2. Banks had yet another year with high profits

Danish banks had yet another year with high profits in a historical perspective (see Figure 1). Their financial statements include the following:

- Annual profit before tax fell by 27.1%, equivalent to DKK 11.2 billion, and return on equity before tax fell from 14.2% to 10.2%.
- Value adjustments fell by 44.2%, equivalent to DKK 5.5 billion, which can be primarily ascribed to lower value adjustments on fund holdings and bonds issued.
- Costs for personnel and administration rose by 12.6%, equivalent to DKK 4.8 billion. Some of the rise can be ascribed to a one-off donation of DKK 1.5 billion from Danske Bank in connection with the current money laundering case.
- Impairments rose by DKK 1.7 billion, but are at a very low level. They can be partly ascribed to farming exposures, and as from 1 January 2018, are made according to new impairment rules (see Box 1).
- Earnings in subsidiaries fell by 10.5%, equivalent to DKK 1.2 billion.
- Net interest earnings fell by 1.8%, equivalent to DKK 620 million, which can be ascribed to a larger increase in interest expenditure than in interest earnings.
- Lending (excl. repo lending) rose by 2.2%, driven in particular by the small and medium-sized institutions.

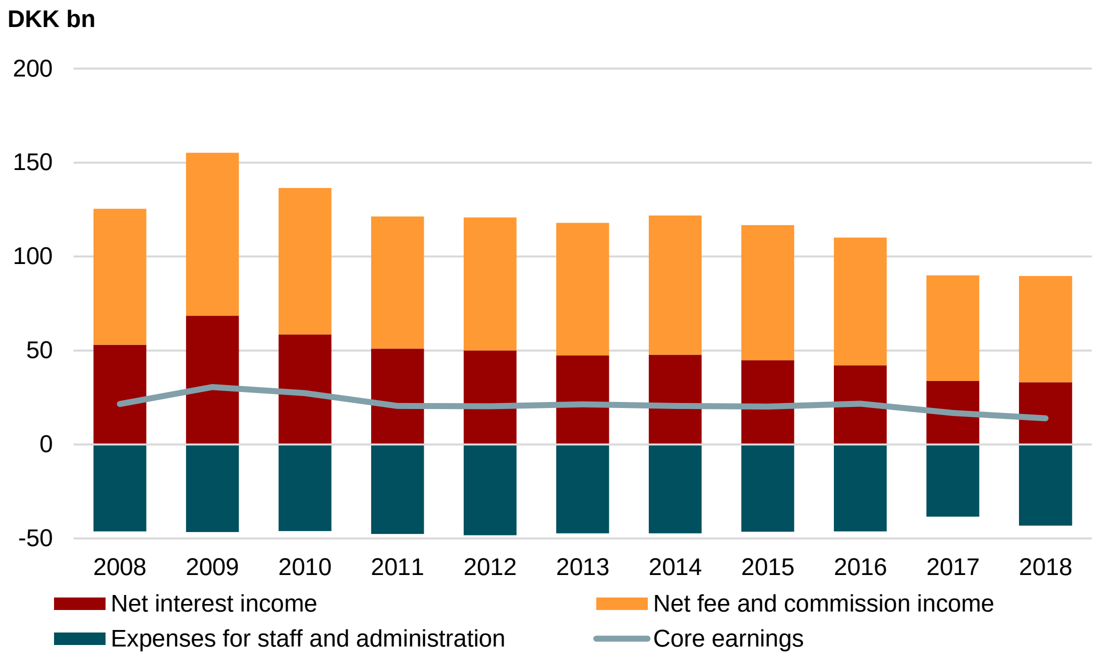
Box 1: IFRS 9 and accumulated impairments

The new IFRS 9 rules on financial statements came into effect on 1 January 2018. One of the things they impose is that impairments now have to be entered earlier and based on the expected loss on all exposures, referred to as a 'caution principle'. Previously, there had to be objective signs of credit deterioration (the neutrality principle), before banks could perform impairment.

Despite the healthy economy, the basic earnings of banks are under pressure (see Box 2). This is due in particular to the continued low level of interest rates putting pressure on their core business.

Net interest rate earnings, which comprise a considerable part of basic earnings, fell by DKK 620 million in 2018 and are now at a historically low level. This is primarily due to the very low interest rates making it hard for banks to earn money on the difference between deposits and lending interest rates. Net fee earnings rose by around DKK 915 billion. Banks have been able to partially counteract falling revenues from net interest earnings with higher fees for several years (see Figure 2).

Figure 2: Lower earnings on core business



Source: Reports to the FSA.

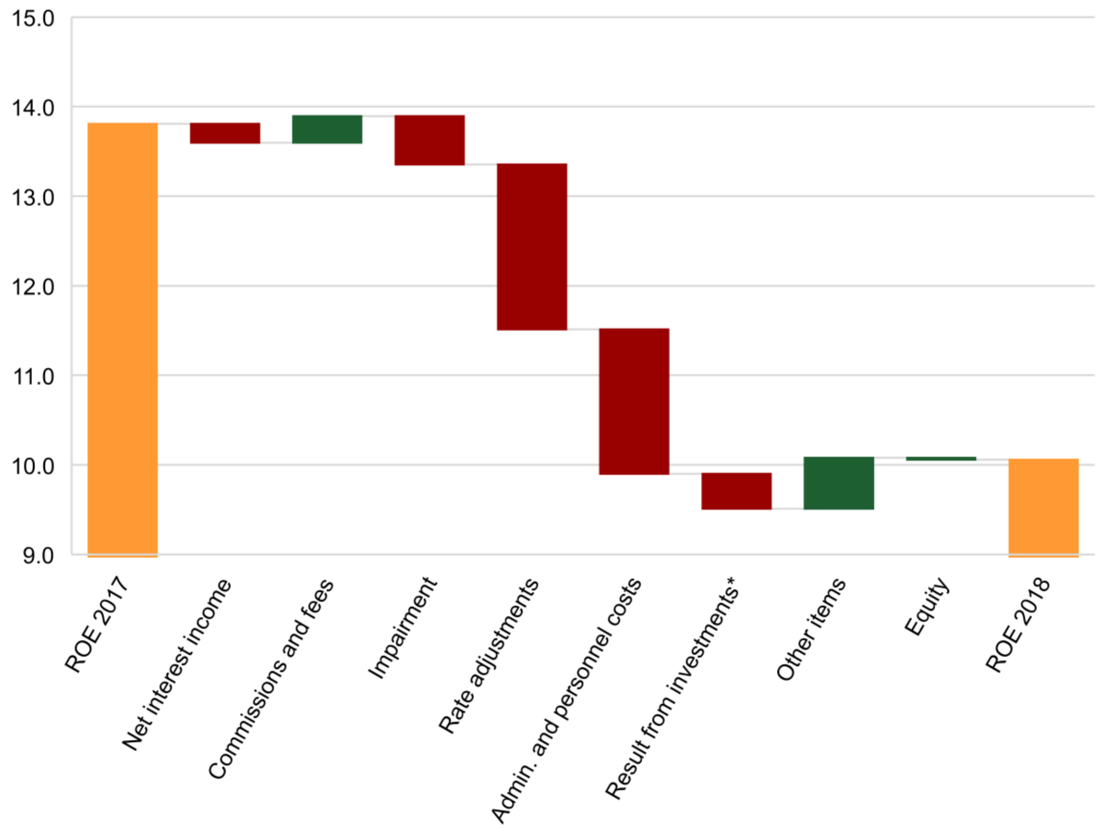
Box 2: Basic earnings

Basic earnings are net earnings less value adjustments, impairment on lending and earnings in subsidiaries. It is thus a measure of whether institutions are able to earn money on their core business. Basic earnings consist mainly of net interest and fee earnings from lending and deposits, etc., and related business for households and undertakings, less administration and personnel costs, etc.

It is important that the institutions have solid basic earnings. It represents the stable earnings they have available. Other items on the income statement (mainly value adjustments) can be very unstable, and vary due to circumstances beyond their control. Basic earnings are therefore the first buffer for the institutions against credit loss (impairment on lending) and exchange rate loss on the financial markets.

Return on equity fell in 2018 by just under 4%. Seen in isolation, value adjustments were the item that contributed most to the fall in ROE, but higher personnel costs and lower net interest earnings also contributed (see Figure 3).

Figure 3: Return on equity affected by value adjustments

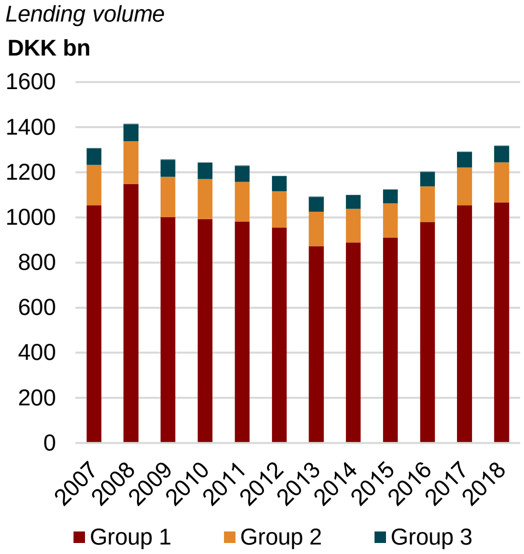


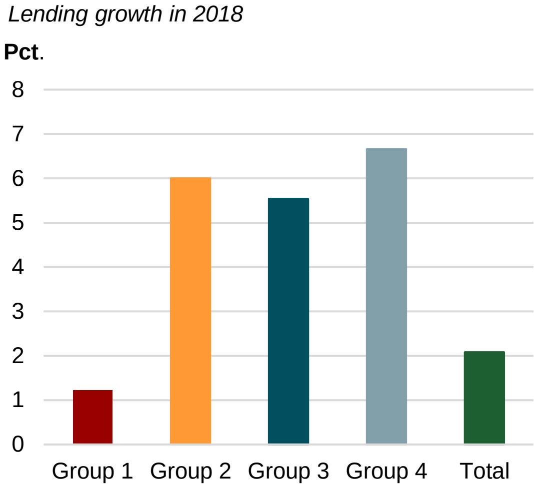
Note: The figure shows the factors that have affected return on equity (ROE) before tax from 2017 to 2018. Other items include other operational earnings, result from investments in associates and affiliates, income from activities during liquidation, amortisation and impairment on intangible and tangible assets, plus tax.
* Indicates result from investments in associates and affiliates.
Source: Reports to the FSA.

3. High lending growth in small and medium-sized institutions

The growth in lending for banks continued to be low in 2018. Overall, it was 2.2%. But it was much higher for the small and medium-sized institutions, 6.0% for Group 2, 5.5% for Group 3 and 6.7% for Group 4, cf. Figure 4.

Figure 4: Lending growth low for the sector, but high for Groups 2-4

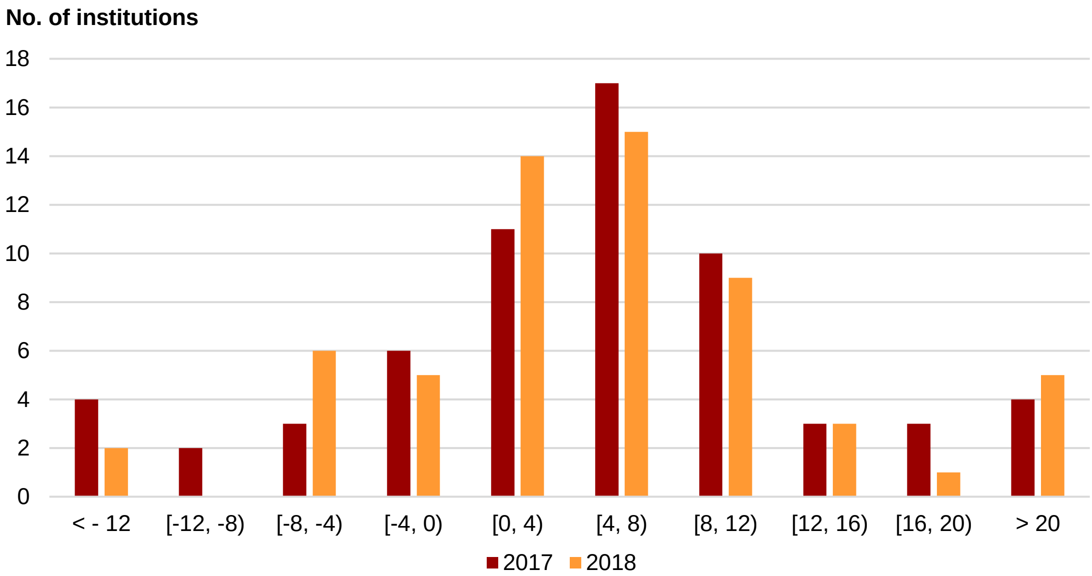




Note: The figure on the right is adjusted for mergers.
Source: Reports to the FSA.

A considerable difference in lending growth exists between individual institutions cf. Figure 5, which shows that some have lending growth rates over 8%, while many have negative growth. The situation remains largely unchanged in relation to 2017.

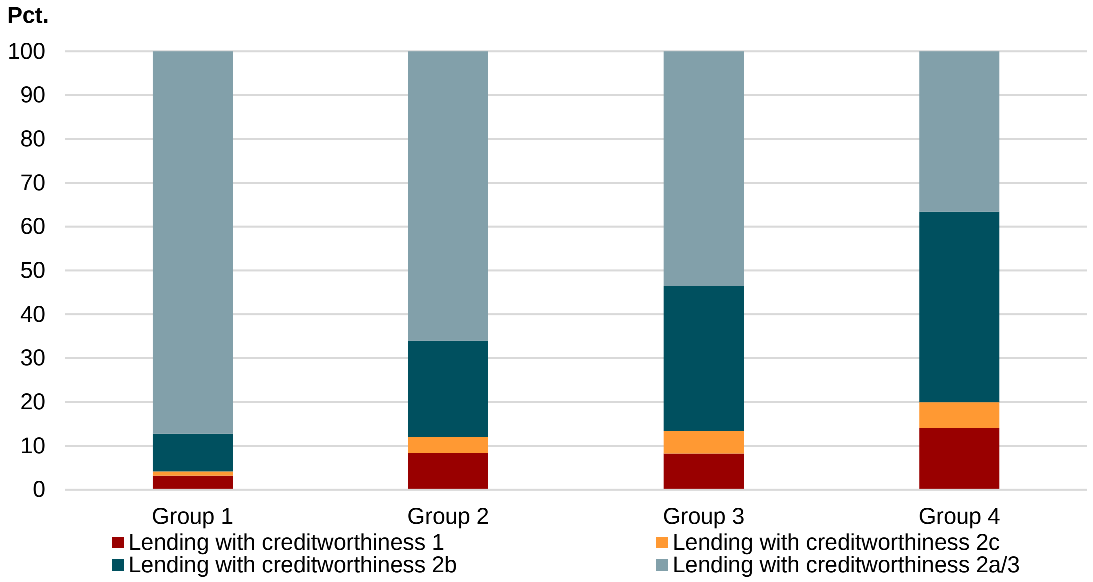
Figure 5: More banks with high growth in lending



Note: The figure states the number of banks with lending growth in the individual intervals.
Source: Reports to the FSA.

Experience has shown that high growth in lending is often followed by high impairments. That's why it is important that the institutions do not relax their credit standards and become overoptimistic with their credit ratings. The FSA's supervisory diamond for banks sets a threshold of 20% for lending growth, and the institutions are expected to stay within this threshold. If they relax their credit standards, it can lead to an increase in lending with weak credit rating. The proportion of loans given by smaller institutions with poor creditworthiness is already high, cf. Figure 6.

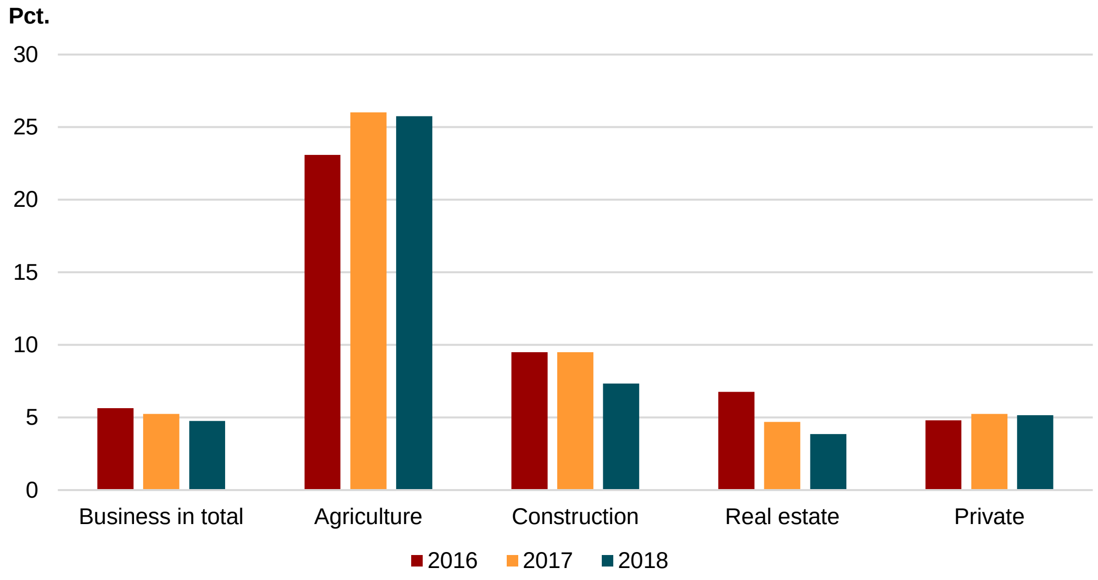
Figure 6: Higher proportion of loans with poor credit rating granted by small banks



Note: Creditworthiness categories are: 3 - Customers with unquestionably good creditworthiness, 2a - Customers with normal creditworthiness, 2b - Customers with certain weakness indicators, 2c - Customers with severe weakness indicators, but with no objective indication of credit deterioration (OIK), 1 - Customers with objective indication of credit deterioration (OIK)
Source: Reports to the FSA.

When the economic situation changes, lending with poor creditworthiness will have a higher risk of default. The problem with defaulted loans is currently highest in agriculture. Agriculture has not experienced any drops in recent years as other sectors have, including as a result of good market conditions, cf. Figure 7. Agriculture was also hard hit in the summer of 2018 by a long period of drought, which meant lower yields from the fields and higher expenditure on animal fodder.

Figure 7: High proportion of defaulted loans for agriculture

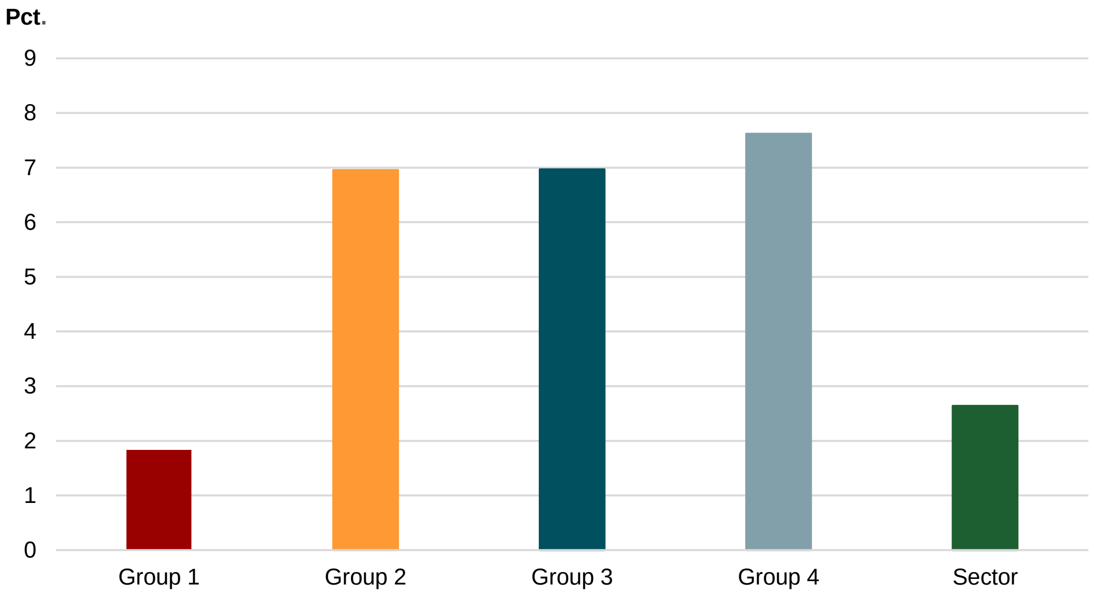


Source: Reports to the FSA.

Lending to farming

Lending to farms still accounts for only a minor part of total bank lending, cf. Figure 8. This is primarily due to the large Group 1 institutions having relatively limited lending to farming. Farm loans among small and medium-sized institutions comprised around 7% of their total exposures.

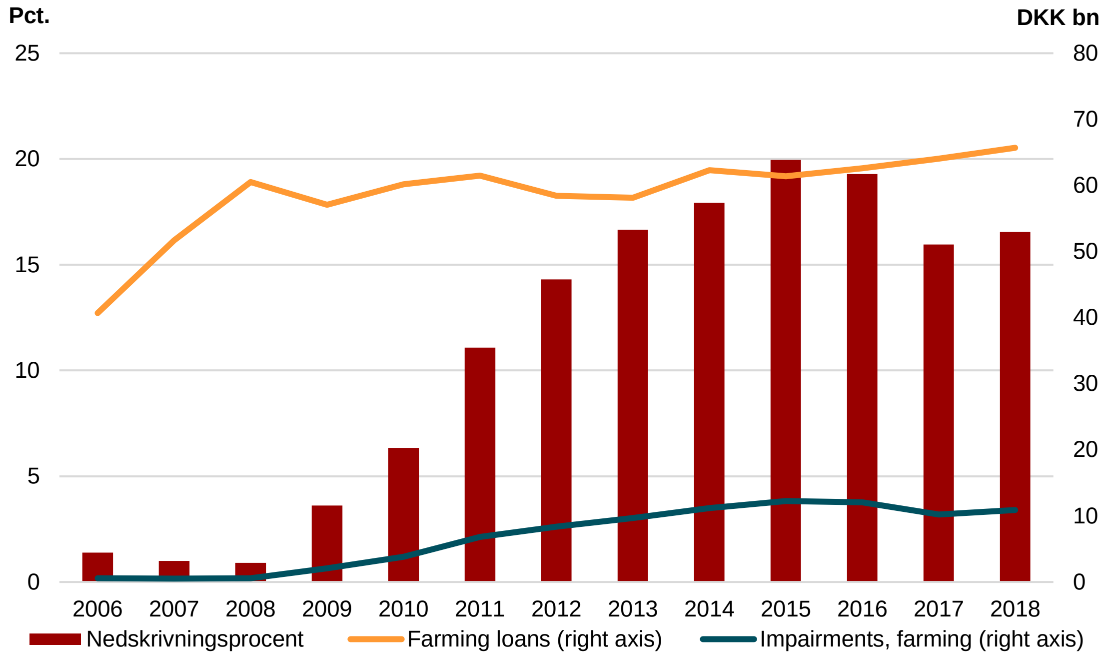
Figure 8: proportion of farming exposures highest in smaller institutions



Source: Reports to the FSA.

The summer drought caused higher impairments for banks lending to agriculture, cf. Figure 9. The previously downward trend in impairment percentages stopped and, in 2018, rose to 16.6%.

Figure 9: The drop in impairment for farming exposures has stopped



Source: Reports to the FSA.

4. Project sales and project sales financing

Property-related project financing comprises a considerable element of exposure to the property market for a number of banks. Project financing is particularly vulnerable to dropping property prices. If property prices drop during the project period and the property is not sold, the project may end up returning a loss. The risk for banks increases in line with the decline in the amount of equity in the project, and only if a limited number are sold or let in advance. The most recent crisis showed that project financing is a segment with very high risk. The FSA expects banks with activities in the sector to define clear parameters in their credit policies and to regularly control credit risk carefully.

On the basis of a questionnaire sent to small and medium-sized banks in the autumn of 2017, the FSA reported that:

- several institutions do not lay down clear parameters in their credit policies
- the requirement for self-financing is low in many instances
- some institutions did not stipulate requirements on advance sales or lettings
- only a few institutions stipulated requirements for construction management or to the developer.

The FSA also found examples of banks waiving their own credit policies. In the wake of the above, project financing has been one of the focus areas for inspections in several small and medium-sized banks. The FSA has encountered high risk willingness in this sector on several occasions. Risk willingness was revealed in such forms as institutions waiving their credit policies, where in a number of cases, requirements for, inter alia, advance sale or letting, sufficient self-financing and established safeguards were not fulfilled. In other instances, the parameters of the credit policy were insufficiently cautious, for example leaving open the option to grant loans with a low level of self-financing without the project being sold or let in advance. Project financing will remain a focus area for FSA inspections in 2019.

Mortgaging rental properties

One experience gained from the financial crisis is how important it is for banks and mortgage credit institutions to adequately base their credit decisions on the robustness of their customer's future earnings and liquidity, and less on surety provided, which can fall in value.
An important example is mortgaging a property when the borrower's intention is mainly to let the property to tenants outside its own group. The Executive Order on the Management and Governance of Banks etc. (the Executive Order on Management) states that banks or mortgage credit institutions can generally only lend to such properties if they will generate positive liquidity (see Box 3).

Box 3: Requirement for positive liquidity when mortgaging rental properties

When calculating liquidity, traditional fixed interest and repayment must be presumed. That means using an interest rate that is fixed for the full term of the loan and a loan that is repaid as an annuity over max. 30 years. The loan period for properties where wear and tear occurs faster, e.g. manufacturing and warehouse properties, must be shortened in the calculation to equate to their projected lifetime. The typical loan period for such manufacturing and warehouse buildings is max. 20 years. When calculating liquidity, the institutions must also bear in mind that hotel properties usually have high maintenance costs.

Positive liquidity for each property is not a requirement for jointly-mortgaged properties, but there does have to be positive liquidity for the property as a whole. When an institution does hold a joint mortgage, it is also a requirement that there are no other mortgage holders than the institution and possibly other companies within its group.

According to the rules, banks and mortgage credit institutions can, in exceptional cases, finance properties with negative liquidity if they can achieve positive liquidity within a timeframe of max. three years. In such instances, the institution must, however, either be able to project the likelihood of this being achieved or that the property will be sold within that period. A supplementary requirement in the rules for such properties is that the customer is financially strong. Furthermore, and according to the rules, the customer must have experience and skills within the area in question and be able to provide suitable self-financing. It is important to remember that the institution can only include possible effects that can be projected as likely within the timeframe laid down in the rules. Effects that go beyond three years cannot be incorporated if the development potential over a longer period will be subject to considerable uncertainty.

The FSA also permits for strong structures which are able to fulfil the following conditions to be treated similarly as joint mortgaging:

- cross-guarantees between all undertakings in the structure
- shares pledged as mortgage surety
- change of control clause
- cross default clause
- financial single creditor setup in the structure when ignoring taxes and duties and ordinary small creditors
- negative pledge
- ban on further borrowing
- ban on lending, including intercompany account receivables outside the structure
- ban on the sale of properties or undertakings without prior approval
- dividend limit, so that the maximum that can be paid as dividends equates to free cash flow for the year after payment of tax and debt servicing.

The FSA finds that banks and mortgage credit institutions with the structure described can achieve sufficient access to, and control over, the liquidity of borrowers.

The complexity of strong structures is significantly higher than the joint mortgaging of properties. The risk of a mistake occurring, causing banks and mortgage credit institutions to fail to achieve sufficient protection, is therefore also higher. That produces high demands on ongoing risk management by the institutions.

It is a requirement that the institutions specify the conditions that must be fulfilled in their procedures for customers to be classed as having strong structures. The conditions above are considered the minimum. In addition are the following compensating requirements:

- Lenders have high earnings with good liquidity and solvency.
- The institution must determine whether the lender has experience and skills within the relevant sector.
- The lender must provide a satisfactory level of self-financing.
- There must be positive liquidity from the start in the portfolio of properties mortgaged, which have strong structures.

5. Thematic surveys

Survey of housing lending in growth areas for large institutions
The objective of the survey was to study the lending of four banks and two branches of foreign banks, subject to the Guidance for Caution in the Credit Rating of Mortgaging of Housing in Growth Areas etc. The survey involved credit inspections. It showed that a number of institutions granted mortgages with high risk, and that the finances of some customers were not sufficiently robust. Neither did some institutions have sufficient internal control mechanisms.

Survey of housing lending in growth areas for small and medium-sized institutions
The purpose of the survey was to study implementation and observance in 15 small and medium-sized institutions of the Guidance for Caution in the Credit Rating of Mortgaging of Housing in Growth Areas etc. It covered a number of qualitative questions, including implementation of the guidance, internal control and the requirements for disposable amount. It also included a number of quantitative questions, including debt factors, negative assets and degree of lending. The FSA found that a large number of the institutions failed to live up to requirements. In some institutions, the guide was also implemented insufficiently or too late.

Survey on lending to cooperative housing. The survey looked at new loans for cooperative housing in six banks.
It included credit review and review of credit policies. The conclusion drawn was that access to valuation of cooperative housing needed to be strengthened, and that there was considerable appetite for risk within the cooperative housing sector.

Overall, the three surveys detected continued signs of increased risk-taking in certain lending segments and banks. These findings applied to housing loans in growth areas in particular. See below. The FSA found increased risk willingness in the medium-sized institutions in particular.

Box 4: Growth areas

'Growth areas' are those which have experienced high property price rises in recent years. The Guidance for Caution in the Credit Rating of Mortgaging of Housing in Growth Areas etc. applies to local governments covered by the 'growth area' designation.

The designation covers: Copenhagen, Frederiksberg, Dragør, Tårnby, Albertslund, Ballerup, Brøndby, Gentofte, Gladsaxe, Glostrup, Herlev, Hvidovre, Høje-Taastrup, Ishøj, Lyngby-Taarbæk, Rødovre, Vallensbæk and Aarhus.

Survey of business acquisitions by capital funds (and others) financed by SIFI banks
The survey was designed to uncover the SIFI banks' and selected branches of foreign banks' financing of business acquisitions by capital funds (and others). The purpose of the survey was to assess the adequacy of risk analysis by banks in granting the financing, and their risk willingness in this regard. Five of the six banks surveyed were asked to stipulate their credit policy in detail, so that it expresses the intended risk willingness. Certain banks needed to improve their sensitivity analyses of future customer earnings and liquidity in connection with

credit decisions. Similarly, certain banks needed to improve the process of customer classification by standardising the process and documenting the basis for doing so better.

Survey of compliance and risk management
The purpose of this survey (which has not yet been completed) is to establish how larger banks ensure compliance and risk management in relation to such aspects as resources, organisation, reporting and focus areas. It covers credit institutions in Groups 1 and 2 as well as selected mortgage credit institutions. The survey and its results will be included in the FSA's process of benchmarking and communicating best practice within the area and to support an analysis of the need for further surveys.

Liquidity stress testing in banks
The FSA ran a thematic survey in the spring of 2018 on the internal liquidity stress testing of SIFI banks. The purpose was to study the configuration of their own liquidity stress testing, including whether they adequately encompass the liquidity risks to which the institution is exposed.

Institutions must adapt stress testing to their own, specific liquidity risks and general business models. Nevertheless, there are still specific measures linked to stress testing methods that the FSA regards as best practice in the area. They include expecting the institutions to define internal boundaries and mandatory requirements in their stress tests. This will give them an understanding of what it takes to violate mandatory requirements and internal boundaries. They should evaluate the stability of deposits, as they are an essential source of financing for most institutions. The boundary between stable and unstable deposits can thus be decisive for whether the institutions have covered their risk correctly.

Experience from the surveys is incorporated into a revision of the guideline on risk management within liquidity for banks and mortgage institutions.

6. Exposures to market risk for banks

Moving holdings outside trading books
Several Danish institutions have moved selected holdings outside their trading books. This was done as a result of the implementation of Basel's new Minimum Capital Requirement for market risk cf. Box 5.

The risk of moving bonds outside the trading book is that it can give an erroneous impression of the bank's current situation. It can also incur an unintended market risk if the bonds are not managed based on a hold-to-expiry approach. Such a market risk can prove to be insufficiently covered by capital, as pillar II capital requirement rules for bonds outside the trading book only allow for credit risk.

Placings outside the trading book therefore impose requirements on the owners of the banks. Trading outside the trading book may not be performed for speculative reasons, as that can give rise to market risk.

The FSA has noted that the larger institutions address this via their practice of laying down clear management limits for holdings outside the trading book. Sales from such holdings are usually only made in connection with management of the replacement risk and only up to six months before due date, so that there is no significant market risk compared to holding until expiry.

In some instances, trading may be needed for the sake of risk management. For example, it is possible for institutions to sell in connection with management of overall interest rate risk outside their trade holdings to limit risk and to ensure that exposures are kept within their predefined limits.

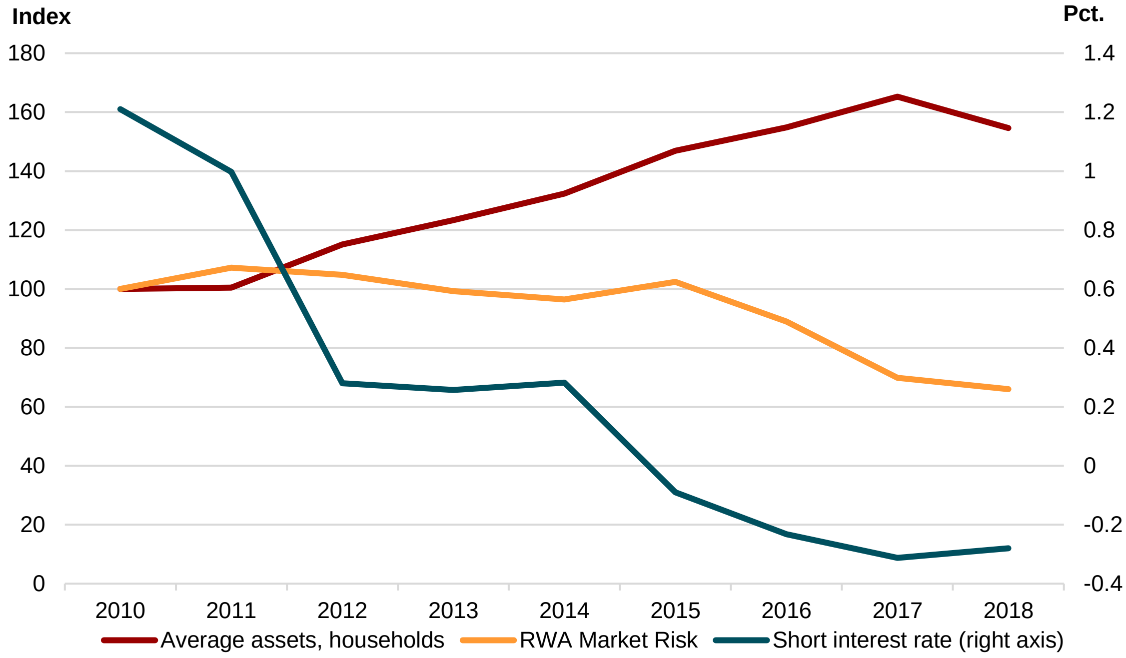
And in certain special instances, trading can be required if institutions need to adapt to fundamental changes in the risk profile, which can have long-term consequences for the business model.

Box 5: Minimum Capital Requirement for market risk (Basel)
Implementation of Basel's new Minimum Capital Requirement for market risk in European legislation is expected to give rise to an increase in the capital requirement for bonds in trading holdings. This is particularly due to the introduction of a risk weighting for credit spread risk for mortgage credit bonds.

The FSA believes that such management limits ensure compliance with applicable regulations and help avoid placing holdings outside the trading book to not give rise to market risks that are not sufficiently capital covered.

Bank market risk versus household assets under management
Low interest rates make it difficult for banks to earn money on their core business, including their own holdings. We can see that the overall risk-taking by banks on market risks has fallen in line with the general decline in interest rates cf. Figure 10.

Figure 10: Reduced market risk in banks, greater exposures for households



Note: Household funds under administration by investment and capital funds. Bank risk-weighted items for market risk (RWA Market Risk). The short interest rate shown in the figure is the three months' CIBOR.
Source: Reports to the FSA and Nasdaq, CIBOR.

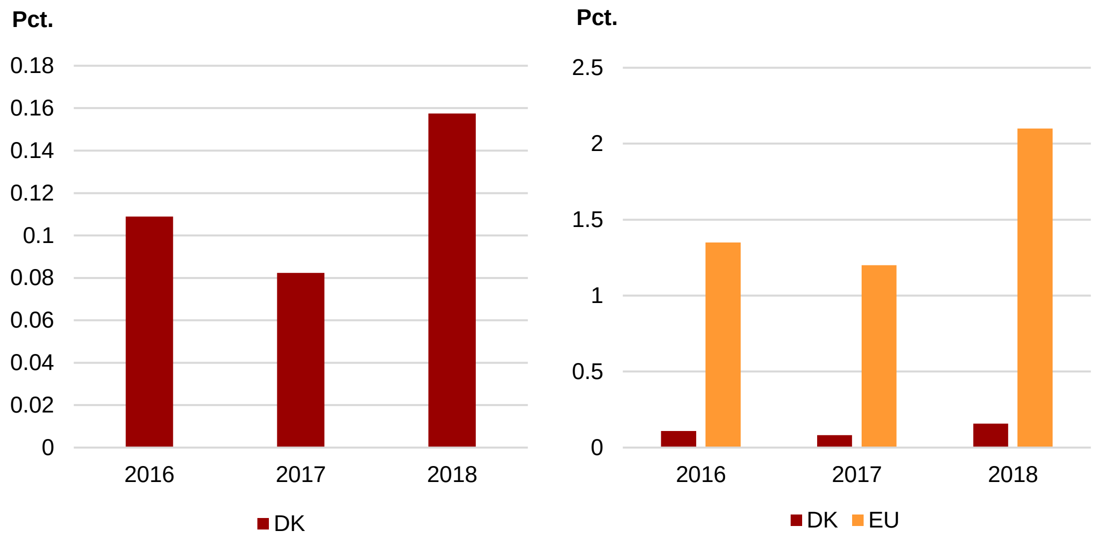
During the same period of exposure reduction by the banks, customer exposure to market interest rate products (including funds under management by investment and capital associations) has risen. There can be many explanations to this disparate development. But the banks ought to be more aware of their responsibilities when advising their customers.

7. Operational risk

As a result of the IMF's recommendations, the FSA expanded its reporting concerning operational loss events from a number of larger institutions in 2017[1]. A loss event is one that can cause loss, has caused loss or could have caused loss. It includes data for operational loss events suffered by the institutions, broken down by business areas (e.g. payment or resolution) and seven predefined event types (such as external fraud or customers, products and business practice), describing the cause of an event. Reporting allows the FSA to identify and monitor changes in the risk profile of institutions, and to identify trends within operational risk in the sector. The FSA uses the reports for ongoing supervision and for inspections.

The total of the five biggest loss events for the larger institutions measured as a percentage of total CET1 capital is shown in Figure 10[2]. This figure has risen from 2017 to 2018. For the sake of comparison, we can see that the total of the five biggest loss events measured as a percentage of CET1 capital in Demark is significantly lower than for the EU's biggest institutions, cf. Figure 11. This can be expected, as there will be more and bigger institutions at EU level which will have suffered large losses. Other quantitative analyses confirm this expectation.

Figure 11: Development of the five biggest losses in relation to CET1

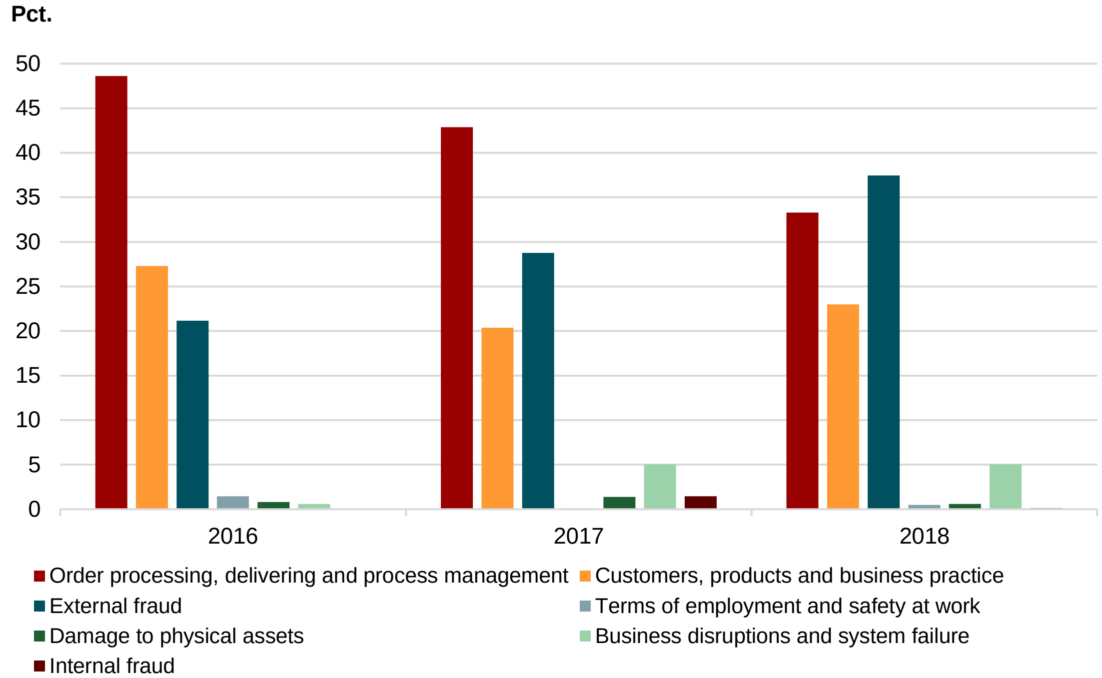


Source: Reports to the FSA and "Risk Assessment of the European Banking System", December 2018, The European Banking Authority.

Figure 12 shows loss events from the last three years broken down under the seven event types. The figure shows an increase in the 'External Fraud' category. This category includes IT and cyber risks, where for example, there has been an increase in the number of phishing attempts. For example, one of the latest trends is an email that looks as if it has been sent from the Director asking an employee to make an emergency transfer.

1 Consequently, the FSA now receives expanded reports from all SIFI and Group 2 institutions.
2 CET1 was chosen because the FSA found that it indicates institution size and makes comparison possible across European institutions

Figure 12: Breakdown of all loss events by event type

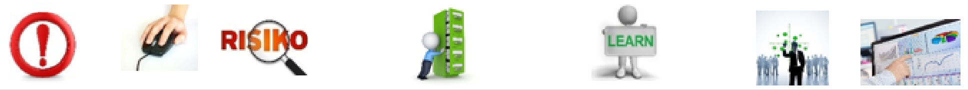


Note: The figure shows the breakdown as a percentage of total loss for SIFI and Group 2.
Source: Reports to the FSA.

The FSA believes that larger institutions have generally started to focus more on operational risks and on how to deal with them. But there are still a number of areas which the institutions ought to put more focus on. When going through the reports from the larger institutions, the FSA found that some of them register loss events in one or a few business areas and event types, where it could be expected that loss events would have been registered within most business areas and event types. In some instances, this is due to the institutions using a business area or event type as an 'umbrella' category. They also often have greater focus on the most frequent event types, such as human error in handling orders or external fraud. Identification of loss events that belong to these event types is therefore more frequent than for other event types.

Box 6 presents a range of observations concerning the way larger institutions deal with operational loss events.

Box 6: Best practice for dealing with operational loss events



Identification of actual or potential loss events.	Staff registers and categorizes the loss event in the business area and event type and determines whether mitigating measures should be initiated.	The person responsible for operational risk collects loss events, reviews and quality-assures reports, and decides on mitigating measures.	The person responsible for operational risk checks that mitigating measures have been implemented.	Together with senior staff, the person responsible for operational risk analyses reported loss events as well as potential loss events and trends. The person responsible for operational risk also prepares reporting to management.

Policies, instructions and business procedures

Policies, instructions and procedures comprise the foundation on which institutions handle operational loss events. Overall, the FSA believes that these have generally been more comprehensive, but it would be better if they were even clearer. For example: policies for operational risk often lack identification of, and ways of dealing with, the special loss events that can arise from an individual institution's business model and organisation.

The FSA has found, in the course of its inspections and ongoing supervision, that institutions have greater focus on the gathering of loss events. But not all the larger institutions allow individual employees to register loss events themselves, as this takes place centrally – e.g. by someone responsible for operational risk or a senior employee. That implies a risk of event description being less exhaustive and that important details are lost.

The FSA has also gained the impression that the institutions continue to have a lot of problems reporting potential loss events, i.e. those that could have caused loss.

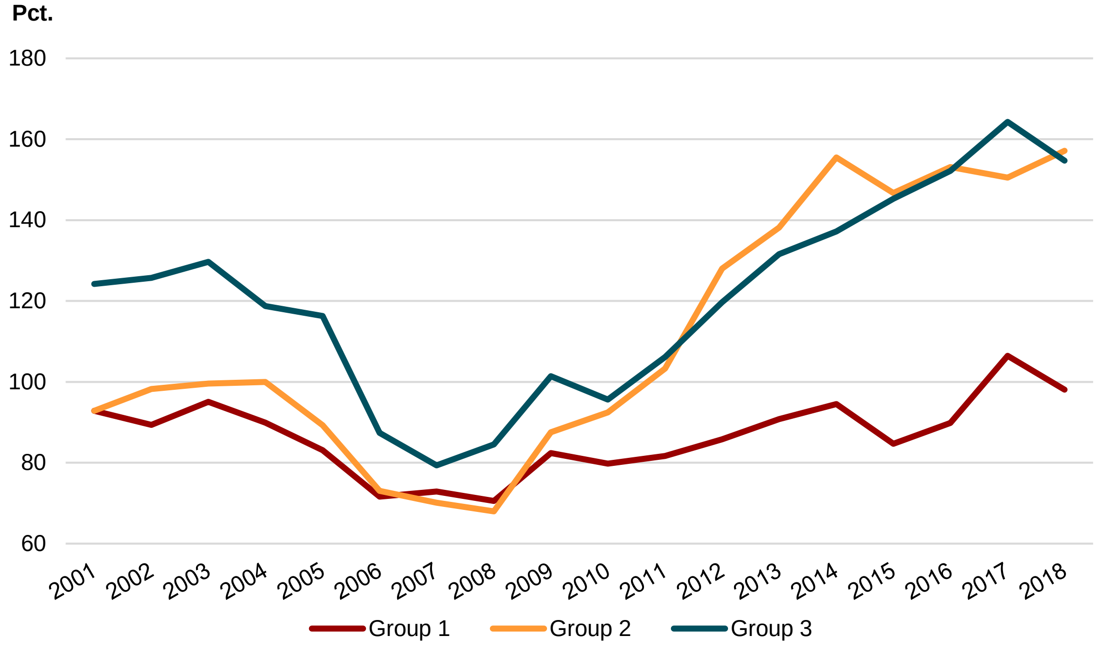
Improved management reporting of operational loss events will help drive greater focus on this area. It is important that such reporting contains analyses and perhaps suggestions for mitigating measures. One precondition for this, is that the person responsible for operational risk has the necessary resources to be able to prepare reports.

8. Considerable liquidity in the sector

Total profits on deposits for banks fell in 2018. At year-end, they stood at DKK 119 billion, which is a drop of 44% compared to year-end 2017. The drop is due to lending rising by DKK 125 billion while deposits only rose by DKK 29 billion. In general terms, profit on deposits was evenly spread across most of the sector, and almost none of the small and medium-sized institutions suffered losses on deposits.

In the years leading up to the financial crisis, Danish banks built up a significant deposit deficit. Profit has been earned on deposits since 2013. Despite the current fall in profit on deposits, the level is still higher than between 2000 and 2005, i.e. in the years before the financial crisis, cf. Figure 13.

Figure 13: Profit of deposits fell, profit on deposits in group 1



Note: The figure shows the balance sheet deposits relative to balance sheet lending for the banks in Groups 1, 2 and 3, respectively. Deposits and lending are recognised including repo and reverse repo. A deposit surplus exists when the ratio is over 100%, see Box 7.
Source: Reports to the FSA and own calculations.

Box 7: Profit on deposits

Profit on deposits is the difference between deposits and lending, including repo and reverse repo.

Lending and other assets are primarily financed by banks through deposits and equity, issuance of various debt instruments and loans from other credit institutions and central banks. The composition of the different sources of funding is critical to the liquidity risks taken by banks.

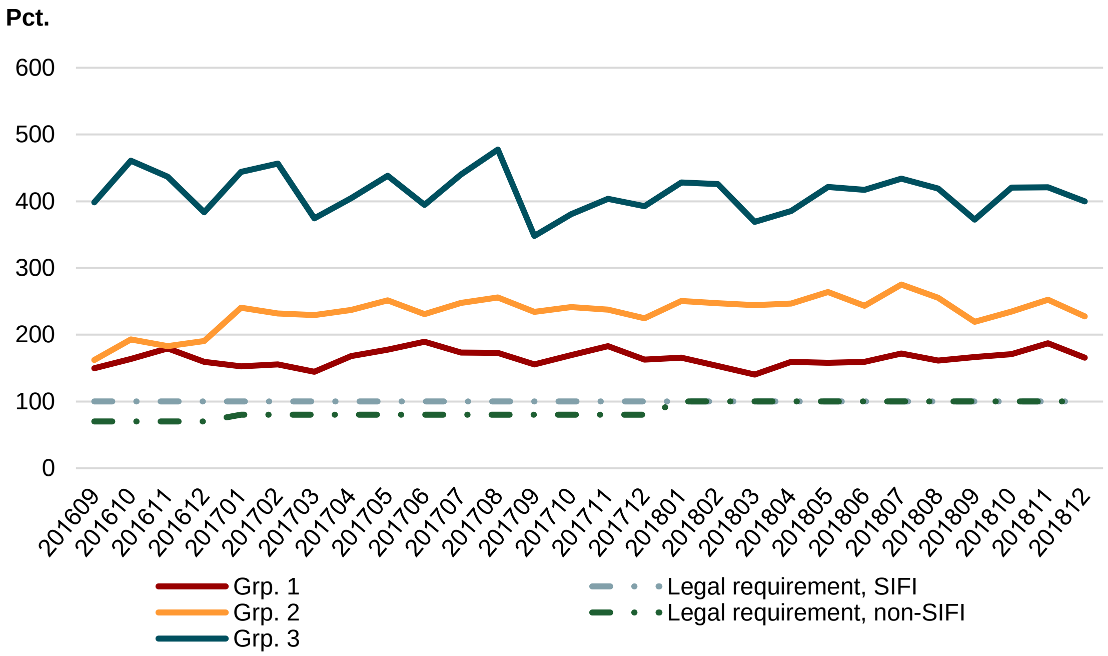
Issuances

The evenly distributed spread of profit on deposits in the sector means that a larger part of the sector needs market issuances to finance business growth. Most small and medium-sized banks therefore only need market financing to optimise their capital structure in connection with capital requirement. Several of the large banks issued debt instruments during the year, and these are generally more dependent on market financing.

All Danish banks fulfil the LCR requirement

All banks fulfilled the LCR requirement of minimum 100% as at 1 January 2019, cf. Figure 14. The LCR level will change during the year as a result of the day-to-day running of the banks, but levels were generally stable throughout 2018. Once the requirement was fully phased-in for all banks in 2018, the LCR levels for individual groups stabilised. The FSA expects that the levels will continue to be more or less stable and that the large institutions will continue to have LCR levels close to the legal requirement. Such banks have more resources, and will thus generally have more sophisticated risk management, whilst the smaller banks will generally have the highest capital adequacy for the legal requirement.

Figure 14: Smaller banks have higher LCR levels



Note: Group 1 institutions are all SIFI banks. The median values for LCR for group 4 institutions are above the median values for group 3 institutions. During the period, Group 4 banks had median LCR values of between 920 and 1590%.
Source: Reports to the FSA and own calculations.

Box 8: The LCR requirement

Since 1 October 2015, the smaller Danish banks have been subject to the common European Liquidity Cover Requirement, LCR. LCR requires institutions to maintain a sufficiently large portfolio of high-quality liquid assets to cover potential imbalances between their incoming and outgoing cash flows during a 30-day intensive liquidity stress.

The LCR requirement was fully phased in on 1 January 2018, but the fully phased-in LCR requirement has applied to SIFI institutions since 1 October 2015.

Liquidity buffers in LCR

Danish mortgage credit bonds comprise a considerable part of the available liquid assets in DKK that can be part of banks' LCR buffers. The FSA concluded a thematic survey in March 2018 of the liquidity buffers held by Danish credit institutions, including their concentration of mortgage credit bonds. The survey showed that the concentration risk arose for LCR buffers for Danish credit institutions in relation to their holdings of mortgage credit bonds as a result of:

- a high concentration of bonds issued by a single mortgage credit institution
- a high ownership of bonds in individual bond series.

The survey also showed that some institutions hold a relatively large proportion of mortgage credit bonds from the same issuer in their LCR buffer. The FSA believes that an institution should not be so concentrated on one issuer of mortgage credit bonds, that it can violate the LCR requirement if bonds from that issuer fall significantly in value.

If an institution holds a large proportion of bonds from the same bond issue, the institution can negatively affect the price in a stress situation if it needs to sell from the series where they hold large shares. The FSA believes that an institution should not, in principle, hold more than half of the issued bonds in a bond series.

All institutions fulfil the new liquidity benchmark in the supervision diamond

No bank has exceeded the threshold liquidity benchmark since it came into effect on 30 June 2018. The benchmark is intended to ensure that banks have a certain braking distance to the legal minimum requirement, to be able to react to potential problems fulfilling the LCR requirement[3]. The SIFI institutions have the lowest capital adequacy, followed by Group 2, etc., cf. Figure 15. The benchmark will in principle be more stable than LCR, as it incorporates more ingoing and outgoing cash flows. That means that the relative importance of individual cash flows is less. It also takes more to move the flow as a whole.

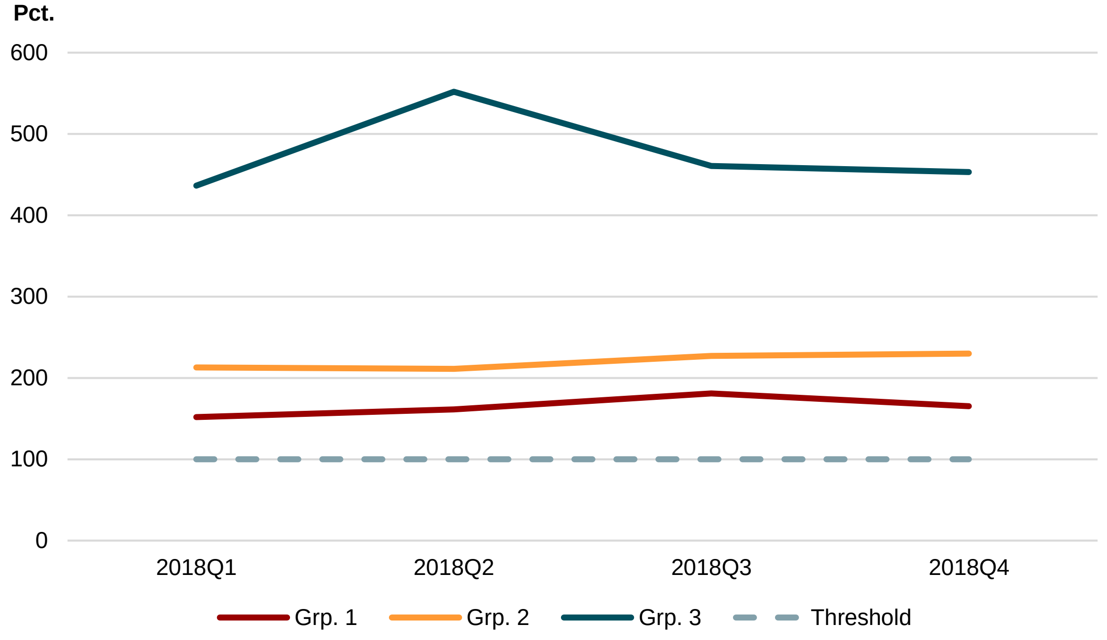
Box 9: The supervision diamond

The FSA calculates five benchmarks in the supervisory diamond every quarter. These are general indicators intended to ensure that institutions cannot incur excess risk. Benchmarks for all banks are published in connection with annual and interim financial statements. Exceeding a benchmark can lead to a risk notice. In such situations, the FSA takes into account mergers, acquisitions and other group factors. The five benchmarks that institutions must comply with are:

- The sum of major exposures < 175% of actual equity
- Funding ratio < 1
- Lending growth < 20% in relation to the same quarter last year
- Property exposure < 25%
- Liquidity benchmark > 100%

3 For an in-depth description of the liquidity benchmark, see 'Guidance on the Supervisory Diamond for Banks', which can be found at https://www.finanstilsynet.dk/da/Tilsyn/Tilsynsdiamanten-for-pengeinstitutter

Figure 15: Small institutions have higher capital adequacy compared to the benchmark



Note: Group 1 institutions are all SIFI banks. The median values for LCR for group 4 institutions are above the median values for group 3 institutions. During the period, Group 4 banks had median LCR values of between 1560 and 1920%.
Source: Reports to the FSA and own calculations.

New requirements for funding ratio for institutions

The European Parliament formerly passed the "Risk Reduction Pack" in April 2019, which includes changes to the Capital Requirement Regulation in the form of CRR II. The most important change within liquidity and funding is the introduction of the Net Stable Funding Ratio (NFSR) requirement. This requirement will apply two years after CRR II finally comes into effect. CRR II is expected to come into effect in mid-2019.

CRR II gives the EBA a mandate to develop ITS concerning reporting forms, reporting guides and publication of NSFR.

NSFR places requirements on the institutions concerning financing their assets, primarily lending and investments, in a sufficiently stable and safe manner over a one-year timeframe. During the financial crisis, a large number of Danish banks financed high lending growth with short market financing abroad. NFSR reduces the risk of a similar scenario because institutions cannot fulfil the NFSR requirement without ensuring a longer and more stable structure for the financing of assets with poor liquidity and/or long remaining maturity.

Box 10: The NSFR requirement

The NSFR requirement is defined as follows:

$$NSFR = \frac{Available\ Stable\ Financing\ (ASF)}{Required\ Stable\ Financing\ (RSF)} \geq 100\%$$

where 'Available Stable Financing' and 'Required Stable Financing' are defined in the forthcoming CRR II.

Available Stable Financing is accounted based on the liabilities side of balance sheets of the institutions. The various categories of liabilities are attributed a weighting that reflects their remaining maturity and expected stability. For example: short, unsecured market financing (less than six months) is given a weighting of 0%, while stable financing sources, such as equity and stable deposit customers, are given a weighting of 100 and 95% respectively.

Required Stable Financing is calculated based on the assets side of the institutions' balance sheets. The various categories of assets are attributed a weighting that reflects their liquidity attributes and remaining maturity. For example: Level 1A assets, as defined in the LCR regulation, have a weighting of 0%, while unencumbered lending is weighted at 50-85%.

Simplified NSFR

The intention of the Commission's proposal for CRR II was that NSFR would apply to all credit institutions at institution and group level. Negotiations between the Council and European Parliament have resulted in the introduction of a simplified NSFR requirements (sNSFR) for small and non-complex institutions.

The FSA can authorise an institution to report under and comply with the simplified requirement if it believes that the simplified requirement is sufficient to catch any relevant funding risks for the institution.

CRR II entails that the requirement for all categories of assets and liabilities must be at least as, or more, conservative than the general NSFR requirement. sNSFR is simplified on the asset (ASF) and liability (RSF) side. Simplification of NSFR was achieved by reducing the number of categories the institutions can put assets and liabilities into and by broadening such categories.

9. Prevention of money laundering and terrorist financing

Money laundering is a high priority area
Prevention of money laundering and terrorist financing is one of seven special focus points of the FSA's strategy moving towards 2020. The area is also high on the political agenda, and the FSA has therefore allocated additional resources to combating money laundering and terrorist financing. The government and a broad majority of the Danish Parliament reached agreement in March 2019 on significantly strengthening supervision of banks in the fight against financial crime. The latest agreement includes strengthening the FSA with significantly more resources, better means of levying fines, the power to deploy observers in banks and to stop the recruitment of new customers.

Rule compliance still not widespread
The FSA believes that the banks are generally aware of the requirements to prevent money laundering and terrorist financing, and an increased focus on compliance. But the FSA has also found that there often is insufficiently deep managerial focus on the area of money laundering and terrorist financing.

Most of these undertakings are aware that they must avoid being used for money laundering and terrorist financing. But management is often not aware of what it has to do in practice to comply with the law. Terrorist financing is currently only a focus area in a few institutions.

Many have problems with KYC procedures in the private and correspondent banking fields.

The FSA also still believes that small and medium-sized banks find it more difficult than bigger banks to allocate resources for compliance with the rules in the money laundering area. This is despite that smaller banks have a simpler business model that should make it easier to comply with requirements. Therefore, there remains a risk that the banks can be exploited for money laundering or terrorist financing.

The FSA is working on risk assessment and guideline for the industry
In addition to money laundering inspections, the FSA is continuously working to maintain its insight into the risks and compliance with the rules in each sector and into the different types of undertakings within each sector.

The FSA is therefore in the process of building an IT-based system for risk assessment of individual undertakings and industries with regard to money laundering and terrorist financing. Risk assessment is currently based on experience from inspections and national risk assessments by SØIK (State Prosecutor for International and Serious Economic and International Crime), PET and international risk assessments from the European Commission and FATF. The FSA is considering extending the risk assessment with reports from the institutions. Therefore, the industry will be involved in this work. Along with greater supervision, the FSA has increased the flow of information for the institutions. This is intended to help them comply with the rules and to support their efforts to prevent money laundering and terrorist financing. The FSA published an updated and extensive guideline on the Anti-Money Laundering Act in October 2018. Work on a new update will be started in 2019.

Box 11: Guidance to the Act on Measures to Prevent Money Laundering and Financing of Terrorism (the Anti-Money Laundering Act)

The FSA published a new and extensive guidance for the Anti-Money Laundering Act in October 2018. The guidance is aimed at undertakings and persons covered by the Anti-Money Laundering Act.

It explains and clarifies extensively the special remarks on the Anti-Money Laundering Act, and it provides practical descriptions and examples, making it a key tool for the undertakings and persons concerned.

The working group set up to draft the current guideline has been made permanent. The group will be involved in drafting a revision of the guideline during 2019, which will also describe the new elements introduced by the Anti-Money Laundering Act with implementation of the 5th Money Laundering Directive.

10. Annexes

Table 1: Annual accounts for banks 2014 – 2018

DKK millions	*2014*	*2015*	*2016*	*2017*	*2018*	Change *2014-2018*	Change *2017-2018*
Income Statement							
Interest income	73,211	60,154	57,519	47,160	49,729	-7.4%	5.4%
Interest expenses	25,457	15,347	15,407	13,370	16,570		23.9%
Net interest income	47,754	44,807	42,112	33,790	33,159	-7.0%	-1.9%
Dividends from shares, etc.	2,916	1,456	897	544	527	29.0%	-3.1%
Fees and commission income	29,448	31,939	31,108	27,158	28,341	-0.8%	4.4%
Fees paid and commission expenses	6,048	6,236	6,176	5,237	5,513	1.8%	5.3%
Net interest and fee income	74,070	71,965	67,941	56,255	56,514	-5.3%	0.5%
Rate adjustment	-2,295	2,555	6,927	12,431	6,934		-44.2%
Expenses for staff and administration	47,250	46,468	46,293	38,353	43,174	-1.8%	12.6%
Amortisation and impairment of intangible and tangible assets	13,155	7,231	3,166	3,066	3,237	-24.5%	5.6%
Impairment losses on loans and receivables etc.	12,525	5,638	2,766	-996	618	-45.2%	
Result from investments in associates and affiliates	10,757	11,332	13,368	10,988	9,830	-1.8%	-10.5%
Profits before tax	16,376	28,490	39,214	41,220	30,084	12.9%	-27.0%
Tax	2,202	4,514	5,398	6,075	4,223	13.9%	-30.5%
Profit for the year	14,174	23,975	33,816	35,145	25,861	12.8%	-26.4%
Balance sheet items							
Receivables from credit institutions and central banks	386,238	239,745	408,495	406,102	310,463	-4.3%	-23.6%
Loans	1,655,603	1,645,049	1,692,390	1,546,732	1,667,794	0.1%	7.8%
Lending excl. repos	1,341,467	1,354,207	1,411,710	1,295,121	1,323,794	-0.3%	2.2%
Bonds	1,041,156	825,072	802,799	691,432	661,599	-8.7%	-4.3%
Shares	26,678	42,073	43,913	40,031	25,553	-0.9%	-36.2%
Investments in associates and affiliates	158,936	161,877	158,870	116,495	120,806	-5.3%	3.7%
Assets linked to pool schemes	116,479	126,560	135,276	120,027	118,645	0.4%	-1.2%
Other assets	552,274	444,473	451,754	341,810	326,084	-10.0%	-4.6%
Total assets	4,022,052	3,586,892	3,771,680	3,388,350	3,309,353	-3.8%	-2.3%
Debt to credit institutions and central banks	648,450	475,945	464,952	349,362	362,992	-11.0%	3.9%
Deposits	1,800,535	1,677,469	1,802,145	1,760,314	1,789,462	-0.1%	1.7%
Deposits excl. repos	1,580,015	1,615,288	1,716,289	1,617,590	1,618,782	0.5%	0.1%
Issued bonds	336,877	378,441	407,888	408,480	306,996	-1.8%	-24.8%
Liabilities, total	3,636,236	3,194,096	3,371,296	3,040,184	2,964,148	-4.0%	-2.5%
Subordinated debt	65,119	58,881	55,142	39,926	34,168	-12.1%	-14.4%
Equity	308,006	321,782	333,389	298,515	299,141	-0.6%	0.2%
Total liabilities	4,022,052	3,586,892	3,771,680	3,388,350	3,309,353	-3.8%	-2.3%

Note: The table shows only selected items. The figures are based on the institutions that existed in the individual years.
Source: Reports to the FSA.

Table 2: Key ratios for banks 2014 – 2018

	2014	2015	2016	2017	2018
Capital ratio	21.0	22.0	23.2	23.8	23.3
Core capital ratio	18.5	19.7	20.7	21.4	21.5
Common Equity Tier 1 capital ratio	17.2	18.0	18.3	19.3	19.0
Return on equity before tax for the year	5.5	9.1	12.1	14.1	10.2
Return on equity after tax for the year	4.8	7.6	10.4	12.0	8.7
Income/cost ratio	1.2	1.5	1.8	2.0	1.6
Interest rate risk	1.0	1.3	1.3	1.9	1.8
Loans plus write-downs on these, relative to deposits	96.0	101.8	96.8	90.1	95.0
Excess cover relative to statutory liquidity requirements	155.9	193.7	205.7	221.3	205.6
Total large exposures	-	-	-	-	93.4
Accumulated impairment rate	3.8	3.3	2.7	2.4	2.3
This year's impairment ratio	0.6	0.3	0.1	0.0	0.1
Lending in relation to equity	5.5	5.1	5.1	5.2	5.6

Note: The figures are based on the institutions that existed in the individual years. The total of large exposures are calculated as the 20 biggest exposures as a percentage of the institution's actual core capital. This definition changed on 1.1.2018, and therefore the financial ratios for 2018 only are shown.
Source: Reports to the FSA.

Table 3: Grouping, 2018

Group 1 – Working capital exceeding DKK 75 billion.

3000	Danske Bank A/S	8079	Sydbank A/S
7858	Jyske Bank A/S	8117	Nykredit Bank A/S

Group 2 – Working capital exceeding DKK 12 billion.

9380	Spar Nord Bank A/S	522	Sparekassen Sjælland-Fyn A/S
5301	A/S Arbejdernes Landsbank	8099	Nordjyske Bank A/S
7670	Ringkjøbing Landbobank A/S	400	Lån & Spar Bank A/S
1149	Saxo Bank A/S	9070	Sparekassen Vendsyssel
7730	Vestjysk Bank A/S	9217	Jutlander Bank A/S
9335	Sparekassen Kronjylland	9686	Den Jyske Sparekasse

Group 3 – Working capital exceeding DKK 750 million.

755	Middelfart Sparekasse	6140	Møns Bank A/S
5999	Danske Andelskassers Bank A/S	1671	Basisbank A/S
7681	Alm. Brand Bank A/S	9044	Dronninglund Sparekasse
9090	Sparekassen Thy	9682	Sparekassen for Nr. Nebel og Omegn
7320	Djurslands Bank A/S	9797	Broager Sparekasse
6771	Lægernes Bank A/S	9137	Ekspres Bank A/S
9740	Frøs Sparekasse	7570	PenSam Bank A/S
844	Fynske Bank A/S	9388	Sparekassen Djursland
7780	Skjern Bank A/S	9827	Sparekassen Bredebro
6471	Grønlandsbanken, Aktieselskab	537	Dragsholm Sparekasse
9695	Saxo Privatbank A/S	6620	Coop Bank A/S
13460	Merkur Andelskasse	13080	Frørup Andelskasse
7890	Salling Bank A/S	7500	Hvidbjerg Bank. Aktieselskab
6520	Lollands Bank, Aktieselskab	847	Rise Flemløse Sparekasse
7930	Kreditbanken A/S	9283	Langå Sparekasse
6880	Totalbanken A/S	9312	Sparekassen Balling
6860	Nordfyns Bank, Aktieselskabet	9354	Rønde Sparekasse

Group 4 – Working capital less than DKK 750 million.

9860	Folkesparekassen	1693	PFA Bank A/S
9133	Frøslev-Mollerup Sparekasse	579	Sparekassen Den lille Bikube
13290	Andelskassen Fælleskassen	5125	Leasing Fyn Bank A/S
9684	Fanø Sparekasse	28001	Maj Bank A/S
9124	Sønderhå-Hørsted Sparekasse	9629	Stadil Sparekasse
9135	Klim Sparekasse	13220	Andelskassen OIKOS
9634	Borbjerg Sparekasse	13350	Østervrå Andelskasse
13070	Faster Andelskasse		