FINANSTILSYNET

Nordic Banking Seminar

March 6, 2023

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Agenda

1. Risk assessment
2. Credit institutions
3. Developments in the Danish housing market and household debt
4. AML and Danske Bank
5. ESG (sustainability)
6. Cyber risk and stress testing

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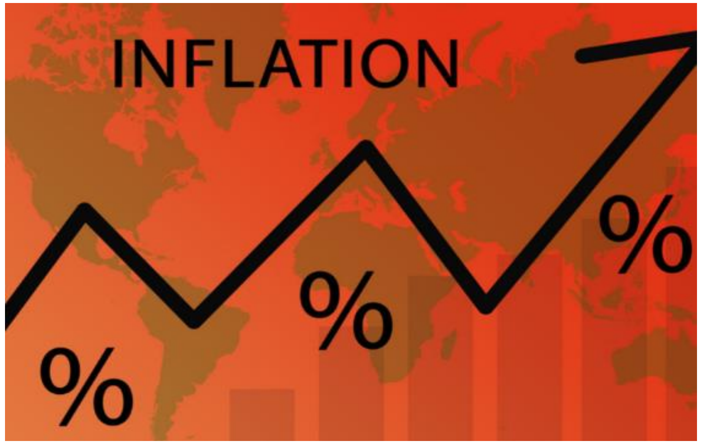
1. Risk assessment

Stormy clouds over the Danish economy …

Predictions key economic variables, september 2022

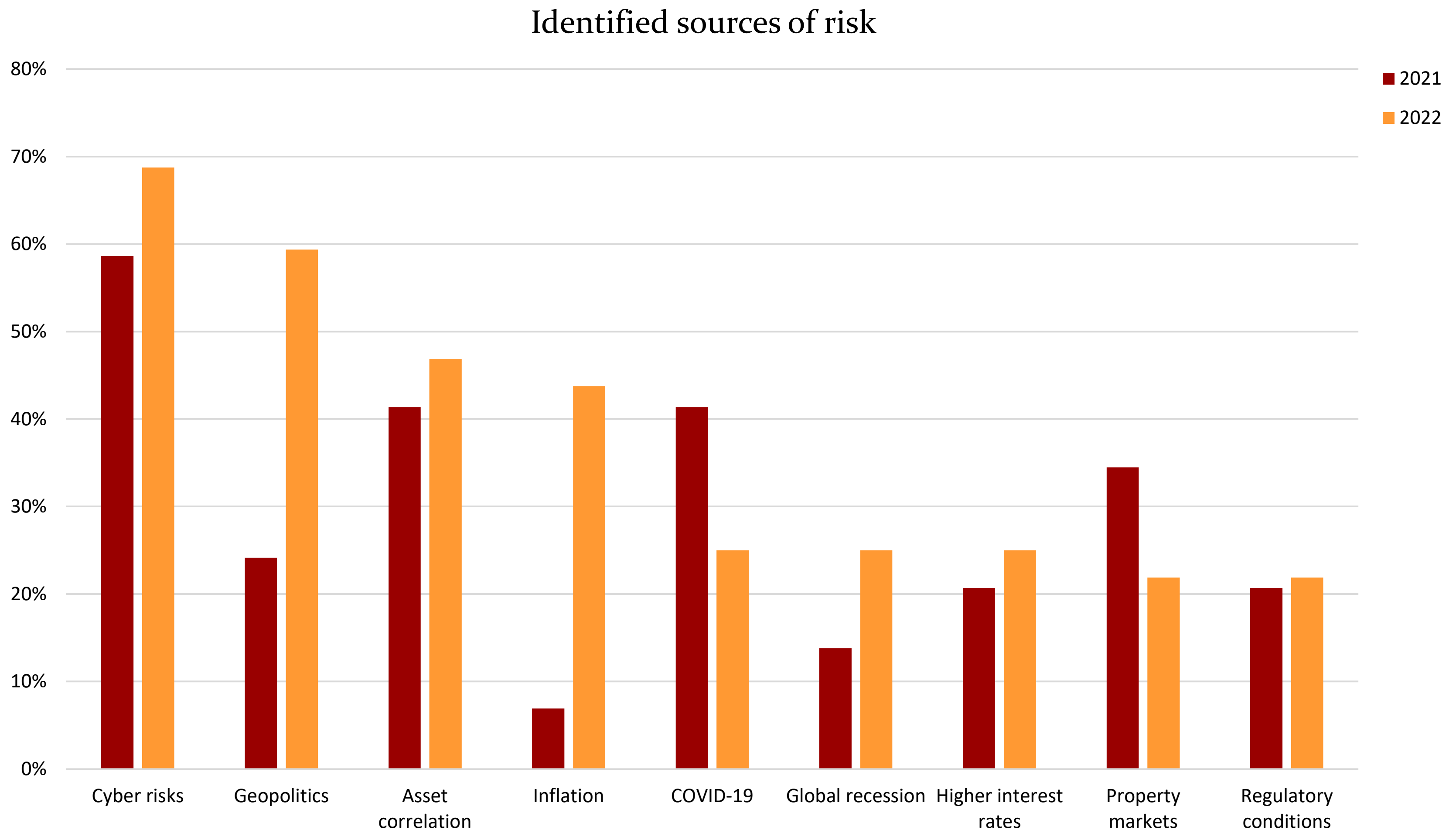
Real growth relative to the previous year, per cent	2021	2022	2023	2024
GDP (real), per cent	4.9	2.0	-0.1	1.2
Employment, 1,000 persons	3.046	3.161	3.150	3.126
Gross unemployment, 1,000 persons	106	76	89	97
Balance of payments on current account, per cent of GDP	8.8	10.7	10.4	10.2
Government budget balance, per cent of GDP	2.6	1.9	1.9	1.5
House prices[1], per cent year-on-year	11.0	2.9	-5.6	-1.8
Consumer prices, per cent year-on-year	1.9	8.6	4.3	1.7
Hourly wages[2] (manufacturing industry), per cent year-on-year	2.6	3.7	4.5	3.9

Source: Outlook for the Danish economy, September 2022, Danmarks Nationalbank



… considerable downside risk

The financial companies' own risk assessment point to …



Note: The companies' responses were due in February 2022 before Russia's invasion of Ukraine

… Cyber risks, geopolitical conditions and inflation

Overall risks across supervisory areas …

- Recession
- Energy crisis (focus on operational risks)
- General decline in asset prices. including property prices
- IT risks and cyber risks
- Inadequate risk management and governance
- Improper/dishonest practices. incl. money laundering

… risks are in general elevated

Energy crisis and the Danish financial sector …

- Trading of energy derivatives are performed by NFCs. primarily energy firms and specialized energy trading firms.

- Financial firms trading on the energy derivate market are primarily big international corporations.

- Danish credit institutions are indirectly exposed through repo and bank loans to energy firms and specialized energy trading firms.

… liquidity has become essential for many firms

A number of structural conditions have also been identified …

- Sustainability and climate-related financial risks (as well as social and behavioral conditions more generally).

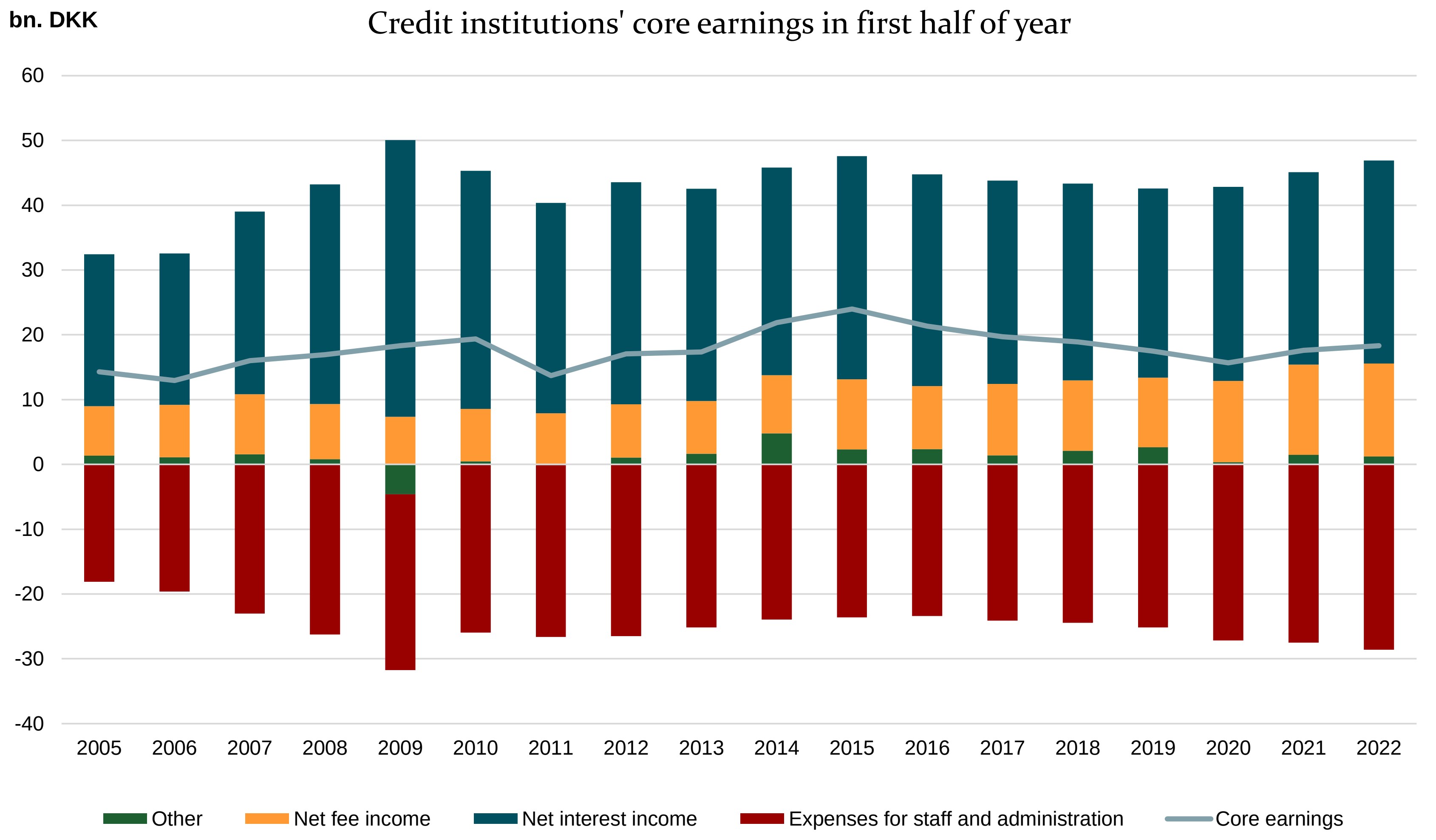
- Technological development will play an increasingly important role.

- Data ownership and the ability to handle data responsibly and ethically is increasingly becoming an important factor.

… which the financial companies have to deal with

2. Credit institutions

Pressure on core earnings is lifting …



Source: DFSA.

… due to higher interest rates and margins

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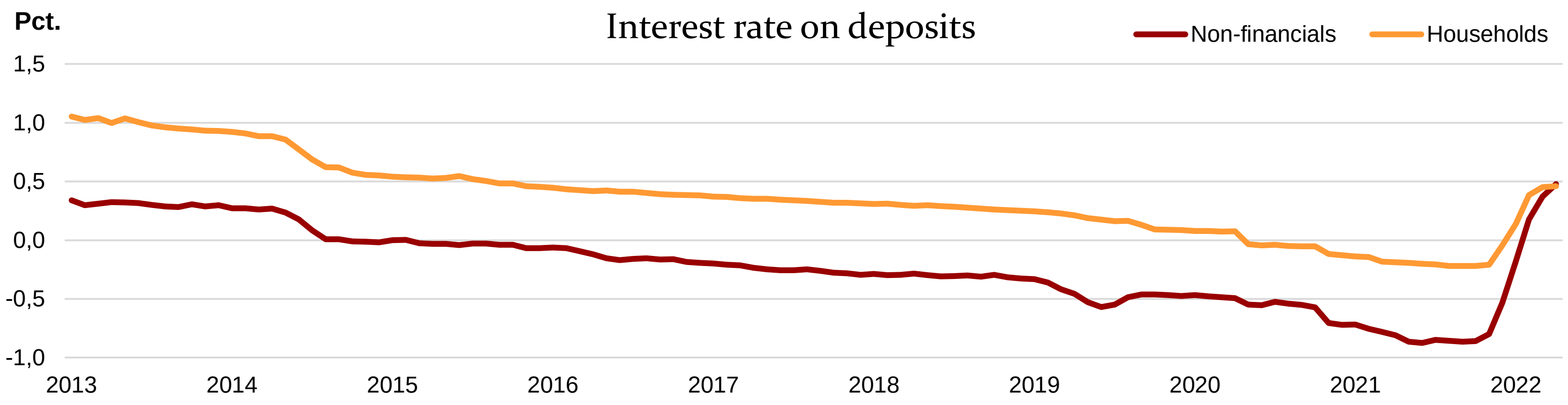
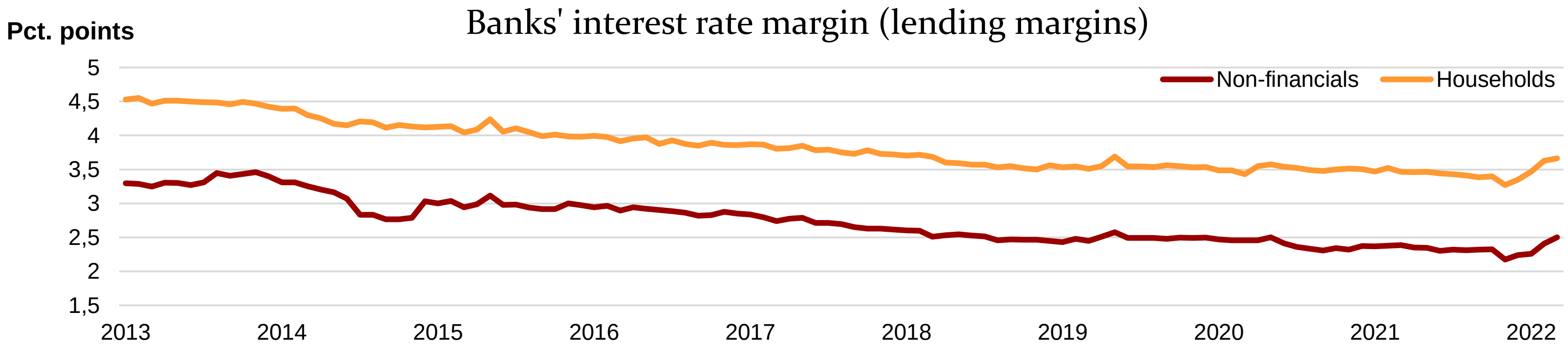
Political focus on development in interest margins and fees …





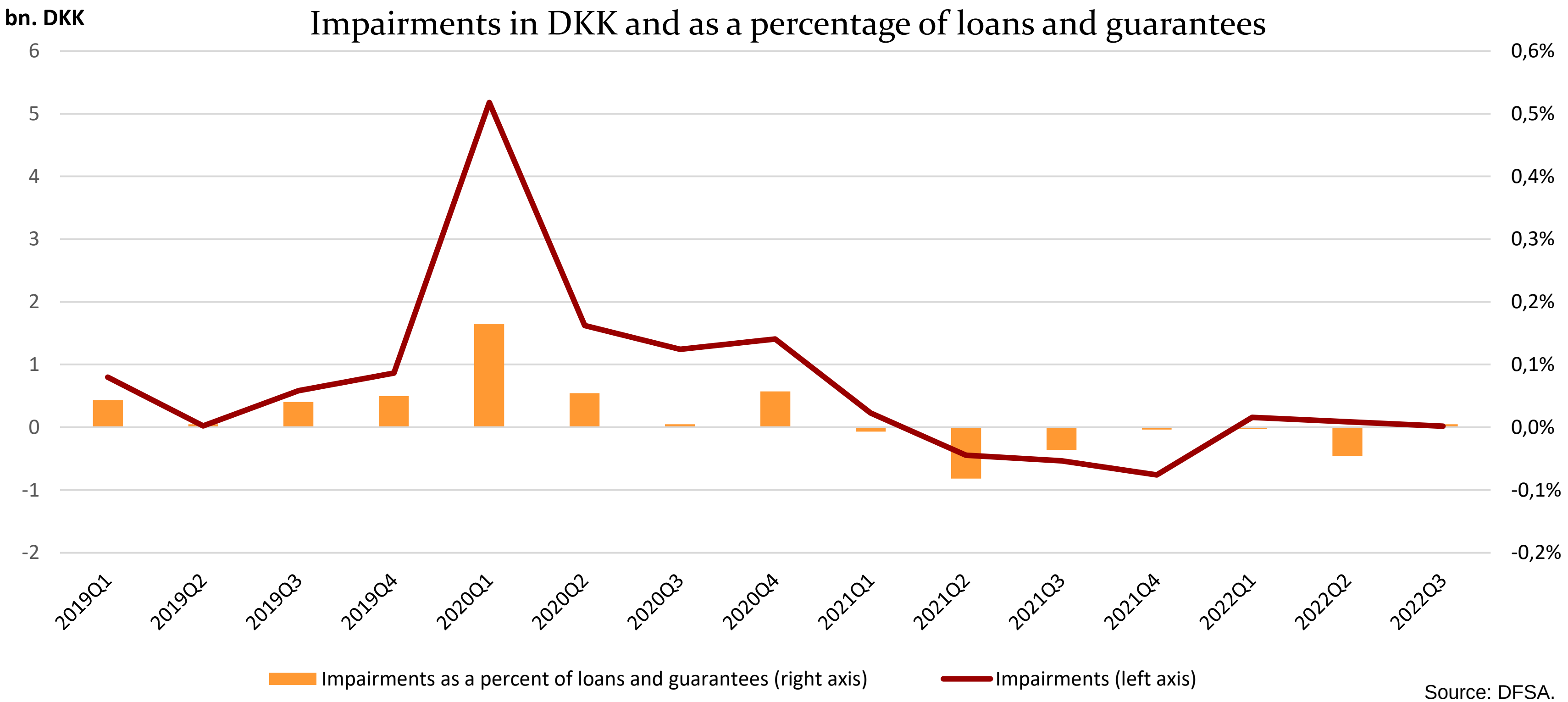
Source: Danmarks Nationalbank

Note: Latest observation is dec-22. Margin is based on existing domestic accounts. Repos are excluded in bottom figure.

… acceptance of negative rates in DK, but ..

Focus on sufficient and accurate loan impairments …

- Discretionary managerial impairment add-ons can be necessary when models fall short of sufficient and accurate impairments. Like the early stages of the Covid-19 crisis institutions. This is still the case.
- Additional supervisory guidance and reporting on impairments based on management judgement.



Source: DFSA.

… and nothing gained by deferring loan impairments

The best crisis management happens before the crisis …

- Financial regulation and supervision must minimize the likelihood of a systemic financial crisis.

- It is crucial that there is enough capital and liquidity in the banks before a crisis.

- In general. The sooner any problems are dealt with, the less are risk.

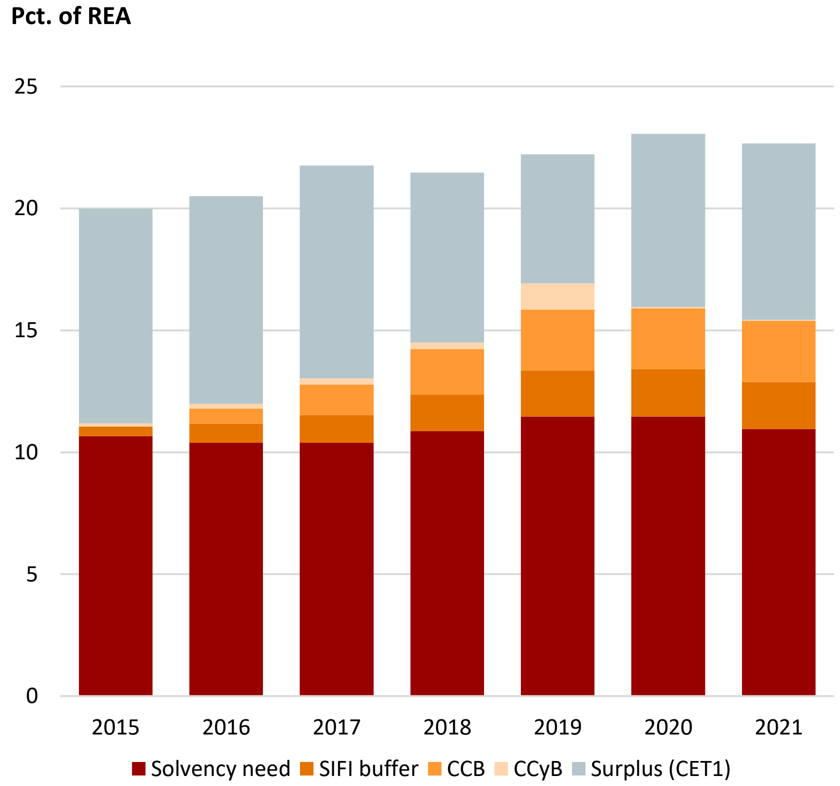
… economic crises must not be exacerbated by the financial sector

Gradual build-up of capital …

- Gradual increase in capital ratio as response to phase-in of buffers.

- The release of the CCyB and dividend restrictions in 2020 increased capital surplus significantly.

Capital position of credit institutions



Source: DFSA.

Implementation of Basel III …

- In 2017 the Basel Committee published a number of recommendations on credit institutions' capital requirements. The Commission has presented its proposal for implementation in the European Capital Requirements Regulation.

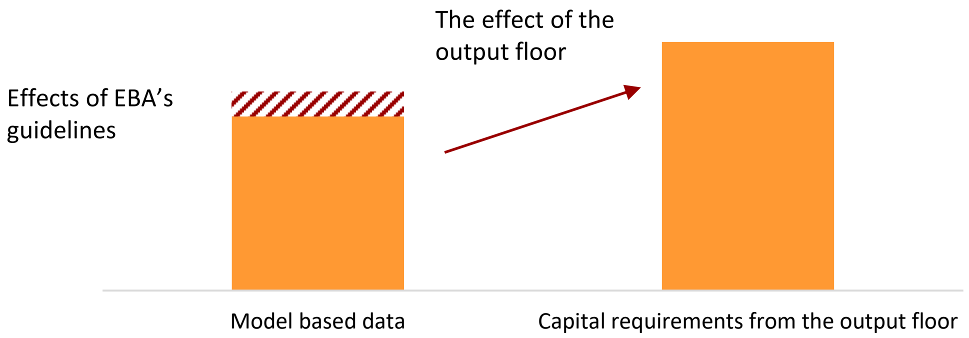
- In particular a floor requirement for the institutions' risk-weights (the output floor) will have a major effect on IRB institutions.

- The proposal also involves a number of changes to the standard approach for credit risk. Changes affect IRB institutions via the output floor, but the changes also affect institutions on the standard approach.

… means higher capital requirements - but manageable

Uncertainty about the estimated effect of output floor …

- EBA has developed guidelines for the IRB institutions' use of internal models.
- The guidelines has led to increases in the institutions' risk-weighted exposures.
- The IRB institutions were supposed to implement capital requirement increases by 1 January 2022. which reflect the effect of EBA's guidelines.

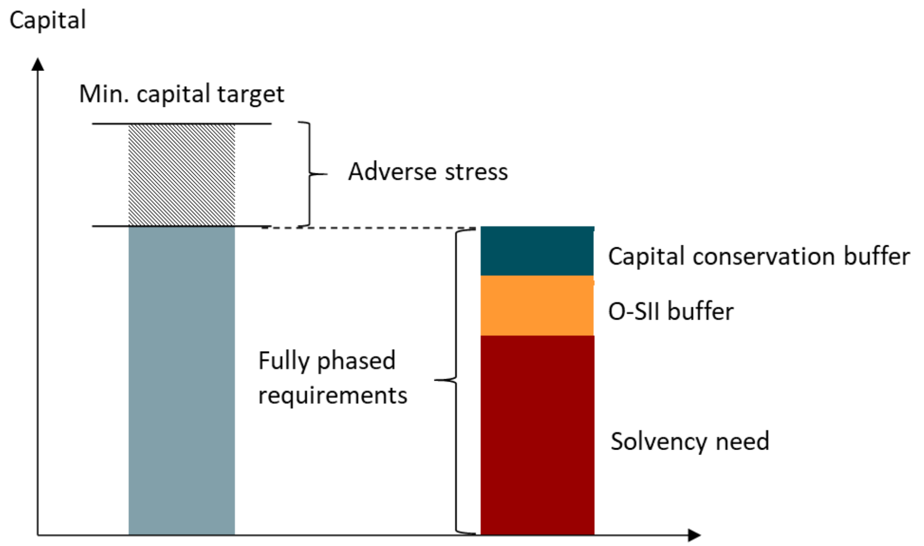


- EBA's latest impact studies show that the recommendations (output floor) can lead to increases in capital requirements of up to <u>36 per cent.</u> (excl. SME discount) for the Danish O-SIIs. The average effect in the EU is 19 per cent.
- The new guidelines from the EBA lead to increases in the IRB institutions' model-based capital requirements. and therefore the overall effect of the output floor will be reduced. After recognition of EBA guidelines, an increase of <u>15 per cent.</u> is estimated

… the proposed adjustment reduces the distance to the floor

Capital targets …

- On top of solvency needs and buffer requirements Danish credit institutions have *capital targets*. Capital targets are based on a severe stress scenario and play an important role in the supervisory approach.



- Capital targets are adjusted for forthcoming regulatory changes, dividend policies etc.

3. Developments in the Danish housing market and household debt

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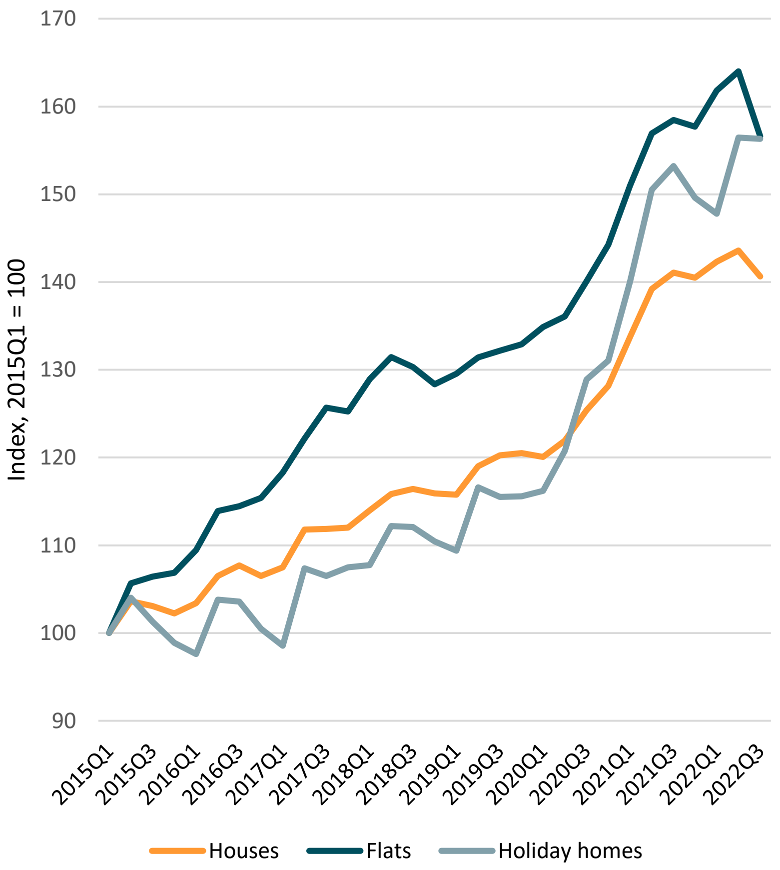
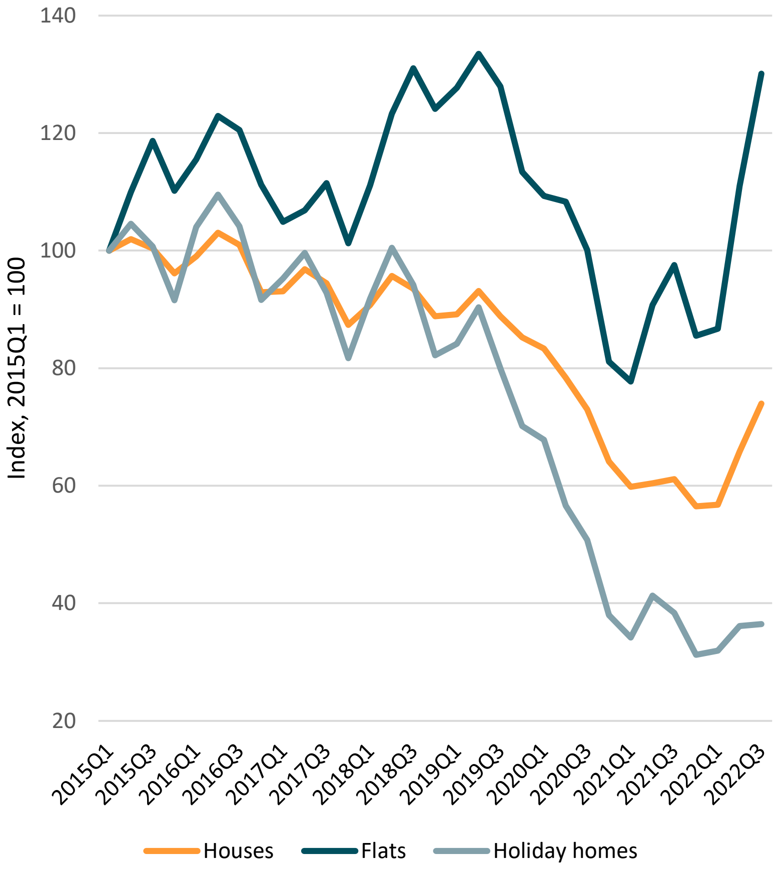
Decrease in real estate prices in late 2022 …

Prices on residential real estate



Note: Last observation is Q3 2022.

Properties for sale

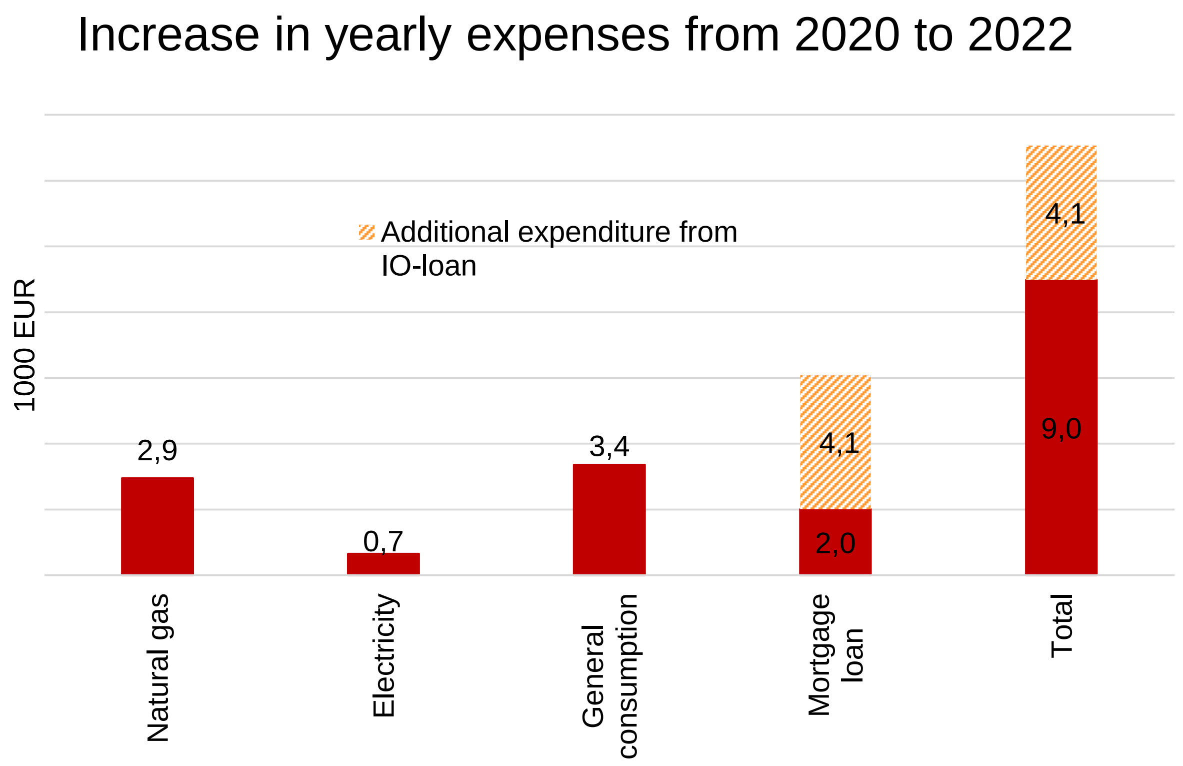


Note: Last observation is Q3 2022.

Source: Finance Denmark.

… which is expected to continue in 2023

Effect of higher food and energy prices on household budgets …



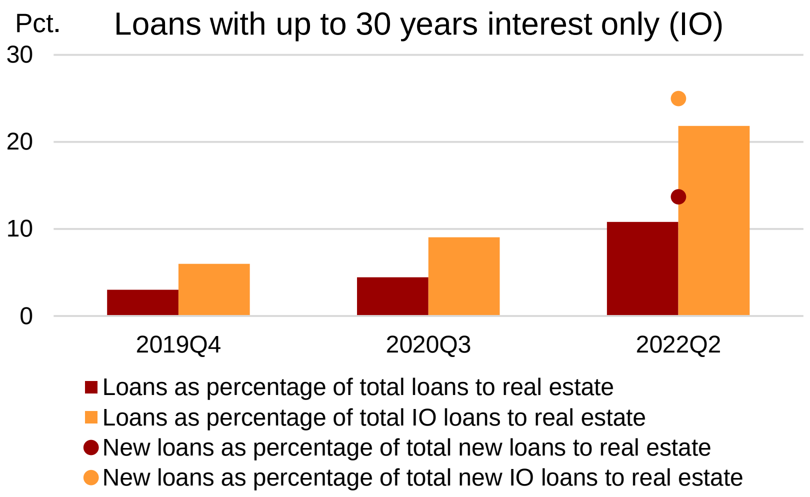
Corresponds to a total increase in expenses of 49 pct. for stylized family with IO-loan

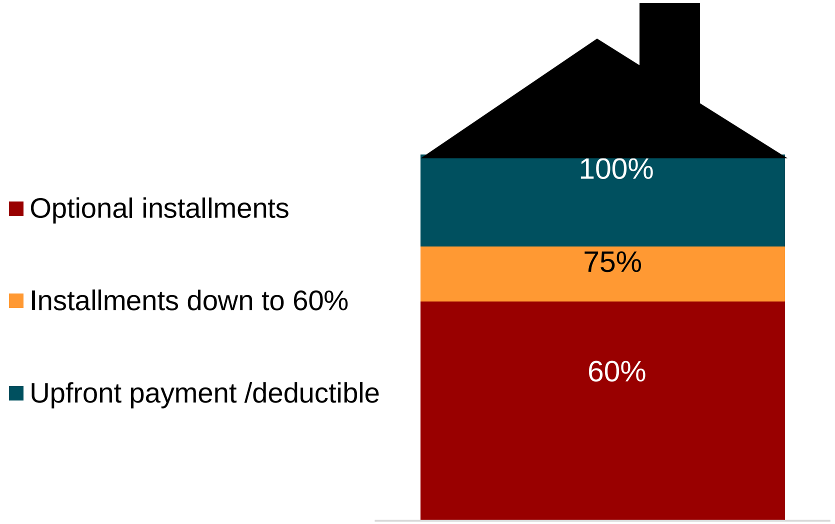
Increase in a stylized family's expenses from 2020 to 2022 in euro. The household (2 adults and 2 children) lives in a 150 m2 house from between 1960-1976, which is financed by a EUR 270.000 mortgage loan. The mortgage loan is a variable rate loan. The family is assumed to keep real consumption fixed.
Source: Own calculations from various statistics.

… especially families with interest-only loans seem to be affected

Mortgages with 30-year interest only period …

- The IO-loans are in strong growth.
- Mortgage banks have the right to terminate the grace period:
  - The loan types are only weakly regulated
  - Provides opportunity for widespread use.
- The loan types are complex
  - Large outstanding debt at maturity and the possibility that the issuer terminates the grace period before maturity.
  - It sharpens the need for guidance from the borrower.





… the Danish FSA is concerned about the widespread use

Risky mortgage products …

- The widespread use of loans with a 30-year grace period can increase household indebtedness and vulnerability to negative financial shocks.

- Experience from adjustable-rate loans (introduced in 1996) and interest-only loans with 10 year grace period (introduced in 2003) is that it is more difficult to manage new types of loans once they have spread significantly.

- New types of loans contributed to increased indebtedness in Danish society and pushed house prices away from long-term levels

  - Worsened the financial crisis of 2008-09.
  - Extraordinarily low services should not give rise to the housing market going off the rails.

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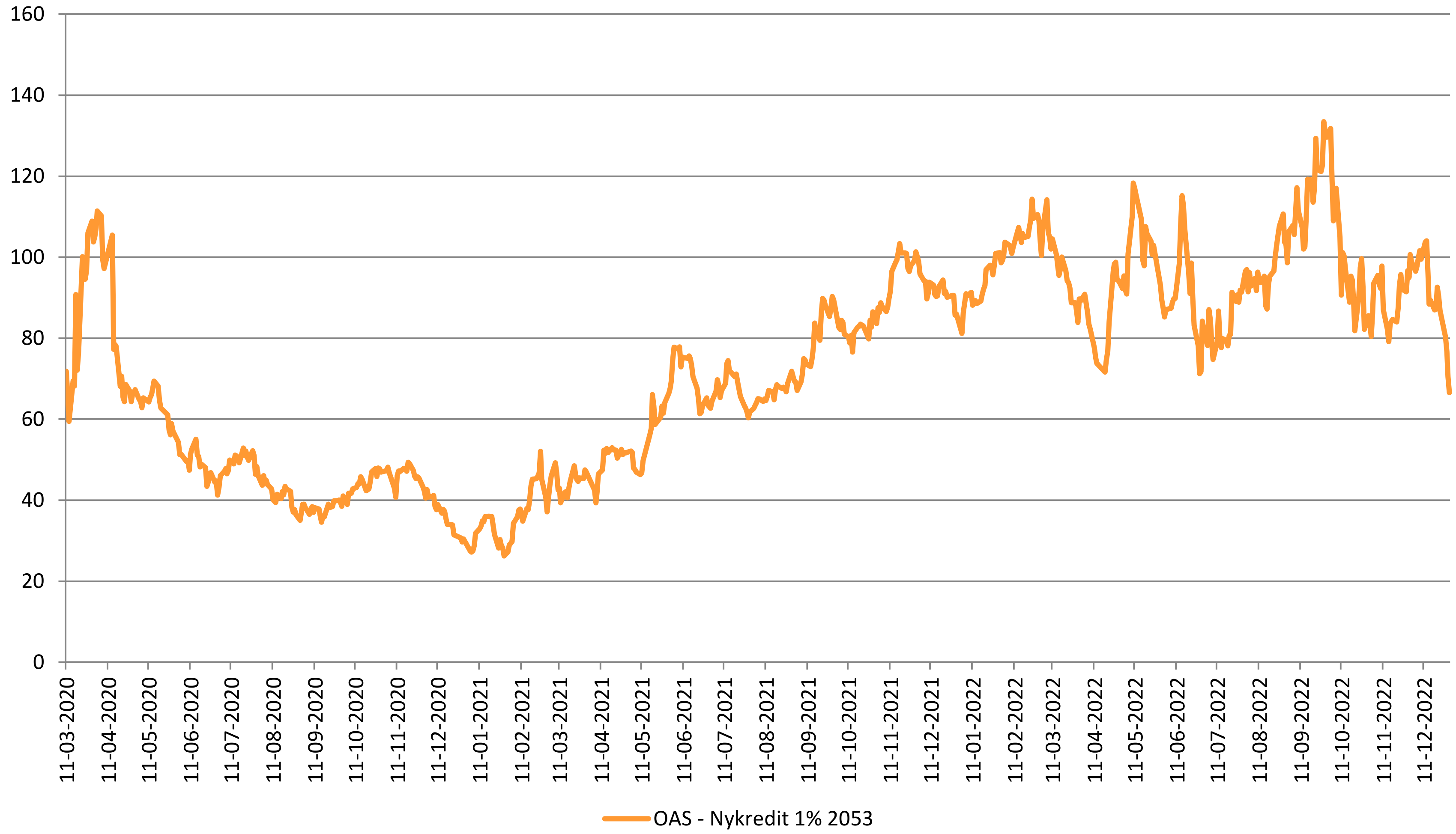
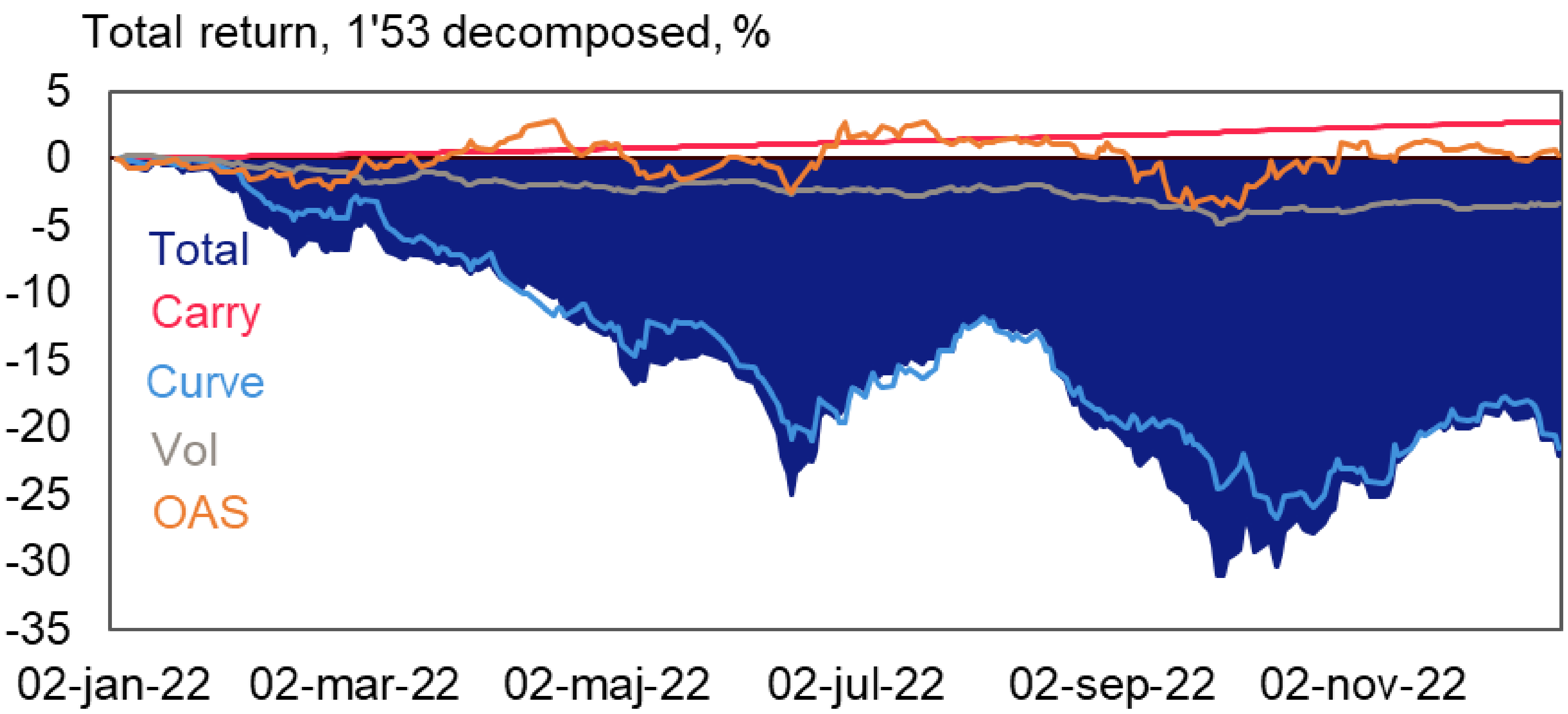
Spreads on callable mortgage bonds back at Covid-19 level …



Source: Nordea Analytics

… and volatile

Negative total return on convertible mortgage bond in 2022 …



Source: Nykredit Markets

… mainly due to rising interest rates

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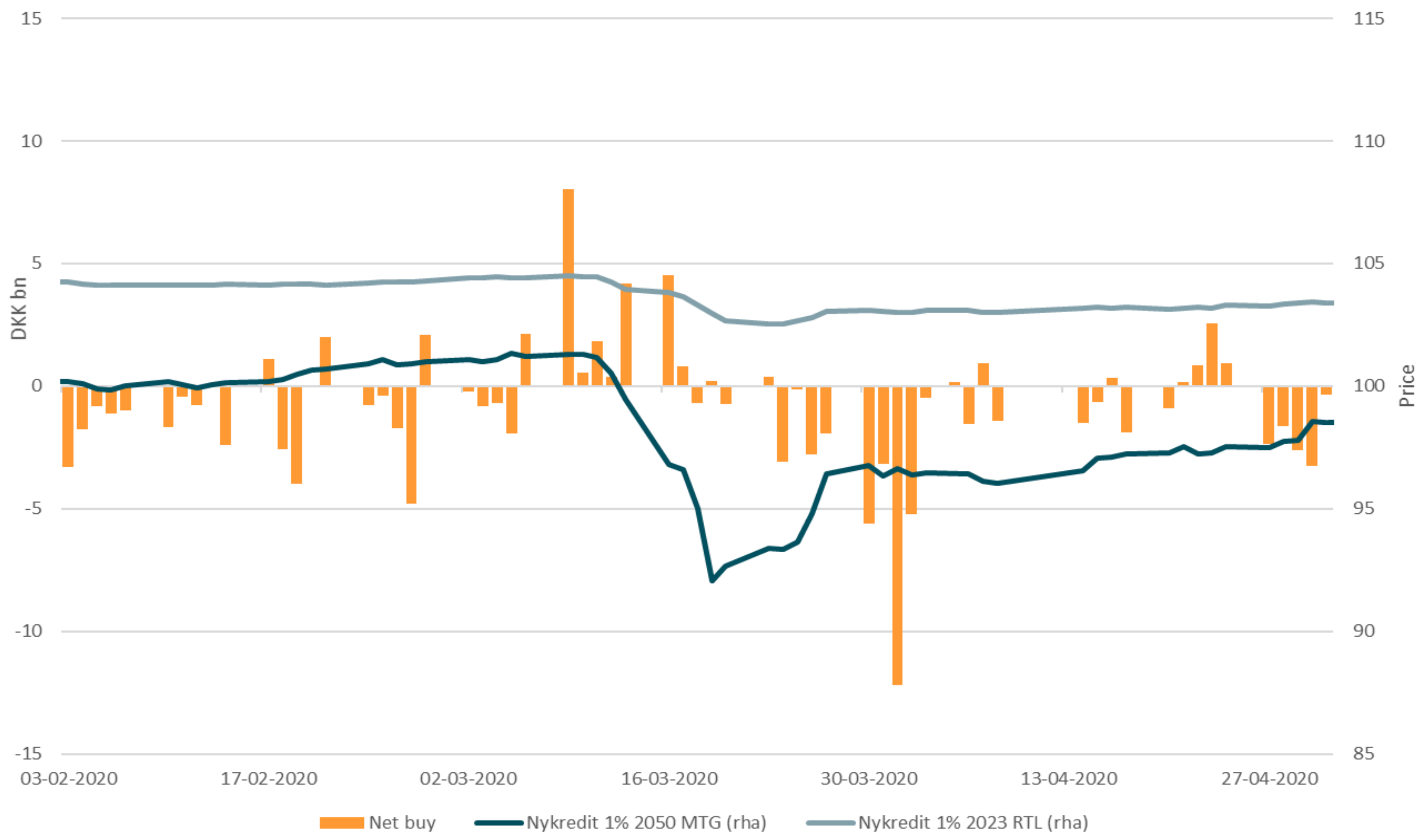
Mortgage bonds were issued …



… and traded through the Covid crisis

Long callable covered bonds …

- The mortgage banks are the backbone in the Danish financial sector:
  - Delivering the majority of credit in Denmark.
  - Covered bonds is essential in liquidity management and investment in Denmark.

- The long callable bonds act as an insurance for both the mortgage bank and the borrower payed by the borrower:
  - When interest rate increases they protect the borrower and thereby the bank against the drop in real-estate prices.
  - When interest rates goes down the borrowers ability to pay the bank is protected by the ability to refinance.

- Thus the sector has to take a broader picture on market making than just the cost as long fixed rate callable bonds reduce the overall risk in the system and most of it is payed by the borrower.

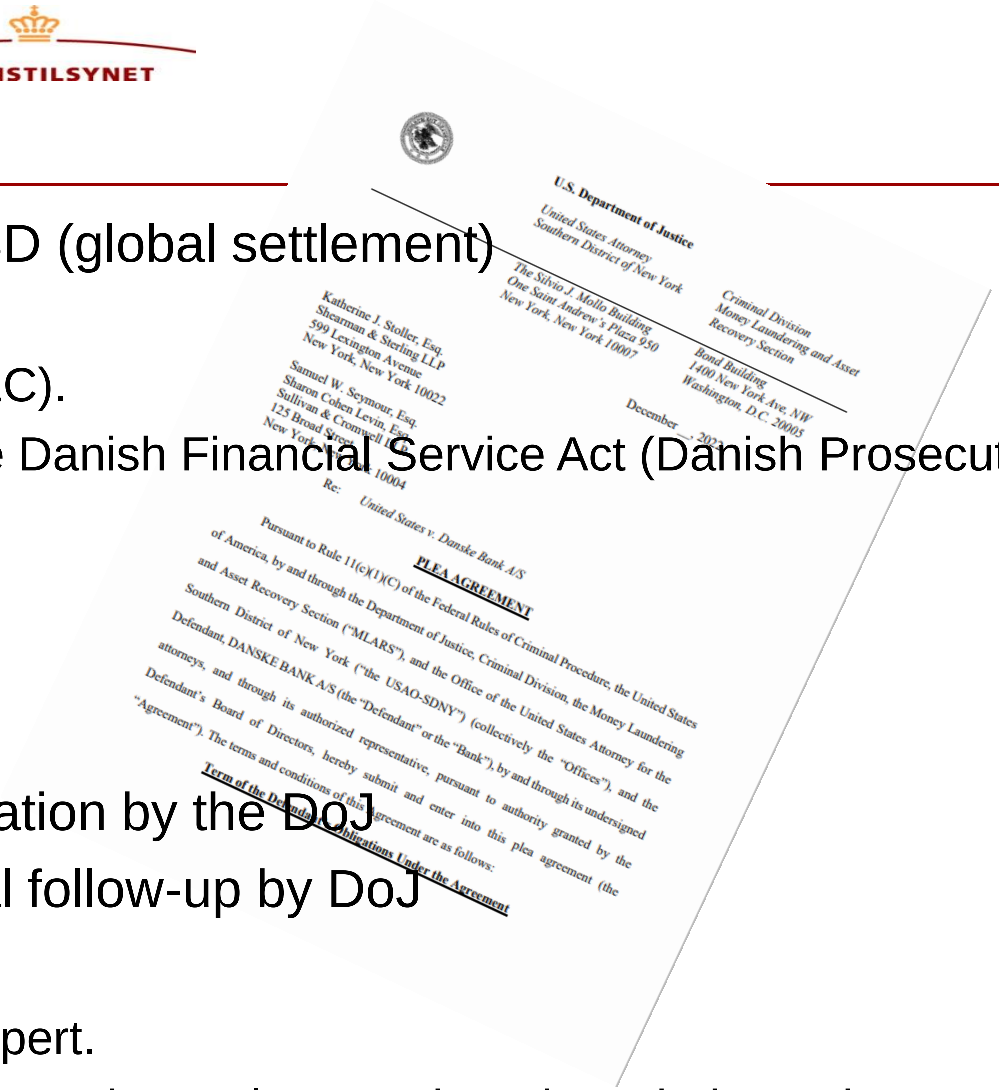
… gives a lot of risk reduction

4. AML and Danske Bank

What happened in Estonia?

- Significant violations of the European and Estonian AML rules in Danske Bank's Estonian branch.
- 15.000 non resident clients with 200 bn euro in transactions from 2007-2015.
- Employees in the Estonian branch actively carried out and covered up the violations.
- Large deficiencies in the three LoD.
- No integration of IT-systems in the branch with those of the rest of the group.
- Failure to examine transactions and customer relationships back in time to detect suspicious transactions.

The latest sanctions – December 2022 …


U.S. Department of Justice

United States Attorney
Southern District of New York

Criminal Division
Money Laundering and Asset Recovery Section

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December _, 2022

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Re: United States v. Danske Bank A/S

PLEA AGREEMENT

Pursuant to Rule 11(c)(1)(C) of the Federal Rules of Criminal Procedure, the United States of America, by and through the Department of Justice, Criminal Division, the Money Laundering and Asset Recovery Section ("MLARS"), and the Office of the United States Attorney for the Southern District of New York ("the USAO-SDNY") (collectively the "Offices"), and the Defendant, DANSKE BANK A/S (the "Defendant" or the "Bank"), by and through its undersigned attorneys, and through its authorized representative, pursuant to authority granted by the Defendant's Board of Directors, hereby submit and enter into this plea agreement (the "Agreement"). The terms and conditions of this Agreement are as follows:

Term of the Defendant's Obligations Under the Agreement

- A historically large fine to the bank: 2 bn USD (global settlement)
  - Bank fraud (US Department of Justice).
  - Misleading information to the market (US SEC).
  - Violation of the Danish AML/CTF Act and the Danish Financial Service Act (Danish Prosecutor).
- Distribution of fine
  - Denmark app. 750 mn. USD.
  - SEC 177 mn. USD.
  - DoJ 1.209 mn. USD.
- The bank has been given a three year probation by the DoJ
- Probation includes conditions and periodical follow-up by DoJ
- The US DoJ may appoint a monitor
  - The DFSA has appointed an independent expert.
  - The DoJ will not decide whether to appoint a monitor as long as there is an independent expert in place.

… fine of more than 10 per cent of market cap

Combatting ML and TF: The mission of the authorities …

- Preventing new cases is a question of having an effective defense against money laundering, terrorism financing and - not the least – the predicate offences behind
- An effective supervision and law enforcement is a central part
- At the end of the day, the most important thing is that financial institutions send the right Suspicious Activity Reports (SARs) to the Financial Intelligence Unit (FIU) and that they take action

KYC → ODD → TM → Alert → STR/SAR

… financial supervisor authorities are quality controllers

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Major initiatives in the DFSA …

- 22 employees – substantial increase since 2017
- Extensive and well informed supervisory program – approximately 200 inspections since 2017
  - Inherent and compliance risk assessment of all sectors and O-SIIs (individually).
- Regular supervision of O-SIIs
  - Continuous supervision of Danske Bank.
- A comprehensive risk scoring model based on reporting from the OEs. Quarterly reporting from the banks.
- A detailed AML/CTF supervisory strategy.
- Active participation in the international supervisory cooperation
  - Colleges – on a risk based approach.
  - Initiative (with our Swedish colleagues) to establish the permanent Nordic Baltic Working Group.

Obliged entities are front-line – we need to strengthen their efforts …

- Technology can enhance the effort – a win-win-win situation
  - Higher quality (better).
  - Better allocation of resources (cheaper).
  - Less bother/intrusion for customers.

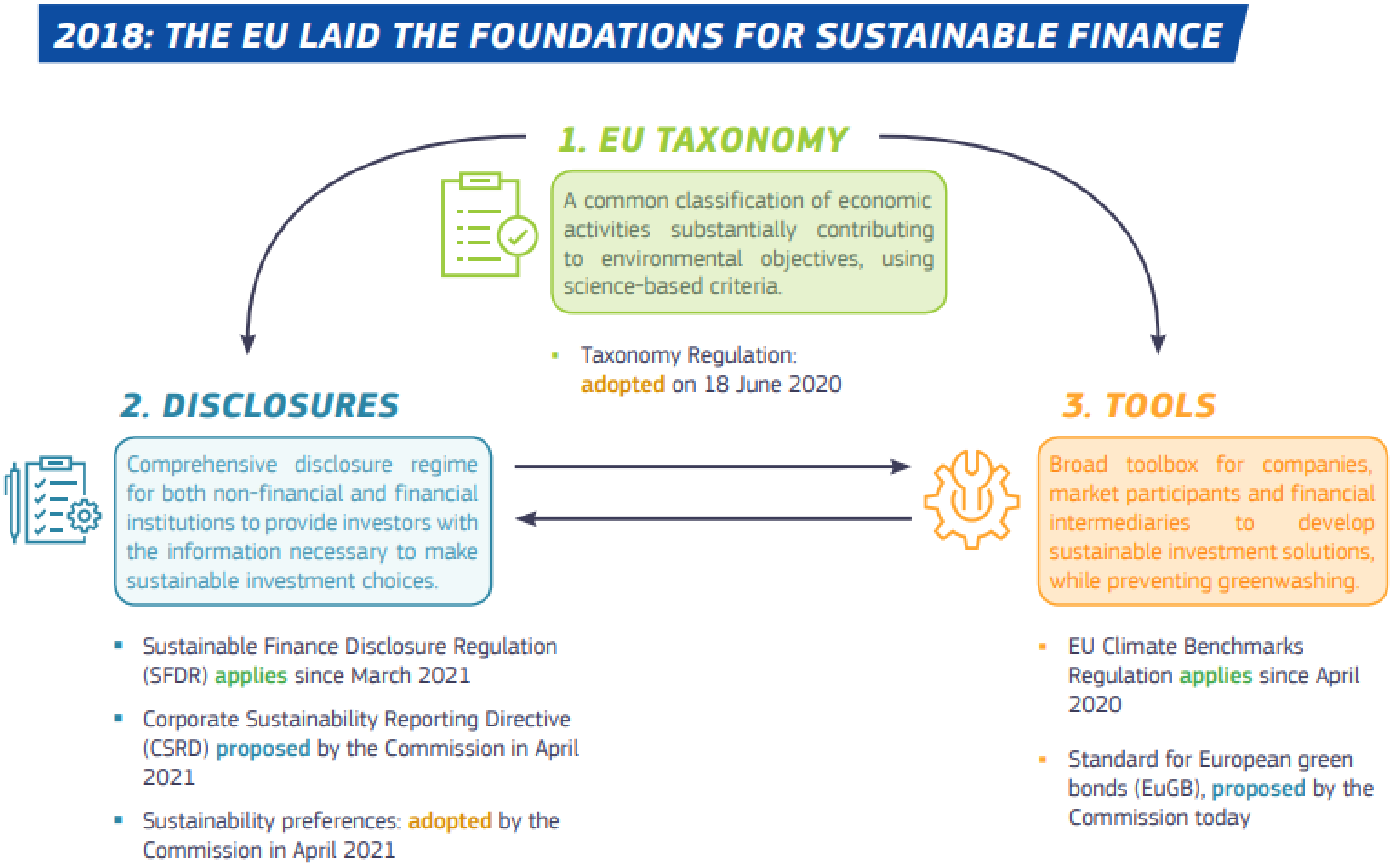
- It is not easy. though
  1. Regulatory uncertainty or outright obstacles.
  2. Access to and quality of data sources.
  3. New risks.
- As supervisors, we must be brave
  - A well-known conundrum: can you supervise if you also guide?

Data protection - Justice and the right to privacy …

- There are very difficult trade-offs here – the key questions underlying our thoughts
  - Proportionality.
  - Consequences for the individual.
  - The legal basis to process data.
- Article 8 of the European Convention on Human Rights sets limits – you must not infringe privacy without due process, legal basis and for legitimate purposes.
- Preamble to AMLD4 states that "*The fight against money laundering and terrorist financing is recognised as an important public interest ground by all Member States*"
- But still not a free for all!

5. ESG (sustainability)

The foundation ...



The EU ESG regulation impact on the financial sector?

- Important to stay updated on the regulation – a lot is coming.
- Data on ESG is of utmost importance.
- Double materiality – remember both the impact and the risks (and the difference between them).
- Increased requirements for reporting and disclosures.
- Banks needs to consider their value chain and to get them along on the journey.

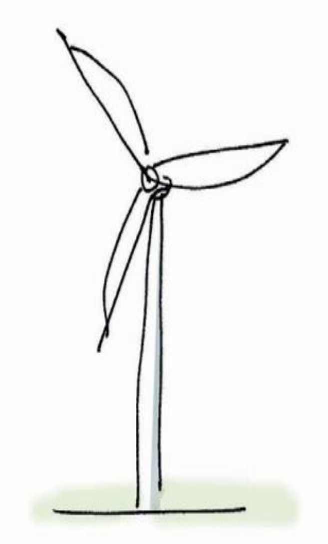
The DFSA has increased our focus on sustainable finance …

- Continue to provide sector-guidance on this new area of regulation as well as contribute to the development of new legislation.

- An increased focus on supervisory activities.

- The supervisory focus is on disclosures and risk management.

- Data still pose a challenge: supervisory focus on transparency of methodes and documentation.



EU is developing standards for sustainable (green) bonds …

The EU is currently negotiating a standard for green bonds

- The purpose is to create a **label** which makes it easier for investors to identify and trust bonds that contribute to the EU's climate and environmental objectives.
- The standard will be **voluntary** but requirements will apply to issuers that use the designation "European green bond" or "EuGB" for their bonds.

Additional labels could be on their way

- The EU Commission announced in their Sustainable Finance Strategy that they plan to develop additional labels for bonds such as:
    - Transition bonds.
    - Sustainability-related bonds.

… to make it easier to identify and trust

Monitoring of climate risk in the Danish financial system …

- In June 2022 the Danish FSA launched work on developing a climate risk stress test with the goal of delivering an operational climate stress test by 2024.

- The climate stress test will involve selected banks covering 81 pct. of assets in the banking sector and pension funds covering 47 pct. of pension contributions.

- The project group has so far reviewed existing literature and held startup meetings with the selected banks and pension funds to determine how to develop a climate stress test suited for the Danish economy and financial sector.

… development of a climate risk stress test

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6. Cyber risk and stress testing

Cyber risk and operational resilience …

- The financial sector in Denmark express:
  - Great concern about cyber security.
  - Cyber risk is the most challenging risk to tackle.

- In line with international institutions such as the ESRB and the Basel Committee on Banking Supervision. it must be assumed that ICT disruptions will occur. Therefore. operational resilience cannot be achieved by focusing solely on preventing ICT disruptions from occurring.

- To be prepared for this the Danish FSA has launched a programme for strengthening the operational resilience of the financial sector. The Central Bank (Nationalbanken) is included in the programme as an advisory partner.

Strengthening operational resilience of the financial sector …

The objective of the programme is to analyse what will happen in case of an extensive ICT disruption; both at enterprise and at sector level.

- the consequences of an extensive ICT disruption will be analysed by means of cyber stress testing.

Based on the knowledge about the consequences acquired in the programme. the DFSA will further the implementation of appropriate initiatives with the individual institutions and at sector level in order to reduce the consequences of a disruption if the results show a need for this.

Cyber stress testing …

Cyber stress testing is a new tool to assess

- whether individual financial institutions and/or the financial system as a whole has the operational capacity to manage a severe but plausible cyber incident that causes a disruption to one or more critical economic functions.
- This involves being able to resume the delivery of the disrupted critical function(s) within tolerable limits through emergency procedures and ultimately restoration of normal operations.

Cyber stress testing is not

- a technical test of controls to withstand a cyber-attack (e.g. TIBER-EU).
- a crisis simulation exercise.
- conducted in real time.

Current status and next steps …

Current: Cyber stress testing has gone live

- Disruption scenario developed in close collaboration with participating firms.
- The participating firms are currently responding to the scenario.
- High level of engagement from participating firms – many constructive questions at Q&A sessions.

Next steps: First results

- Responses to be submitted.
- Analysis.
- Dialogue with participating firms regarding the results and possible mitigating measures.

… first results will provide valuable insight

Summary

- Energy crisis, inflationary pressure and looming recession all contribute to an elevated level of risk.
- Higher interest rates have boosted credit institutions core earnings. But accurate loan impairment levels are important during periods of elevated risks. Nothing gained by deferring loan impairments.
- Banks are in overall more capital-robust than prior to the great financial crisis.
- Higher prevalence of risky mortgage products. The widespread use of loans with a 30-year grace period can increase household indebtedness and vulnerability to negative financial shocks.
- The market for Danish mortgage bonds did not dry up during recent periods of market stress, but has experienced volatility. Liquidity is key and long fixed rate callable bonds reduce the overall risk in the system and most of it is payed by the borrower.
- The Estonia case illustrated a necessity to increase awareness of AML. The DFSA have initiated major initiatives. Technology can better our AML-efforts, but we need to use it carefully.
- Institutions should monitor ESG and climate-related financial risks. Standards and regulation is continuously evolving.
- The DFSA have initiated initiatives to bolster the financial sector against cyber disruptions. Resilience needs to be strengthened. Stress testing is a part of the toolkit.

Thank you