

Crisis management in the financial sector

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The reliability of the financial system in all situations is of vital importance to society. Financial markets have become international in scope, with the extensive adoption of new technology. Although this has brought benefits, it has also increased the potential threats to the system, and particularly the system infrastructure. Authorities and other financial market participants need to be active both in prevention and in preparing to meet new threats as they arise. Increasing internationalisation has reduced the significance of national borders in financial market contingency planning. Within the European Union, a framework based on multinational agreements has been developed to allow advance preparation for potential crises affecting the financial system. This is being tested in exercises at both national and international level. Business continuity and contingency planning carried out independently by companies and organisations in the financial sector also make an essential contribution to maintaining the ability of the financial markets to withstand crises.

The financial system is a key component of a functioning society

An efficient and stable financial system is one of key features of a modern society. Broadly understood, the financial system encompasses

many different institutions and functional units. Taken together, these constitute part of our society's vital infrastructure.¹ This has been acknowledged regularly in a variety of projects that have produced plans for coping with potentially severe threats to society.²

Finland's financial system is highly advanced technically. Viewed internationally, new technology is used extensively in all financial operations in Finland, enhancing the efficiency of financial sector companies and boosting productivity across the entire economy.

On the other side of the coin is the considerable dependence this brings on technology and the vulnerability of society in situations in the face serious technological disturbances. Increased interdependence between different social functions and broader exploitation of digital technology have brought new threats and risks that are hard to manage.

¹ Other components of critical infrastructure include energy supply, healthcare, information and communications technology, transport, and water and food supply.

² See eg 'Green Paper on a European Programme for Critical Infrastructure Protection (EPCIP)', Annex 2: Indicative list of critical infrastructure sectors (published 17 November 2005) and 'Proposal for a Directive of the Council on the identification and designation of European Critical Infrastructure and the assessment of the need to improve their protection' (presented 12 December 2006). Comparable documents relating to Finland are 'The Strategy for Securing the Functions Vital to Society' (Government Resolution adopted on 23 November 2006), the present Emergency Powers Act (1080/1991) and 'Proposal for a new law on emergency powers, Report of the Emergency Powers Act Committee' (Ministry of Justice, Committee Report (2005:2)). All these highlight the financial system, and particularly the payment system, as a critical and vital function for society.



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Finland's financial system depends on information systems on several levels. Important from the perspective of crisis situations are the centralised systems and service centres for producing financial services. These centres constitute critical nodes of the financial system. Also critical are the information networks used to link service users (ie companies, households and the public sector).

One typical feature of small countries like Finland is the limited number of financial market participants. This increases the importance of each participant and also the financial system's crisis vulnerability compared with larger, more diversified markets.

Recent years have seen increased attention given to how to manage risks to the vital infrastructure of society. Particularly salient are increased technical vulnerability, increased interdependence between

systems, deeper integration and changing threat scenarios.

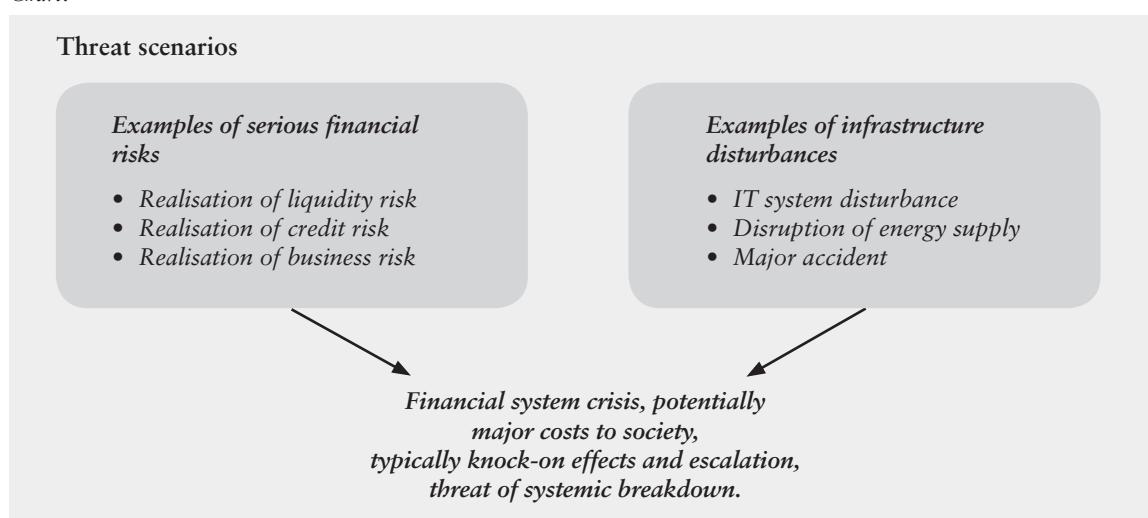
The reassessment of threats has also been prompted in part by the terrorist attacks in New York (September 2001), Madrid (March 2004) and London (July 2005), natural disasters (tsunamis, Hurricane Katrina) and the bird flu that first emerged in 2006 with the associated threat of a pandemic.

Threats to the financial system

Financial sector companies experience some sort of disturbances and risks on a daily basis. These individual events do not, however, cause significant costs to the companies concerned or their customers, and their operations as a whole are not threatened.

More serious are those rare situations and disturbances that threaten the stability and even the very existence of the entire financial system.

Chart.



These typically involve costs and losses that are borne by the economy as a whole in one form or another.

Serious financial market threats can be divided into two main types:

1. The realisation of serious financial risks.
2. Serious disturbances to the infrastructure used in producing financial services.

Financial system threat scenarios have traditionally concerned the realisation of various financial risks. For example, banks' credit or liquidity risks can in some extreme situations be realised in a way that threatens the existence of both an individual bank and the banking system as a whole. The historical banking crises in Finland and other industrial countries are examples of the realisation of financial risks leading to substantial costs.

Another perspective on risks and disturbances, and one that has attracted increasing attention in recent years, is the issue of threats to the financial system infrastructure. The nature and significance of these sorts of crisis have been altered by extensive financial integration and the increasing use of information technology. As a result, various risks, if realised, can spread further and more rapidly than in the past. Hence, the effects of infrastructure disturbances can be much more severe and constitute a risk to the system as a whole.

As a part of efforts to protect vital social infrastructure, the Finnish authorities have sought to assess the most significant threats. The threat scenarios identified in 'The Strategy for Securing the Functions Vital to Society' (Government Resolution adopted on 23 November 2006) are listed in the table below.

From the perspective of the financial system, these are serious threats, although they would impact in different ways. A disturbance in the electricity grid would cause a breakdown in the functioning of infrastructure used in service production, while a major accident or terrorist attack could cause a financial crisis through the destruction of property and asset values. Moreover, assessments carried out jointly by authorities and financial sector companies have identified the following scenarios as posing a

Banking crises are examples of the realisation of financial risks leading to substantial costs.

Table.

Threat scenarios

- *A disturbance in the electricity grid*
- *A serious disturbance of the health and income security of the population*
- *A serious disturbance in the functioning of the economy*
- *Major accidents and natural disasters*
- *Environmental threats*
- *Terrorism as well as organized and other serious crime*
- *Threats linked to migratory flows*
- *Political, economic and military pressure*
- *The use of military force*

Preparations would aim, on one hand, to prevent crisis situations arising in the first place while, on the other hand, minimising the impact if a crisis were to occur nevertheless.

particular threat to the entire sector and the companies operating within it:

- The supply of energy (electricity) is hampered or ceases altogether.
- Information systems stop operating and/or telecom traffic comes to a halt.
- There is a major accident or serious terrorist attack.
- Society experiences a conflict situation similar to war.

The potential impact on an individual financial sector company may be summed up as follows. If any of these threats were realised,

- related parties (other financial market participants, customers) could not be used/reached
- information systems could not be used
- telecom links would not work
- personnel could not be reached
- premises could not be used.

Each of these scenarios would have its own chronological and geographical dimensions that would influence the effects and costs for society. A key feature is the threat of escalation, where the realisation of risk or a threat scenario in one part of the financial system would directly affect other parts of the system, hampering operations and leading to a multiplier effect. If serious enough, such a scenario could threaten the entire financial system and trigger a systemic crisis, ie 'system failure' due to the realisation of risks and disturbances.

Authorities provide the base for preparations against crises

It is essential that both authorities and financial sector companies prepare in advance for potential threats. Such preparations would aim, on one hand, to prevent crisis situations arising in the first place while, on the other hand, minimising the impact if a crisis were to occur nevertheless. To this end, both authorities and individual companies in the sector must have appropriate plans and measures in place in advance and tested in crisis exercises.

Attitudes to crisis preparation naturally vary between authorities and between individual participants. From a central bank perspective it is particularly important to prepare at the level of the system as a whole rather than that of the individual company or other participant.

Finnish preparations for financial crises and all potential threats to the system can be divided into two levels: national and international. At national level, planning is shaped by Finnish legislation – particularly the Emergency Powers Act – and guidelines issued to financial sector companies by the relevant authorities. There is cooperation between the financial market authorities (Ministry of Finance, Bank of Finland, Finnish Financial Supervision Authority, Ministry of Social Affairs and Health, Insurance Supervision Authority). Preparations are given concrete form via eg the National Board of

Economic Defence's financial services pool, which brings together all relevant authorities and market participants in Finland.

At international level, the banking supervisors, central banks and finance ministries of the European Union agreed in 2005 a memorandum of understanding on cooperation in financial crisis situations.

Increased international cooperation reflects both increasing links between national financial systems and deepening financial market integration in Europe. The latter has led to a more centralised structure, in which a single centre can offer services to the entire European market area. Large financial institutions operating in several countries have rapidly grown in importance in recent years. Also relevant from a Finnish perspective is the Nordic dimension, as Finland's financial market is in many ways closely linked to the other Nordic markets.

According to the aforementioned memorandum of understanding, other authorities should be informed in the event of a possible systemic risk, or if one or other party wants to find out if such a risk exists. The memorandum only covers situations where there is thought to be cross-border implications. It is not legally binding, being a document of intent based on voluntary cooperation.

In the Eurosystem, crisis preparations are shaped by a number of factors, including the joint TARGET

payment system run by the European System of Central Banks. In 2003, Nordic central banks signed a memorandum of understanding on financial crisis management. In addition, central banks and supervisory authorities in a number of countries have their own bilateral or multilateral agreements on cooperation. In terms of content, the European and Nordic memoranda concentrate mainly on describing principles, operating methods and the organisation of crisis management in the event of a crisis. Arrangements for the sharing of information in managing crises are a fundamental issue in the memoranda.³

Business continuity planning

In addition to official preparations, the effective management of crisis situations requires as a matter of urgency that financial sector companies also have their own individual business continuity plans and contingency arrangements. Business continuity planning by individual companies and organisations sets out from business principles, agreements with customers and related risk management arrangements.

Financial system risk management, threat prevention and improvement of crisis management capabilities all require constant

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³ See, for example, the 2006 special edition of the Bank of Finland Bulletin on financial stability in Finland (Financial stability 2006). Page 76 lists all international and national memoranda of understanding signed by the Bank of Finland for the securing of financial stability and the management of financial crises.

Are voluntary agreements between authorities and financial sector companies' own business continuity planning sufficient to manage a serious financial crisis or disturbance?

updating and reassessment. In the area of prevention, particularly important at the level of the individual organisation is business continuity planning, the aim of which is to prepare in advance for possible problem situations.

With good planning, companies seek to ensure they are able to continue operating with the smallest possible losses, and to fulfil their obligations even when operations are disrupted as a result of some internal or external event. Besides information system disturbances, other possible disruptive events could include human error, malpractice, a telecommunications break, electricity power cut, fire, water damage, partial or total destruction of premises or the loss of key personnel. Examples of business continuity planning are the use of backup premises and duplication of information systems and electricity supply or transmission lines.

From the perspective of society as a whole, however, business continuity planning of this sort is not really enough and has to be supplemented with other steering mechanisms, such as the agreements mentioned above, statutory obligations and joint action by authorities and companies in the sector.

Assessment of arrangements and their further development through exercises

A topical issue both in Finland and in other European countries is the adequacy of the action and planning

that have already been completed. In the final analysis, is a framework based on voluntary agreements and financial sector companies' own business continuity planning sufficient to manage a serious financial crisis or disturbance affecting several countries?

This question is topical in Europe at present due in part to the increasing importance of large multinational financial corporations. This has led to the networking of production, services and indeed the whole sector and the growth of mutual interdependence across national borders. At the same time, the trend at company level to concentrate on core competencies has led to increasing outsourcing of support functions and services.

The financial system is structurally centralised, particularly in small countries. Against this background, a subsidiary or branch office of a large multinational operator can be systematically important in a small country, and this could pose a problem in the event of a need for crisis management. Statutory control or regulation are highly problematical in an integrated world with free movement of capital.

One answer to this question in recent years has been for authorities to work together and in concert with market participants to organise various crisis exercises. These allow them to test the effectiveness of the memoranda of understanding on crisis management and companies'

own readiness in the face of major risks or significant disturbances. Exercises are generally based on a scenario in which the financial system is threatened with crisis simultaneously in several countries at once.

Authorities in the European Union and the euro area have jointly organised a number of financial crisis exercises and simulations. In 2006, there was both an EU-wide exercise and a separate crisis simulation exercise for the Eurosystem. The Nordic Countries have also arranged crisis exercises among themselves.

In the United Kingdom, the ability of the financial system to withstand crisis has been tested in large annual exercises, with participation from both authorities and market participants.⁴ Among other things, the exercises have focused on the management of pandemics. The most recent financial market contingency exercise in Finland was PATO 2005, which tested the crisis capabilities of both authorities and other parties.

Experiences with these exercises have been for the most part positive. Both the authorities and the representatives of market participants who have participated in the exercises have felt them to be extremely useful. One key focus of testing has been the

flow of information between authorities in different countries.

The exercises have, however, also highlighted the need for development in a number of areas. One of these is to ensure the formation of a common assessment between the different involved parties when crisis threatens or in the event of a disturbance in the financial system. A review of cross-border actions has also been raised. Moreover, the European crisis management system has not yet been tested in a real crisis affecting more than one country.

From the point of view of the Eurosystem, the crisis exercise in 2006 confirmed the preparedness of the Eurosystem for dealing with potentially systemic events that might affect the euro area financial system. Within the Eurosystem, work has already begun on developing improved financial market infrastructure business continuity plans, particularly with reference to the euro area. A characteristic feature of continuity planning in the Eurosystem is the general complexity of systems and the differences in perspective between different institutions.

Challenges for crisis management

The development of Finland's financial markets in recent years as part of the integrating European financial market area poses a number of clear challenges regarding crisis management against potential threats and crises. A high level of dependency

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⁴ See www.fsc.gov.uk, Tripartite initiatives: Financial Sector Market Wide Exercise 2006 Report. In the United Kingdom, the Bank of England, the Financial Services Authority and the Treasury engage in extensive cooperation in the area of financial system continuity planning.

The international nature of possible crises strongly increases the importance of being prepared in advance.

on the flawless operation of information technology is one clearly discernible trend and is taking on new forms. The share of the Finnish financial market in foreign ownership is considerable due to the arrival of large international financial corporations.

European integration exposes national financial systems to disturbances occurring elsewhere and to the knock-on effects of these disturbances. For this reason, both preventive actions and methods of crisis management must cover the entire European Union.

Meeting to these challenges requires constant effort, particularly for authorities in small countries. Credible crisis management and preventive action require wide-ranging international cooperation between financial market authorities (central banks, supervisors and finance ministries).

The international nature of threat scenarios and the crises that could potentially affect Finland's financial system strongly increase the importance of being prepared in advance. The possibility of escalation and the scale of the potential costs from serious crises and disturbances mean that thorough business continuity planning at the level of the individual company or organisation is extremely important and a fundamental component in sound crisis management.

Keywords: financial crises, threat scenarios, crisis simulation exercises, business continuity planning, crisis management