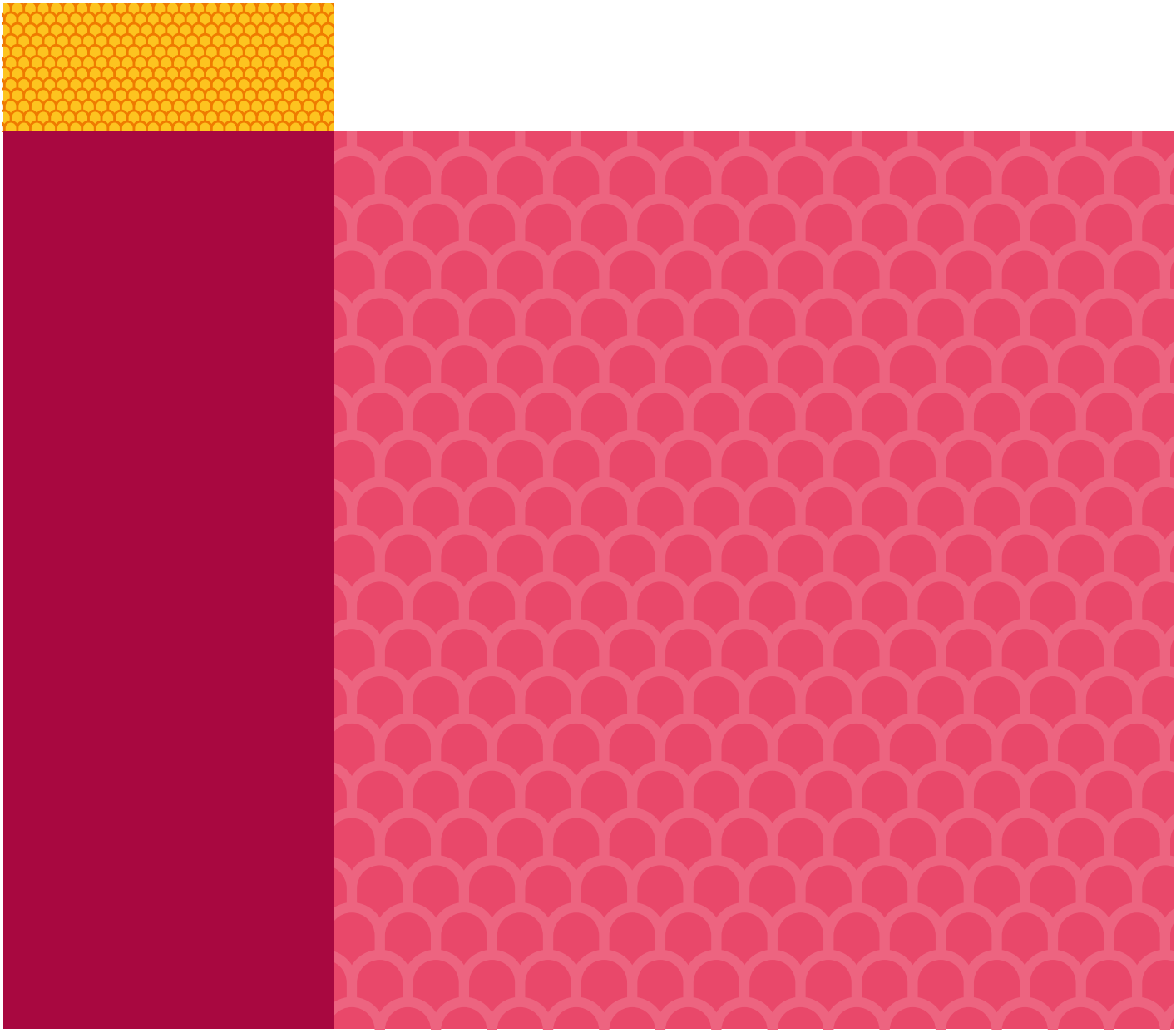
BANK OF ENGLAND

Financial Market Infrastructure

Consultation Paper

Operational Resilience: Central Securities Depositories

December 2019



Consultation Paper

Operational Resilience: Central Securities Depositories

December 2019

The Bank of England (the Bank) invites comments on this Consultation Paper. Comments should reach the Bank by 3 April 2020.

Comments may be sent by email to FMIFeedback@bankofengland.co.uk.

Alternatively, please send comments in writing to:

Operational Resilience (CSDs)
Financial Market Infrastructure Directorate
Bank of England
20 Moorgate
London EC2R 6DA

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Copies of this consultation paper are available to download from the Bank's website at www.bankofengland.co.uk.

Contents

1 Overview

1.1 This consultation paper (CP) sets out proposals for the Bank of England's (the Bank's) expectations for a central securities depository's (CSD's) Operational Resilience Framework and a draft Supervisory Statement (SS) (see appendix) that establishes these expectations. The draft SS sets out what meeting the expectations being consulted on may look like. These expectations are not binding, but they will provide CSDs with information on how the Bank intends to assess the operational resilience of CSDs.

1.2 This consultation is relevant to all current Bank supervised CSDs and CSDs which are planning to apply to the Bank seeking authorisation.

1.3 These expectations have been developed following the publication of Discussion Paper (DP) 1/18 'Building the UK financial sector's operational resilience'.[1] The Bank, Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA) have developed a joint document which addresses the feedback received to this DP and the outcomes associated with an Operational Resilience Framework. This CP should be read in conjunction with this joint document.

1.4 The policy objective is for CSDs to be operationally resilient to disruption events. The Bank considers disruption to settlement to be a financial stability issue, meaning that improving resilience among CSDs would therefore support the Bank's financial stability objective.[2] The Bank therefore considers that improvements in operational resilience should be facilitated by supervisory expectations.

1.5 The Bank considers operational risk to be a risk inherent in doing business. If not managed effectively, it will negatively impact both the financial and the operational activities of a CSD. As a result the Bank expects that CSDs' risk management frameworks should incorporate actions to minimise the likelihood of an operational risk event crystallising; and actions to mitigate and recover from an operational risk event if it crystallises. These risk management frameworks should integrate with the development of appropriate impact tolerances for important business services.

Responses and next steps

1.6 This consultation closes on 3 April 2020. The Bank invites feedback on the proposals set out in this consultation. Please address any comments or enquires to FMIFeedback@bankofengland.co.uk.

1.7 The proposed implementation date for the proposals is Q4 2021.

Summary of proposals

1.8 The policy proposals included in this CP are the Bank's proposed supervisory expectations for the operational resilience of CSDs.

1.9 Consistent with the approach set out in the DP 1/18, the proposals aim to ensure that CSDs deliver improvements to their operational resilience in three main areas:

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1 July 2018: https://www.bankofengland.co.uk/prudential-regulation/publication/2018/building-the-uk-financial-sectors-operational-resilience-discussion-paper.

2 'Financial stability objective' means the objective set out in section 2A of the Bank of England Act 1998.

(i) **prioritising the things that matter:** boards and senior management should prioritise those activities that, if disrupted, would pose a risk to the stability of the UK financial system (financial stability). This may mean a shift away from thinking about the resilience of individual systems and resources and a shift towards considering the services that are provided to identifiable participants (identifying important business services);

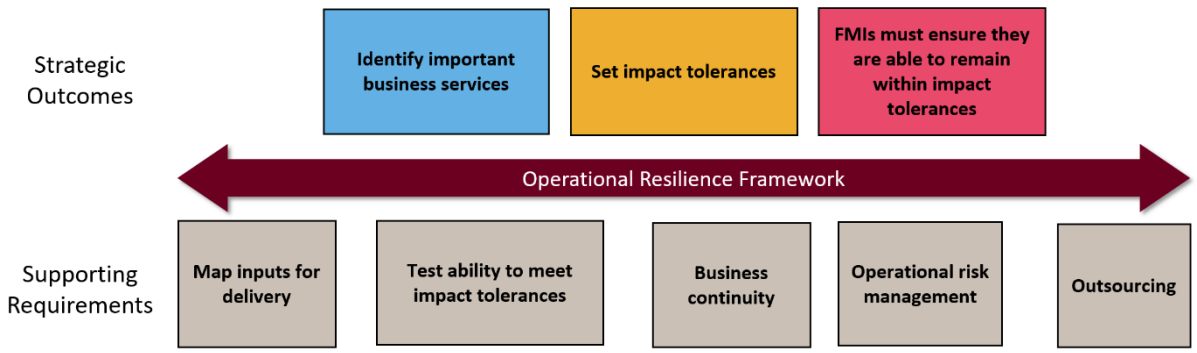
(ii) **setting clear standards for operational resilience:** CSDs should articulate specific maximum levels of disruption within which they will be able to resume the delivery of important business services following extreme but plausible disruptions (setting impact tolerances); and

(iii) **investing to build resilience:** CSDs should have contingency arrangements in place to enable them to resume the delivery of important business services, taking action in advance to ensure that important business services are able to remain within impact tolerances in extreme but plausible scenarios.

1.10 The terminology used in this CP and corresponding draft SS is consistent with the terminology used in those draft SSs relating to operational resilience published by the Bank, PRA and FCA. This is to ensure the UK authorities have a consistent supervisory approach to operational resilience across regulated firms.

1.11 Figure 1 below illustrates the key elements in the Bank's proposed approach.

Figure 1: Strategic outcomes and supporting requirements for the Operational Resilience Framework



Structure of the CP

1.12 Chapter 2 consults on the Bank's proposed expectations regarding a CSD's Operational Resilience Framework.

1.13 Chapter 3 sets out the relationship between the Bank's proposed Operational Resilience Framework and the requirements established in Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 ('CSDR') and Commission Delegated Regulation (EU) No 2017/392 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories ('RTS 2017/392').

(Article 78 (2) of CSDR RTS 2017/392)

2 The Bank's proposed expectations regarding a CSD's Operational Resilience Framework

2.1 This chapter sets out the Bank's expectations for a CSD to produce an 'Operational Resilience Framework'. The Bank proposes to align the definition of operational resilience with that published in DP1/18 'Building the UK financial sector's operational resilience'. DP1/18 stated 'Operational resilience is the ability of an FMI and the sector as a whole to prevent, respond to, recover and learn from operational disruptions'.

2.2 The Bank suggests that a CSD should produce an Operational Resilience Framework and associated material. The Bank proposes that this framework is an approach which will establish how the CSD will meet the operational resilience objectives set out in the draft SS. The Bank suggests that the framework should ensure that a CSD identifies and targets for investment, where necessary, those aspects of its business most sensitive to an operational disruption. The Bank proposes that the extent of the work required to develop the Operational Resilience Framework should be comprehensive but proportionate to the outcomes expected by the Bank.

2.3 The Bank proposes that a CSD's production of an Operational Resilience Framework is consistent with the requirement in Article 70 (1) of CSDR RTS 2017/392 for a CSD to 'have in place a well-documented framework for the management of operational risk with clearly assigned roles and responsibilities.' The Bank views the Operational Resilience Framework as consistent with the business continuity policy and disaster recovery plan referred to in Article 57 (2) (j) of CSDR RTS 2017/392, and not in conflict with those requirements.

2.4 The Bank suggests that the Framework should focus on a CSD's ability to:

- minimise the likelihood of an operational disruption event; and
- mitigate and recover from an operational disruption event.

2.5 The Bank proposes an Operational Resilience Framework should include as a minimum, policies and procedures:

- for the identification of important business services;
- in relation to the approval of impact tolerances for important business services;
- aligned to its broader operational risk framework, for the identification and mapping of people, processes, technology, facilities and information (operational assets) underlying each important business service;
- for identifying risk of disruption to important business services;
- to ensure that important business services, if disrupted can be recovered within the set impact tolerance; and
- for utilising the results of such testing to make improvements to its procedures and capabilities for minimising the likelihood of, and facilitating recovery from, disruption to important business services.

2.6 The Bank suggests that an Operational Resilience Framework should include communications planning. The Bank proposes that this should take into consideration the potential impact of operational resilience disruption on interdependent FMIs, or the effect of disruption across multiple jurisdictions, markets and products.

2.7 The Bank's proposal that a CSD's Operational Resilience Framework includes communications planning is consistent with the requirement in Article 78 (4) (d) of RTS 2017/392 that a CSD shall develop and maintain detailed procedures and plans concerning crisis management and communications, including appropriate contact points, to ensure that reliable and up to date information is transmitted to relevant stakeholders and the competent authority.

(Article 57 (2) (j) of CSDR RTS 2017/392)

(Article 70 (2) of CSDR RTS 2017/392)

(Article 78 (4) (d) of CSDR RTS 2017/392)

Identification of important business services and risks to important business services

2.8 As set out in DP1/18, avoiding disruption to particular systems is a contributing factor to operational resilience, but it is ultimately an important business service that needs to continue to be provided. A focus on important business services will allow appropriate assessment of end-to-end risks to those important business services, thereby increasing operational resilience.

What is a business service?

2.9 A business service is a service that a CSD provides, delivering a specific outcome or utility to an identifiable participant. A business services approach is an effective way to prioritise improvements to systems and processes. Looking at systems and processes on the basis of the business services they support may bring more transparency to and improve the quality of operational resilience decision making, thereby improving operational resilience.

2.10 The Bank suggests that a CSD should consider the chain of activities which make up the business service, from taking on an obligation, to delivery of the service, and determine which parts of the chain are essential to delivery. This would vary by business service. Sometimes the chain will be long, and certain early stages, for example when an obligation is accepted, may not be essential to the final delivery of a service. In other cases, the process of delivering a service may be more integrated and origination may be a key part. The Bank considers that the most essential parts of the service should be operationally resilient, and that firms should accordingly focus their work on the resources necessary to deliver those activities in the chain.

2.11 The Bank would not expect internal services such as those provided by human resources or payroll teams to be identified as business services for the purposes of the proposed policy. Failure to deliver internal services would only give rise to concerns from the Bank's perspective when it affected the delivery of outward-facing business services which have direct consequences for financial stability. Internal services, if necessary for the delivery of important business services, should be included in the mapping work a CSD should be performing.

What makes a business service important?

2.12 The Bank proposes that this identification process should identify specific market or product business services that a CSD provides, but that it should also consider operational activities that

support or comprise elements of market or product business services, which could also be deemed important business services. Such operational activities could include:

- issuance;
- settlement (by product type);
- custodian relations and management;
- credit risk management;
- collateral management; and
- reimbursement procedures and sanctioning rates.

2.13 The Bank proposes that CSDs will be expected to identify important business services by considering a variety of factors. Examples of factors that are relevant to the identification of an important business service might be:

- the relevant market share of the CSD;
- the number of members the CSD serves;
- the substitutability of the business service; or
- regulatory driven activity or external obligations.

2.14 The introduction of the concept of important business services will enable the Bank to prioritise its supervision of CSDs so as to foster financial stability.

The Bank intends that it will consider that a business service is an 'important business service' if a prolonged disruption of that business service would significantly disrupt the orderly functioning of a market which a CSD serves, thereby impacting financial stability.

2.15 The Bank proposes that this definition of 'important business services' should be broader than the concept of 'critical operations' established in Article 78 (1) of RTS 2017/392. However, the Bank proposes that the expectation that a CSD should identify its important business services and the risks to these business services is consistent with Article 66 (2) of RTS 2017/392, which requires a CSD to identify all potential single points of failure in its operations and assess the evolving nature of the operational risk that it faces. This is because important business services is intended to encompass a wider range of activities, which may not all be critical operations.

2.16 The Bank suggests that a CSD should identify its important business services in order to understand both the implications of disruption of a particular business process to a participant, as well as the interrelationship and interdependency between important business services in the way they support a participant.

2.17 The Bank proposes that a CSD, having identified its important business services, should undertake an assessment of the operational risks that are relevant to these important business services. The Bank suggests that the list of relevant operational risks should be used in the design of disruption scenarios for the purposes of testing, but should also have wider usage in the CSD for the purposes of managing operational resilience. The Bank proposes that each CSD should use its own risk assessment based upon its own circumstances, markets, products and operational structure to understand which operational risks are relevant, and where operational resilience issues exist.

2.18 The Bank proposes to include a non-exhaustive set of examples of the types of risks that the Bank might expect to be considered by a CSD.

(Article 66 (2) of CSDR RTS 2017/392)

(Article 78 (2) of CSDR RTS 2017/392)

Setting the impact tolerance for important business services

2.19 The Bank intends to define impact tolerance as the maximum tolerable level of disruption for an important business service, whereby further disruption would pose a significant impact to the market the CSD serves. A CSD should consider a range of possible measures by which to judge the appropriate impact tolerance for a given important business service. These factors could include for example: the length of time of an outage, the number of participants impacted, the volumes and values of transactions affected.

2.20 Impact tolerances provide a clear standard which the Bank would expect a CSD to remain within, and which boards and senior management could use to drive improvements to their operational resilience.

2.21 The Bank suggests that impact tolerances should be set on the assumption that disruptions will occur. The draft SS sets out some proposed metrics that a CSD could consider when setting a tolerance.

2.22 The Bank proposes that the impact tolerance is complementary to the recovery time objective for a CSD's critical services established in Article 78 (2) of RTS 2017/392. This is because the Bank views the definition of 'important business services' as broader than the concept of 'critical operations'. The Bank suggests that the two-hour maximum recovery time, therefore, only applies to those 'important business services' that are considered to also be 'critical operations'. This two-hour maximum recovery time for a CSD's 'critical operations' must be met and should be identified and catered for in a CSD's disaster recovery plan.

2.23 In addition, the impact tolerances that the Bank proposes to introduce differ from risk appetites. One key difference is that impact tolerances assume a particular risk has crystallised rather than focusing on the likelihood and impact of operational risks occurring. A CSD that is able to remain within its impact tolerances increases its ability to respond to extreme but plausible disruptions, whereas risk appetites are likely to be exceeded in these disruptions.

2.24 The Bank proposes that a CSD should define an impact tolerance in order to set a measure for each important business service in respect of which procedures can be developed and testing carried out. The Bank suggests that a CSD should ensure that each important business service remains within the impact tolerance which the CSD has set for it. A CSD may be unable to meet the impact tolerance in all circumstances; in this instance the Bank proposes that a CSD should take steps to return the important business service to within its impact tolerance where there has been a

breach of that important business service's impact tolerance. The Bank proposes that this expectation is consistent with the requirements laid out in Article 70 (3) of RTS 2017/392, for a CSD to 'define and document clear operational reliability objectives, including operational performance objectives and committed service-level targets for its services and securities settlement systems. It shall have policies and procedures in place to achieve those objectives'.

2.25 Further, the Bank proposes that the requirement that a CSD should set impact tolerances for its important business services is consistent with Article 49 (2) (third sub-paragraph) of RTS 2017/392, which requires that a CSD's board shall define, determine and document an appropriate level of risk tolerance and risk bearing capacity for the CSD. The Bank's proposed expectations of a CSD's board in relation to the Operational Resilience Framework are set out in paragraphs 2.44-2.49 of this CP. The Bank proposes that in setting an impact tolerance for important business services, a CSD should leverage existing risk management frameworks to determine the acceptable level of disruption it is able to tolerate. CSDs may already be setting its own risk appetite based on its existing risk management framework.

2.26 The Bank proposes that the CSD should also set out the metrics that it will consider and monitor when setting a tolerance, which may be qualitative or quantitative. The Bank proposes that these metrics need not necessarily be time-based, but could instead be based on financial loss to participants, or counterparties impacted as a result of market disruption. The Bank does not provide any specific metrics for this purpose. The Bank proposes that this expectation is consistent with the requirements set out in Article 70 (4) of RTS 2017/392, which requires a CSD to 'ensure that its operational performance objectives and service-level targets…include both qualitative and quantitative measures of operational performance.'

2.27 The Bank proposes that a CSD should take reasonable steps to evidence that it can operate within the impact tolerance for each important business service in the event of disruption to its operations.

(Article 49 (2) (third sub-paragraph) of CSDR RTS 2017/392)

(Article 70 (3) of CSDR RTS 2017/392)

(Article 70 (4) of CSDR RTS 2017/392)

(Article 78 (2) of CSDR RTS 2017/392)

Mapping and identification of dependencies

2.28 The Bank suggests that a CSD should map dependencies. Mapping of dependencies should entail a CSD identifying and documenting the necessary people, processes, technology, facilities and information required to deliver each of the CSD's important business services. This mapping should facilitate the gathering of evidence to diagnose and remedy vulnerabilities in a CSD's important business services. The Bank considers this a necessary step to ensure a thorough understanding of the ways in which operational disruption could occur.

2.29 For example, a CSD's mapping could highlight vulnerabilities in how important business services are being delivered, such as limited substitutability of resources, single points of failure, and concentration risk. The proposed Operational Resilience Framework would require a CSD to take action to remediate these vulnerabilities so that important business services could be delivered within impact tolerances.

2.30 The Bank proposes that the mapping and identification of dependencies is consistent with the requirement in Article 77 (1) (a) of RTS 2017/392 for a CSD to conduct a business impact analysis to prepare a list with all the processes and activities that contribute to the delivery of the services it provides. However, Bank proposes that this mapping exercise is broader in scope and application as it encompasses important business services, whose definition is broader than the concept of 'critical operations' established in Article 78(2) of RTS 2017/392.

2.31 The Bank intends that the mapping of the dependencies within important business services should allow a CSD to comprehensively understand how interconnected or concentrated its important business services, products, and markets are. The Bank proposes this is necessary in order to design, understand and evaluate the full implications of scenarios (as described in 2.34-2.40 below). This will help the CSD to prioritise its mitigation and recovery actions by identifying specific vulnerabilities.

2.32 The Bank suggests that the mapping of dependencies should include any outsourced providers, including critical service providers that the CSD considers to be involved in the supply of important business services. CSDs should review the risks to its important business services from other parties as a result of inter-dependencies, and develop appropriate risk management tools. The Bank proposes that this expectation is consistent with the requirement under Article 68 (1) of RTS 2017/392, which states a CSD 'shall identify critical utilities providers and critical service providers that may pose risks to CSD's operations due to its dependency on them'.

(Article 68 (1) of CSDR RTS 2017/392)

(Article 77 (1) (a) of CSDR RTS 2017/392)

(Article 78(2) of CSDR RTS 2017/392)

Testing, monitoring and reporting

2.33 The Bank proposes that a CSD should test its important business services against a range of extreme but plausible disruption scenarios to establish whether these important business services can remain within their impact tolerances. The Bank proposes that once a CSD has established what its important business services are, and an impact tolerance for each important business service, the CSD can more precisely define the types of events which will cause disruption to such an important business service and, this will aid the CSD in being prepared for disruption.

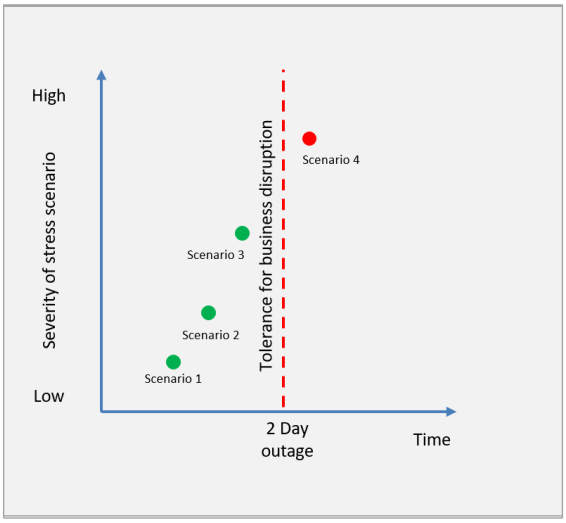
2.34 Paragraph 3.23 in the draft SS sets out the Bank's intention that a CSD should develop a testing plan that details how it would assure itself that it is able to remain within impact tolerances for its important business services. The entire chain of activities that have been identified as the important business service should be considered when developing testing plans.

2.35 The severity of scenarios used by a CSD for testing could be varied by increasing the number or type of resources unavailable for delivering the important business service, or extending the period for which a particular resource is unavailable. The mapping work that a CSD could undertake is likely to be useful in informing it of how its scenarios could be made more difficult.

2.36 A CSD should test a range of scenarios, including those in which they anticipate exceeding their impact tolerance. This is illustrated in figure 2 below. The Bank does not currently propose to set scenarios for a CSD to use when testing their ability to remain within the impact tolerance for their important business services.

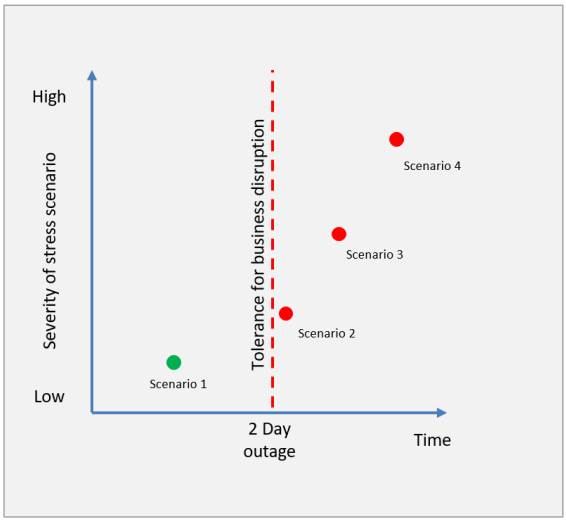
Figure 2: Some scenarios may see impact tolerances exceeded

Case one: A CSD considers its impact tolerance against extreme but plausible scenarios. Operational resilience is sufficient – it is disproportionate to expect the CSD not to breach its impact tolerance in the extreme scenario of scenario 4 .



Key
- Scenario recovered within tolerance
- Scenario not recovered within tolerance

Case two: A CSD considers its impact tolerance against extreme but plausible scenarios. In this case, operational resilience is not sufficient – the CSD should take steps to improve operational resilience.



Key
- Scenario recovered within tolerance
- Scenario not recovered within tolerance

2.37 The Bank proposes that that the testing of important business services against disruption scenarios is consistent with the requirement in Article 77 (2) of CSDR RTS 2017/392 for a CSD to identify how various scenarios affect the continuity of its critical operations. However, the Bank proposes that testing is broader in scope and application as it encompasses important business services, whose definition is broader than the concept of 'critical operations' established in Article 78 (2) of RTS 2017/392.

2.38 The Bank suggests that a CSD should:

(i) conduct scenario analyses of its ability to meet its impact tolerance for each of its important business services in the event of extreme but plausible disruption to its operations;

(ii) identify an appropriate range of adverse scenarios of varying nature, severity and duration, relevant to its business and risk profile, and

(iii) consider the risks to delivery of its important business services in those scenarios.

2.39 Where the impact tolerance cannot be met for any important business service, or where there is uncertainty as to whether it can be met, the Bank proposes that a CSD should be able to provide an explanation as to why this has happened and what remedial actions it will undertake to ensure the impact tolerance can be met in future. In such situations, the Bank proposes that the CSD should explain what mitigating actions will be taken to ensure the important business service can be brought within the firm's impact tolerance should disruption occur. In addition, the Bank proposes that the relevant important business service should be prioritised when the CSD makes choices about remediation or improvements in its systems, processes and technologies.

2.40 The Bank proposes that in setting an impact tolerance for important business services, CSDs will be expected to incorporate these impact tolerances into the monitoring and reporting procedures of key qualitative and quantitative measures and processes which support delivery of these services, so as to guide management in taking actions to control risks to a CSD's ability to stay within the defined impact tolerance.

(Article 77 (2) of CSDR RTS 2017/392)

(Article 78 (2) of CSDR RTS 2017/392)

(Article 79 of CSDR RTS 2017/392)

Documentation

2.41 The Bank suggests that a CSD should make a written record of the assessments made as a result of the Operational Resilience Framework procedures and shall provide this to the Bank upon request.

2.42 The Bank proposes that this requirement for a CSD to maintain documentation relating to its Operational Resilience Framework is consistent with the requirement in Article 47 (1) of RTS 2017/392 for a CSD to establish documented policies, procedures and systems that identify, measure, monitor, manage and enable reporting on the risks that the CSD may be exposed to and the risks that the CSD poses to any other entities including its participants and their clients, as well as linked CSDs, CCPs, trading venues, payment systems, settlement banks, liquidity providers and investors. The Bank also considers this consistent with the requirement in Article 77 (3) of RTS 2017/389 for a CSD to ensure its business impact analysis and risk analysis are kept up to date.

2.43 In particular, the Bank suggests that a CSD should make a written record of the determinations made in respect of:

- the identification of its important business services;
- the setting of its impact tolerances for those important business services;
- the mapping and identification of interdependencies in relation to those important business services; and
- the testing, monitoring and reporting of its important business services ability to stay within their impact tolerance.

(Article 47 (1) of CSDR RTS 2017/392)

(Article 77 (3) of CSDR RTS 2017/389)

Governance Arrangements

2.44 The Bank suggests that a credible Operational Resilience Framework will not only take into account testing and improvement of the Framework, but will also be subject to a CSD's governance process.

2.45 The Bank proposes that this expectation for a CSD's Operational Resilience Framework to be subject to a CSD's governance process is consistent with the requirement in Article 49(2) (third

sub-paragraph) of RTS 2017/392 for the management body of a CSD to assume final responsibility for managing a CSD's risks.

2.46 The Bank intends that a CSD's board, directly or through the use of relevant sub-committees, should assure itself that the Operational Resilience Framework is fit for purpose. The Bank proposes that a CSD's board should ensure that it regularly reviews and approves the Operational Resilience Framework, at intervals it deems appropriate or following an event where an impact tolerance has been breached.

2.47 The Bank proposes that the body designated with responsibility for risk management by the board of directors should:

- approve the CSD's identified list of important business services;
- approve the CSD's impact tolerances for the important business services;
- be satisfied that the CSD's important business services are mapped effectively;
- review the results of impact tolerance testing; and
- be satisfied that appropriate risk mitigation steps have been undertaken.

2.48 The Bank proposes that a CSD's Operational Resilience Framework should be subject to periodic assessment by the body designated with responsibility for audit by the board of directors, in line with its audit approach but taking into consideration material changes to the Framework. The Bank proposes that this expectation is consistent with the requirement in Article 73 (1) of RTS 2017/392, which states that 'a CSD's operational risk-management framework and systems shall be subject to audits'.

2.49 The Bank suggests that this internal audit assessment should cover: i) the extent to which the Operational Resilience Framework satisfies the Bank's expectations as laid out in this SS; and ii) the effectiveness of the CSD's operational resilience processes.

(Article 49 (2) (third sub-paragraph) of CSDR RTS 2017/392)

(Article 73 (1) of CSDR RTS 2017/392)

3 Relationship with CSDR and associated technical standards

3.1 The actions that the Bank proposes CSDs to take are grounded in the requirements established in Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 ('CSDR') and Commission Delegated Regulation (EU) No 2017/392 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories ('RTS 2017/392').

3.2 In particular, Article 70 of RTS 2017/392, which specifies further Article 47 of RTS 2017/392, establishes a requirement that a 'CSD shall have in place a well-documented framework for the management of operational risk with clearly assigned roles and responsibilities. A CSD shall have appropriate IT systems, policies, procedures and controls to identify, measure, monitor, report on and mitigate its operational risk'. This SS is consistent with this requirement. The Bank has developed expectations that a CSD should establish an 'Operational Resilience Framework', as part of which a CSD should identify its 'important business services', establish an 'impact tolerance' for these services and identify and map their dependencies, and to use scenario testing to establish whether they can stay within their impact tolerances.

3.3 This CP introduces the concept of 'important business services'. The Bank views the concept of important business services as broader than the concept of 'critical operations' established in Article 22 (2) CSDR and Article 78(1) of RTS 2017/392. However, the Bank views the expectation that a CSD should identify its important business services and the risks to these business services as consistent with Article 66 (2) of RTS 2017/392, which requires a CSD to identify all potential single points of failure in its operations and assess the evolving nature of the operational risk that it faces. The requirement in Article 78 (2) and Article 77 (2) of RTS 2017/392, for a CSD to identify and include a recovery-time objective no longer than two hours for critical operations, and to conduct a risk analysis to identify how various scenarios affect the continuity of its critical operations, would only apply to an important business service that a CSD considers to be a 'critical operation'.

3.4 CSDs must continue to meet the requirements established by CSDR and its associated technical standards. No additional requirements are imposed by this SS beyond those imposed by CSDR and its associated technical standards and the Bank considers all expectations set out in this SS to be consistent with the general requirements of Article 45 of CSDR and Article 70 of CSDR RTS 2017/392, as set out above.

- (Article 22 (2) of CSDR).
- (Article 45 of CSDR).
- (Article 70 of CSDR RTS 2017/392).
- (Article 77 (2) of CSDR RTS 2017/392).

(Article 78 (2) of CSDR RTS 2017/392).

Appendix: Draft Supervisory Statement 'Operational Resilience: Central Securities Depositories'

Contents

1 Introduction

1.1 This Supervisory Statement (SS) is relevant to all Bank of England (Bank) authorised central securities depositories (CSDs) and any CSDs seeking authorisation by the Bank. It explains the Bank's supervisory approach to operational resilience, which is relevant to many areas of a CSD's operations. The Bank considers disruption to settlement has the potential to be a financial stability issue, meaning that a lack of resilience amongst CSDs would therefore represent a threat to the Bank's financial stability objective.[1] The Bank therefore considers that improvements in operational resilience, consistent with the approach for other FMIs, should be facilitated by supervisory expectations.

1.2 The policy objective of this SS is for CSDs to be resilient to operational disruption events. Consistent with the approach for other FMIs, this SS contains a set of actions that the Bank expects CSDs to undertake in order to achieve a level of operational resilience which, in the Bank's view, is sufficient. Taken together, the aim of this framework is to ensure that CSD's risk management frameworks cover both minimising the likelihood of an operational disruption occurring and mitigating and recovering from an operational disruption once such disruption crystallises.

Relationship with CSDR and associated technical standards

1.3 The actions that the Bank expects CSDs to take as a result of this SS are grounded in the requirements established in Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 ('CSDR') and Commission Delegated Regulation (EU) No 2017/392 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories ('RTS 2017/392').

1.4 In particular, Article 70 of RTS 2017/392, which specifies further Article 47 of RTS 2017/392, establishes a requirement that a 'CSD shall have in place a well-documented framework for the management of operational risk with clearly assigned roles and responsibilities. A CSD shall have appropriate IT systems, policies, procedures and controls to identify, measure, monitor, report on and mitigate its operational risk.' This SS is consistent with this requirement. The Bank has developed expectations that a CSD should establish an 'Operational Resilience Framework', as part of which a CSD should identify its 'important business services', establish an 'impact tolerance' for these services and identify and map their dependencies, and use scenario testing to establish whether they can stay within their impact tolerances. Definitions for these terms are provided in Chapter 2.

1.5 This SS introduces the concept of important business services. The Bank views the concept of important business services as broader than the concept of 'critical operations' established in Article 22 (2) CSDR and Article 78(1) of RTS 2017/392. However, the Bank views the expectation that a CSD should identify its important business services and the risks to these business services as consistent with Article 66 (2) of RTS 2017/392, which requires a CSD to identify all potential single points of failure in its operations and assess the evolving nature of the operational risk that it faces. The

[1] Financial stability objective' means the objective set out in section 2A of the Bank of England Act 1998.

requirement in Article 78 (2) and Article 77 (2) of RTS 2017/392, for a CSD to identify and include a recovery-time objective no longer than two hours for critical operations, and to conduct a risk analysis to identify how various scenarios affect the continuity of its critical operations, would only apply to an important business service that a CSD considers to be a 'critical operation'.

1.6 The Bank will supervise the operational resilience policy in line with its existing supervisory approach for FMIs. The Bank's supervision of FMIs is judgement-based and forward-looking. It is carried out using a supervisory risk assessment framework to identify risks that FMIs may be exposed to and the mitigants that FMIs have in place to guard against those risks.

1.7 CSDs must continue to meet the requirements established by CSDR and its associated technical standards. No additional requirements are imposed by this SS beyond those imposed by CSDR and its associated technical standards and the Bank considers all expectations set out in this SS to be consistent with the general requirements of Article 45 of CSDR and Article 70 of CSDR RTS 2017/392, as set out above.

1.8 Relevant CSDR standards are italicised and embedded in the body in the text and following each relevant section:

(Article 22(2) of CSDR)

(Article 45 of CSDR)

(Article 70 of CSDR RTS 2017/392)

(Article 77(2) of CSDR RTS 2017/392)

(Article 78(2) of CSDR RTS 2017/392)

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1.10 Chapter 2 establishes the definitions and concepts used in the SS.

1.11 Chapter 3 sets out the Bank's expectations regarding a CSD's Operational Resilience Framework.

2 Definitions and Concepts

Use of terminology

2.1 The terminology used in this SS is consistent with the terminology used in those SSs relating to operational resilience published by the PRA and FCA. This is to ensure the UK authorities have a consistent supervisory approach to operational resilience across regulated firms. However, the relevant articles of CSDR and associated technical standards are referenced throughout.

Operational Resilience

2.2 Operational resilience is the ability of FMIs and the sector as a whole to prevent, respond to, recover and learn from operational disruptions.

Important business services

2.3 A business service is a service that a CSD provides, delivering a specific outcome or utility to an identifiable participant. The Bank considers that a business service is an 'important business service' if a prolonged disruption of that business service would significantly disrupt the orderly functioning of a market which a CSD serves, thereby impacting financial stability.

2.4 This definition of important business services is broader than the concept of 'critical operations' established in Article 78 (1) of RTS 2017/392.

2.5 CSDs are expected to identify whether a business service is important by considering a variety of factors. Examples of factors that are relevant to the identification of a business service might be:

- the market share of the CSD;
- the number of members the CSD serves;
- the substitutability of the business service; or
- regulatory driven activity or external obligations.

2.6 This identification process should identify specific market or product business services that a CSD provides but it should also consider operational activities that support or comprise elements of market or product business services, which could also be deemed important business services. Such operational activities could include:

- Issuance;
- settlement (by product type);
- custodian relations and management;
- credit risk management;
- collateral management; and
- reimbursement procedures and sanctioning rates.

(Article 78 (1) of CSDR RTS 2017/392)

Impact tolerance

2.7 Impact tolerance is the maximum tolerable level of disruption for an important business service, whereby further disruption would pose a significant impact to the market the CSD serves. A CSD should consider a range of possible measures by which to judge the appropriate impact tolerance for a given important business service. These factors could include for example: the length of time of an outage, the number of participants impacted, the volumes and values of transactions affected.

2.8 The Bank views a CSD's impact tolerance for an important business service as distinct to the recovery-time objective for a CSD's critical operations established in Article 78(2) of RTS 2017/392. This recovery-time objective for a CSD's critical operations must be met and should be identified and catered for in a CSD's disaster recovery plan.

2.9 As noted above, the Bank views the definition of important business services as broader than the concept of 'critical operations'. The recovery-time objective need not, therefore, apply to all important business services, but only to those that are also considered to be 'critical operations'.

(Article 78 (2) of CSDR RTS 2017/392)

3 The Bank's expectations regarding a CSD's Operational Resilience Framework

3.1 The Bank expects a CSD to produce an Operational Resilience Framework and associated material. This framework is an approach which will establish how the CSD will meet the operational resilience objectives set out in this SS. The framework should ensure that a CSD identifies and targets for investment, where necessary, those aspects of its business most sensitive to an operational disruption. The extent of the work required to develop the Operational Resilience Framework should be comprehensive but proportionate to the outcomes expected by the Bank.

3.2 The Bank views a CSD's production of an Operational Resilience Framework as consistent with the requirement in Article 70 (1) of CSDR RTS 2017/392 for a CSD to 'have in place a well-documented framework for the management of operational risk with clearly assigned roles and responsibilities.' The Bank views the Operational Resilience Framework as consistent with the business continuity policy and disaster recovery plan referred to in Article 57 (2) (j) of CSDR RTS 2017/392, and not in conflict with those requirements.

3.3 The Framework should focus on a CSD's ability to:

- minimise the likelihood of an operational disruption event; and
- mitigate and recover from an operational disruption event.

3.4 The Bank expects an Operational Resilience Framework to include as a minimum, policies and procedures:

- for the identification of important business services;
- in relation to the approval of impact tolerances for important business services;
- aligned to its broader operational risk framework, for the identification and mapping of people, processes, technology, facilities and information (operational assets) underlying each important business service;
- for identifying risk of disruption to important business services;
- to ensure that important business services, if disrupted can be recovered within the set impact tolerances; and
- for testing and utilising the results of such testing in order to make improvements to its procedures and capabilities for minimisation of the likelihood of and the mitigation of, and recovery from, disruption to important business services.

3.5 The Bank further expects an Operational Resilience Framework to include communications planning. This should take into consideration the potential impact of operational resilience disruption on interdependent FMIs, or the effect of disruption across multiple jurisdictions, markets and products.

3.6 The Bank views the expectation that a CSD carries out communications planning as consistent with the requirement in Article 78 (4) (d) of RTS 2017/392 that a CSD shall develop and maintain detailed procedures and plans concerning crisis management and communications, including

appropriate contact points, to ensure that reliable and up to date information is transmitted to relevant stakeholders and the competent authority.

(Article 57 (2) (j) of CSDR RTS 2017/392)

(Article 70 (2) of CSDR RTS 2017/392)

(Article 78 (4) (d) of CSDR RTS 2017/392)

Identification of important business services and risks to important business services

3.7 A CSD should consider the chain of activities which make up the business service, from taking on an obligation, to delivery of the service, and determine which parts of the chain are essential to delivery.

3.8 The Bank expects a CSD to be capable of identifying all types of important business services in order to understand both the implications of disruption of a particular business process to a participant as well as the interrelationship and interdependency between important business services in the way they support a participant.

3.9 The Bank expects a CSD, having identified its important business services, to undertake an assessment of the operational risks that are relevant to these important business services. The list of relevant operational risks is expected to be used in the design of disruption scenarios for the purposes of testing, but should also have wider usage in the CSD for the purposes of managing operational resilience. Each CSD is expected to use its own risk assessment based upon its own circumstances, markets, products and operational structure to understand which operational risks are relevant, and where operational resilience issues exist.

3.10 The Bank views the concept of important business services as broader than the concept of 'critical operations' established in Article 78(2) of RTS 2017/392. However, the Bank views the expectation that a CSD should identify its important business services and the risks to these business services as consistent with Article 66 (2) of RTS 2017/392, which requires a CSD to identify all potential single points of failure in its operations and assess the evolving nature of the operational risk that it faces.

3.11 A non-exhaustive set of examples of the types of risks that the Bank might expect to be considered by a CSD are listed below.

- **Data breach:** participant or other business data compromised, for example through a cyber-attack.
- **Internal fraud:** transactions intentionally mis-reported.
- **External fraud:** theft/robbery.
- **Employment practices:** compensation and/or benefit failure, termination issues, organised labour activity.
- **Clients, Products & Business practices**: legal breaches, regulatory breaches, breach of privacy, account churning, misuse of confidential information.
- **Damage to physical assets**: natural disaster losses, human losses.

- **Business disruption and system failures**: hardware or software failure, telecommunications or utilities outages.

- **Execution delivery and process management:** miscommunication, model or system mis-operation, delivery failure, collateral management failure.

(Article 66 (2) of CSDR RTS 2017/392)

(Article 78 (2) of CSDR RTS 2017/392)

Setting the impact tolerance for important business services

3.12 The Bank expects a CSD to define an impact tolerance in order to set a measure for each important business service in respect of which procedures can be developed and testing carried out. The Bank expects a CSD to ensure that each important business service remains within the impact tolerance which the CSD has set for it. A CSD may be unable to meet the impact tolerance in all circumstance, in this instance the Bank expects a CSD to take steps to return the important business service to within its impact tolerance where there has been a breach of that important business service's impact tolerance. The Bank views this expectation as consistent with the requirements laid out in Article 70 (3) of RTS 2017/392, for a CSD to 'define and document clear operational reliability objectives, including operational performance objectives and committed service-level targets for its services and securities settlement systems. It shall have policies and procedures in place to achieve those objectives'.

3.13 The Bank considers that an impact tolerances differs from a risk appetites. One key difference is that impact tolerances assume a particular risk has crystallised rather than focusing on the likelihood and impact of operational risks occurring.

3.14 The Bank views the impact tolerance as distinct to the recovery time objective for a CSD's critical services established in Article 78(2) of RTS 2017/392. This is because the Bank views the definition of important business services as broader than the concept of 'critical operations'. The recovery time objective, therefore, only applies to those important business services that are considered to also be 'critical operations'. This two hour maximum recovery time for a CSD's 'critical operations' must be met and should be identified and catered for in a CSD's disaster recovery plan.

3.15 Further, the Bank views the expectation that a CSD should set an impact tolerance for its important business services as consistent with Article 49 (2) (third sub-paragraph) of RTS 2017/392, which requires that a CSD's board shall define, determine and document an appropriate level of risk tolerance and risk bearing capacity for the CSD. The Bank's expectations of a CSD's board are outlined in paragraphs 3.31-3.36.

3.16 The Bank expects that in setting an impact tolerance for important business services, a CSD should leverage existing risk management frameworks to determine the acceptable level of disruption it is able to tolerate. A CSD may already be setting its own risk appetite based on its existing risk management framework.

3.17 The CSD should also set out the metrics that it will consider and monitor when setting a tolerance, which may be qualitative or quantitative. These metrics need not necessarily be time-based, but could instead be based on to financial loss to participants, or counterparties impacted as a result of market disruption. The Bank does not propose any specific metrics for this purpose. The Bank considers this expectation to be consistent with the requirement in Article 70 (4) of RTS

2017/392, which requires a CSD to 'ensure that its operational performance objectives and service-level targets…include both qualitative and quantitative measures of operational performance.'

3.18 The Bank expects a CSD to take reasonable actions to evidence that it can operate within the impact tolerance for each important business service in the event of disruption to its operations.

(Article 49 (2) (third sub-paragraph) of CSDR RTS 2017/392)

(Article 70 (3) of CSDR RTS 2017/392)

(Article 70 (4) of CSDR RTS 2017/392)

(Article 78 (2) of CSDR RTS 2017/392)

Mapping and identification of dependencies

3.19 The Bank expects a CSD to map dependencies. Mapping of dependencies should entail a CSD identifying and documenting the necessary people, processes, technology, facilities and information required to deliver each of the CSD's important business services. This mapping should facilitate the gathering of evidence to diagnose and remedy vulnerabilities in a CSD's important business services. The Bank considers this a necessary step to ensure a thorough understanding of the ways in which operational disruption could occur.

3.20 The Bank considers that the mapping and identification of dependencies is consistent with the requirement in Article 77 (1) (a) of RTS 2017/392 for a CSD to conduct a business impact analysis to prepare a list with all the processes and activities that contribute to the delivery of the services it provides. However, the Bank expects this mapping exercise to be broader in scope and application as it encompasses important business services, whose definition is broader than the concept of 'critical operations' established in Article 78(2) of RTS 2017/392, as explained in paragraphs 1.6 and 2.9 above.

3.21 Mapping of the dependencies within important business services should allow a CSD to comprehensively understand how interconnected or concentrated its important business services, products, and markets are. This is necessary in order to design, understand and evaluate the full implications of scenarios (as described in 4.15 below). This will help the CSD to prioritise its mitigation and recovery actions by identifying specific vulnerabilities.

3.22 The Bank proposes that the mapping of dependencies should include any outsourced providers, including critical service providers that the CSD considers to be involved in the supply of important business services. A CSD should review the risks to its important business services from other parties as a result of inter-dependencies, and develop appropriate risk management tools. The Bank considers this expectation be consistent with the requirement under Article 68 (1) of RTS 2017/392, which states a CSD 'shall identify critical utilities providers and critical service providers that may pose risks to CSD's operations due to its dependency on them'.

(Article 68 (1) of CSDR RTS 2017/392)

(Article 77 (1) (a) of CSDR RTS 2017/392)

(Article 78(2) of CSDR RTS 2017/392)

Testing, Monitoring and Reporting

3.23 The Bank expects that a CSD will test its important business services against a range of extreme but plausible disruption scenarios to establish whether these important business services can remain within impact tolerances. Once a CSD has established what its important business services are, and an impact tolerance for each important business service, the CSD can more precisely define the types of scenarios which will cause disruption to a specific important business service and, therefore, the capacity to recover from the disruption event.

3.24 The Bank considers that the testing of important business services against disruption scenarios is consistent with the requirement in Article 77 (2) of CSDR RTS 2017/392 for a CSD to identify how various scenarios affect the continuity of its critical operations. The Bank also considers that testing important business services against disruption scenarios is consistent with the requirement under Article 79 of RTS 2017/392 for a CSD to monitor its business continuity policy and disaster recovery plan and test them at least annually. However, the Bank's expectation of testing is broader in scope and application as it encompasses important business services, whose definition is broader than the concept of 'critical operations' established in Article 78(2) of RTS 2017/392.

3.25 A CSD should:

(i) conduct scenario analyses of its ability to meet its impact tolerance for each of its important business services in the event of extreme but plausible disruption to its operations;

(ii) identify an appropriate range of adverse scenarios of varying nature, severity and duration, relevant to its business and risk profile; and

(iii) consider the risks to delivery of the CSD's important business services in those scenarios.

3.26 Within any operational risk scenario identified, where the impact tolerance cannot be met for any important business service, or where there is uncertainty as to whether it can be met, the Bank expects a CSD to be able to provide an explanation as to why this has happened and what remedial actions the CSD will undertake to ensure the impact tolerance can be met in future. In such situations, the Bank expects that the CSD should explain how such risks will be managed as part of their risk management framework and what mitigating actions will be taken or how business continuity planning and disaster recovery will be enhanced to ensure the important business service can be brought within the CSD's impact tolerance should disruption occur. In addition, the Bank expects the relevant important business service to be prioritised when the CSD makes choices about remediation or improvements in its systems, processes and technologies.

3.27 In setting an impact tolerance for important business services, CSDs will be expected to incorporate these impact tolerance into the monitoring and reporting procedures of key qualitative and quantitative measures. A CSD should processes which support delivery of these services, so as to guide management in taking actions to control risks to a CSD's ability to stay within the defined impact tolerance.

(Article 77 (2) of CSDR RTS 2017/392)

(Article 78(2) of CSDR RTS 2017/392)

(Article 79 of CSDR RTS 2017/392)

Documentation

3.28 The Bank expects that a CSD will make a written record of the assessments made as a result of the Operational Resilience Framework procedures and to share this with the Bank only if requested to do so.

3.29 The Bank considers that this requirement for a CSD to maintain documentation relating to its Operational Resilience Framework is consistent with the requirement in Article 47(1) of RTS 2017/392 for a CSD to establish documented policies, procedures and systems that identify, measure, monitor, manage and enable reporting on the risks that the CSD may be exposed to and the risks that the CSD poses to any other entities including its participants and their clients, as well as linked CSDs, banks, trading venues, payment systems, settlement banks, liquidity providers and investors. The Bank also considers this consistent with the requirement in Article 77(3) of RTS 2017/389 for a CSD to ensure its business impact analysis and risk analysis are kept up to date.

3.30 In particular, the CSD should make a written record of the determinations made in respect of:

- the identification of its important business services;
- the setting of its impact tolerances for those important business services;
- the mapping and identification of interdependencies in relation to those important business services; and
- the testing, monitoring and reporting of its important business services ability to stay within their impact tolerance.

(Article 47 (1) of CSDR RTS 2017/392)

(Article 77 (3) of CSDR RTS 2017/389)

Governance Arrangements

3.31 The Bank expects that a credible Operational Resilience Framework will not only take into account testing and improvement of the Framework, but will also be subject to a CSD's governance process.

3.32 The Bank considers that this expectation for a CSD's Operational Resilience Framework to be subject to a CSD's governance process is consistent with the requirement in Article 49(2) (third sub-paragraph) of RTS 2017/392 for the management body of a CSD to assume final responsibility for managing a CSD's risks.

3.33 The Bank expects a CSD's board to assure itself that the Operational Resilience Framework is fit for purpose. The Bank expects a CSD's board to ensure that it regularly reviews and approves the Operational Resilience Framework, at intervals it deems appropriate or following event where an impact tolerance has been breached.

3.34 The body with responsibility for risk management as designated by the board of directors should:

- approve the CSD's identified list of important business services;
- approve the CSD's impact tolerances for the important business services;
- be satisfied that the CSD's important business services are mapped effectively;
- review the results of impact tolerance testing; and
- be satisfied that appropriate risk mitigation steps have been undertaken.

3.35 A CSD's Operational Resilience Framework should be subject to periodic assessment by the body designated with responsibility for audit by the board of directors, in line with its audit approach but taking into consideration material changes to the Framework. The Bank considers this expectation to be consistent with the requirement in Article 73 (1) of RTS 2017/392, which states that 'a CSD's operational risk-management framework and systems shall be subject to audits'.

3.36 This internal audit assessment should cover: i) the extent to which the Operational Resilience Framework satisfies the Bank's expectations as laid out in this SS; and ii) the effectiveness of the CSD's operational resilience processes.

(Article 49 (2) (third sub-paragraph) of CSDR RTS 2017/392)

(Article 73 (1) of CSDR RTS 2017/392)