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# FSOR 2023

**FSOR**  
FINANCIAL SECTOR FORUM  
FOR OPERATIONAL RESILIENCE

The Financial Sector forum for Operational Resilience (FSOR) is a public-private collaboration forum that aims to increase cyber resilience in the financial sector in Denmark. FSOR is chaired by Danmarks Nationalbank, and comprises the key players in the Danish financial sector. In 2023, the ordinary meetings of FSOR were held in May and November. At the November meeting, a decision was made to admit Saxo Bank as a new member.

### **Risk analysis guides FSOR's work**

The FSOR members and Danmarks Nationalbank identify and address operational risks that could impact the sector and potentially threaten financial stability. FSOR's risk analysis addresses a number of cyber and supplychain risks. In 2023, FSOR also assessed risks associated with artificial intelligence (AI) and large language models (LLM), quantum technology, use of cloud services, insider threat, DDoS attacks and climate change. By the end of 2023, the risk analysis had identified 37 risks, several of which relate to data protection and the ability to recover from a cyberattack (recovery).

FSOR's risk analysis is updated every six months. Based on the results, FSOR assesses the need for additional measures to reduce the risks identified. In 2023, an analysis was initiated on how payments can be continued in extreme but plausible scenarios.

### **Crisis response ensures cross-sectoral coordination in case of a crisis situation**

Danmarks Nationalbank chairs a secretariat that maintains and updates a crisis management plan at least quarterly, established by FSOR to ensure a coordinated response across the financial sector in the event of incidents with the potential to disrupt financial stability. The crisis management plan supplements the members' own crisis management and is linked to the national crisis management, coordinated by the National Operational Staff (NOST).

In June 2023, the FSOR crisis response team conducted a partial test on an unannounced activation of the crisis management plan amongst the participants. As a representative of the Danish financial sector, Danmarks Nationalbank participated in two tests. In June, a test was conducted across several sectors in Denmark, and in August, a test was conducted across the Nordic-Baltic countries. Lessons learnt from both tests have been incorporated into FSOR's Crisis Management plan.

In August and September 2023, the FSOR crisis response team organised two theme days in Fredericia and Copenhagen, focusing on plan and strategy as well as crisis communication.

### **Tool to increase sector's cyber maturity**

Private members of FSOR have developed a tool where companies can use a questionnaire to assess their cyber maturity and highlight any areas that could benefit from further efforts to increase maturity. A steering group under FSOR is ensuring that the project progresses under the chairmanship of e-nettet, which also acts as the system owner on behalf of the financial sector. In 2023, work was put into customising the tool to meet user needs. The need to adapt to future legal requirements was identified, and measures to achieve this were planned.

### **Cyber survey**

In 2023, Danmarks Nationalbank analysed the cyber maturity of FSOR participants based on a questionnaire in the above-mentioned tool at the end of 2022. Similar surveys on the cyber maturity of the financial sector were conducted in 2016, 2018 and 2020.

The latest survey indicates that the financial sector has a mature level of cybersecurity, albeit with variations among companies. Targeted efforts must continue to increase cyber resilience and limit the impact of cyberattacks. Management commitment in cybersecurity has a positive impact on cyber maturity, and for some, the management's commitment could be further increased, including greater focus on data protection and recovery capabilities. Several companies could devise more concrete plans for systems and data recovery after a cyberattack, and some companies could also increase resilience by strengthening network and data protection.

### **TIBER-DK tests critical financial sector players**

In the TIBER-DK programme, Danmarks Nationalbank coordinates threat-based tests of the cyber resilience of critical actors in the financial sector. All tested participants participate in FSOR. TIBER testing simulates advanced cyberattacks in live operation environments. In 2023, the programme continued according to plan and celebrated an important milestone in December when the first five years were completed.

The annual threat landscape report, prepared by Nordic Financial CERT (NFCERT) with the involvement of relevant parties for the TIBER tests, was published in December 2023. NFCERT has subsequently presented the report to FSOR.

Due to the positive experience with TIBER, the method is being rolled out across Europe. The area is now covered by EU legislation in relation to threat-based red team testing (DORA, Digital Operational Resilience Act), which will apply from January 2025. Danmarks Nationalbank has anchored the Danish experience gained over the

past five years in the detailed guidelines at European level and contributed to domestic legislation. Danmarks Nationalbank will continue this work in 2024.

### **Nordic Cyber in Finance Conference 2023**

In September 2023, Danmarks Nationalbank hosted the annual Nordic Cyber in Finance Conference. The aim of the conference was to bring together all Nordic central banks and relevant financial institutions to strengthen knowledge-sharing and public-private sector co-operation on cyber security in the financial sector. In 2017, Danmarks Nationalbank initiated the Nordic Cyber in Finance Conference, and after having been held in the other Nordic countries, the conference returned to Copenhagen in 2023. The conference featured a number of inspiring speakers from home and abroad. Other central banks have expressed interest in the experiences with FSOR in recent years, and Danmarks Nationalbank shared experiences from FSOR on the joint work to increase the resilience of the financial sector that has been initiated since its establishment in 2016.

### **Peter Ejler Storgaard**

Chair of FSOR

Director and Head of Financial Stability in Danmarks Nationalbank