



European Securities and  
Markets Authority

# Final Report

**Guidelines on CCP recovery plan scenarios (Article 9(12) of CCPRRR)**





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# 1 Executive Summary

## Reasons for publication

Article 9(1) of Regulation (EU) 2021/23 ('CCPRRR') sets out an obligation for central counterparties (CCPs) to draw up and maintain a recovery plan providing for measures to be taken in the case of both default and non-default events and combinations of both, in order to restore their financial soundness, without any extraordinary public financial support, and allow them to continue to provide critical functions following a significant deterioration of their financial situation or a risk of breaching their capital and prudential requirements under Regulation (EU) No 648/2012 ('EMIR').

Article 10(2) of CCPRRR then sets out an obligation for the CCP's competent authority to review the recovery plan and assess the extent to which it satisfies the requirements set out in Article 9 of CCPRRR, in coordination with the supervisory college in accordance with the procedure set out in Article 11 of CCPRRR.

Article 9(12) of CCPRRR mandates ESMA, in cooperation with the European Systemic Risk Board (ESRB), to issue guidelines in accordance with Article 16 of Regulation (EU) No 1095/2010 ('ESMA Regulation') to further specify the range of scenarios to be considered for the purposes of Article 9(1) of CCPRRR (the 'Guidelines'). The mandate further provides that in issuing such guidelines, ESMA should take into account, where appropriate, supervisory stress testing exercises.

ESMA published the Consultation Paper with its draft Guidelines under Article 9(12) of CCPRRR on 12 July 2021. The consultation ended on 20 September 2021. ESMA received 6 responses. ESMA also held a public hearing on the Consultation Paper (along with other consultation papers issued by ESMA under CCPRRR) on 14 September 2021.

This Final Report provides the final Guidelines on the range of scenarios to be considered for the purposes of CCP recovery plans ('recovery plan scenarios').

In accordance with Article 9(12) of CCPRRR, ESMA has cooperated with the ESRB in finalising these Guidelines. ESMA also sought advice from the Securities and Markets Stakeholder Group. The Final Report (and the accompanying final Guidelines) also take into account the feedback provided by the respondents to the consultation.

## Contents

Sections 2 and 3 set out the definitions, background and mandate for the Guidelines.

Section 4 provides the feedback statement. The Section presents the comments received from respondents to the consultation as well as the rationale for the decisions that have been made by ESMA on whether and how to introduce some changes to the draft Guidelines that ESMA consulted on.



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Finally, Section 5 contains all relevant annexes. Annex I sets out the legislative mandate for developing the Guidelines. Annex II includes the cost and benefit analysis for the Guidelines. Annex III provides the advice of the Securities and Markets Stakeholder Group. Annex IV contains the final Guidelines.

## **Next Steps**

These Guidelines have now been published.

Pursuant to Article 16(3) of ESMA Regulation, competent authorities must inform ESMA of whether they (i) comply, (ii) do not comply but intend to comply, or (iii) do not comply and do not intend to comply with these Guidelines. In case of non-compliance, competent authorities must state their reasons for non-compliance, within two months from the date of publication of the Guidelines on ESMA's website in all EU official languages of their reasons for not complying with the Guidelines.

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## 2 Legislative References, Abbreviations and Definitions

The following legislative references are used in this Final Report:

CCPRRR	Regulation (EU) 2021/23 of the European Parliament and of the Council of 16 December 2020 on a framework for the recovery and resolution of central counterparties and amending Regulations (EU) No 1095/2010, (EU) No 648/2012, (EU) No 600/2014, (EU) No 806/2014 and (EU) 2015/2365 and Directives 2002/47/EC, 2004/25/EC, 2007/36/EC, 2014/59/EU and (EU) 2017/1132 <sup>1</sup>
EMIR	Regulation (EU) 648/2012 of 4 July 2012 of the European Parliament and Council on OTC derivatives, central counterparties and trade repositories <sup>2</sup>
ESMA Regulation	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC <sup>3</sup>
Delegated Regulation 152/2013	Commission Delegated Regulation (EU) No 152/2013 of 19 December 2012 on capital requirements for central counterparties <sup>4</sup>
Delegated Regulation 153/2013	Commission Delegated Regulation (EU) No 153/2013 of 19 December 2012 on requirements for central counterparties <sup>5</sup>

The following abbreviations are used in this Final Report:

<i>CCP</i>	Central Counterparty
<i>CP</i>	Consultation Paper
<i>EC</i>	European Commission
<i>EEA</i>	European Economic Area

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<sup>1</sup> OJ L 22, 22.1.2021, p. 1–102

<sup>2</sup> OJ L 201, 27.7.2012, p.1

<sup>3</sup> OJ L 331, 15.12.2010, p. 84

<sup>4</sup> OJ L 52, 23.2.2013, p. 37

<sup>5</sup> OJ L 52, 23.2.2013, p. 41



<i>ESFS</i>	European System of Financial Supervision
<i>ESMA</i>	European Securities and Markets Authority
<i>ESRB</i>	European Systemic Risk Board
<i>EU</i>	European Union
<i>FMI</i>	Financial Market Infrastructure

Unless otherwise specified, the terms used in this Final Report have the same meaning as in CCPRRR, EMIR and the Delegated Regulations 152/2013 and 153/2013.

### 3 Background and Mandate

1. ESMA is mandated to foster sound and effective supervision and to drive supervisory convergence across the EU under its founding regulation (ESMA Regulation).
2. CCPRRR was published in the Official Journal on 22 January 2021 and entered into force on 12 February 2021. CCPRRR puts into place a recovery and resolution framework for CCPs which are systemically important for the financial system. This aims at ensuring that the critical functions of CCPs are preserved while maintaining financial stability and helping to avoid the costs associated with the restructuring and the resolution of failing CCPs from falling on taxpayers. CCPRRR therefore establishes a minimum standard as regards the contents and information to be included in recovery plans to ensure that all CCPs have sufficiently detailed recovery plans should they face financial distress.
3. As regards recovery planning, Article 9(1) of CCPRRR places an obligation on CCPs to draw up and maintain a recovery plan providing for measures to be taken in the case of both default and non-default events and combinations of both, in order to restore their financial soundness, without any extraordinary public financial support, and allow them to continue to provide critical functions following a significant deterioration of their financial situation or a risk of breaching their capital and prudential requirements under EMIR.
4. Article 10(2) of CCPRRR then sets out an obligation for the CCP's competent authority to review the recovery plan and assess the extent to which it satisfies the requirements set out in Article 9 of CCPRRR within six months of the submission of the plan and in coordination with the supervisory college in accordance with the procedure set out in Article 11 of CCPRRR.
5. CCPRRR contains various tasks ascribed to ESMA. In particular, Article 9(12) of CCPRRR contains a mandate for ESMA, in cooperation with the ESRB, by 12 February 2022 to issue guidelines in accordance with Article 16 of the ESMA Regulation to further specify the range of scenarios to be considered for the purposes of Article 9(1) of CCPRRR. The mandate further provides that in issuing such guidelines, ESMA should take into account, where appropriate, supervisory stress testing exercises.
6. The objective of these Guidelines is therefore to specify a range of recovery plan scenarios to be considered by CCPs when drawing up and maintaining their recovery plans and by competent authorities when assessing those recovery plans.
7. CCPRRR stipulates requirements regarding the range and nature of the recovery plan scenarios. ESMA notes that the Annex (Section A) of CCPRRR states that a recovery plan should include:

“(21) taking into account Article 49(1) of Regulation (EU) No 648/2012, a range of scenarios that would severely affect the financial soundness or operational viability of the CCP and be relevant to the CCP's specific conditions such as its product mix, business model and liquidity and risk governance framework, including scenarios involving system-wide events or events specific to the legal



entity and any group to which it belongs and specific stress to the individual clearing members of the CCP or, where appropriate, a linked FMI;”

*“(22) taking into account Article 34, and Article 49(1), of Regulation (EU) No 648/2012, a range of scenarios that would severely affect the financial soundness or operational viability of the CCP and result both from the stress or default of one or more of its members, including scenarios going beyond the stress or default of at least the two clearing members to which the CCP has the largest exposures under extreme but plausible market conditions, and from other reasons including losses from the CCP’s investment activities or from operational problems, including severe external threats to a CCP’s operations due to an external disruption, shock or cyber-related incident.”*

8. Furthermore, Recital 18 of CCPRRR clarifies that a recovery plan should contemplate an appropriate range of scenarios, envisaging both systemic and specific stresses to the CCP, that would endanger its viability, also taking into account the potential impact of contagion in a crisis, both domestic and cross-border. The scenarios should be more severe than those used for the purposes of regular stress testing pursuant to Article 49 of EMIR, while remaining plausible. A recovery plan should cover a broad range of scenarios including scenarios resulting from default events, non-default events and a combination of both. Recovery plans should also distinguish between different types of non-default events.

Recital 18

In order to deal in an efficient manner with failing CCPs, competent authorities should have the power to impose preparatory measures on CCPs. A minimum standard should be established as regards the contents and information to be included in recovery plans to ensure that all CCPs in the Union have sufficiently detailed recovery plans should they face financial distress. Such recovery plan should contemplate an appropriate range of scenarios, envisaging both systemic and specific stresses to the CCP, that would endanger its viability, also taking into account the potential impact of contagion in a crisis, both domestic and cross-border. The scenarios should be more severe than those used for the purposes of regular stress testing pursuant to Article 49 of Regulation (EU) No 648/2012, while remaining plausible. The recovery plan should cover a broad range of scenarios including scenarios resulting from default events, non-default events and a combination of both; and should include comprehensive arrangements for the re-establishment of a matched book, for the full allocation of losses arising from clearing member default, and adequate absorbency for all other types of losses. Recovery plans should distinguish between different types of non-default events. The recovery plan should form part of the operating rules of the CCP agreed contractually with clearing members. Those operating rules should further contain provisions to ensure the enforceability of recovery measures outlined in the recovery plan in all scenarios. Recovery plans should not assume access to extraordinary public financial support or expose taxpayers to the risk of loss.

Article 9(1)

1. CCPs shall draw up and maintain a recovery plan providing for measures to be taken in the case of both default and non-default events and combinations of both, in order to restore their financial soundness, without any extraordinary public financial support, and allow them to continue to provide critical functions following a significant deterioration of their financial situation or a risk of breaching their capital and prudential requirements under Regulation (EU) No 648/2012.

Article 9(12)

12. ESMA shall, in cooperation with the ESRB, by 12 February 2022 issue guidelines in accordance with Article 16 of Regulation (EU) No 1095/2010 further specifying the range of scenarios to be considered for

the purposes of paragraph 1 of this Article. In issuing such guidelines, ESMA shall take into account, where appropriate, supervisory stress testing exercises.

Annex (Section A)

(21) taking into account Article 49(1) of Regulation (EU) No 648/2012, a range of scenarios that would severely affect the financial soundness or operational viability of the CCP and be relevant to the CCP's specific conditions such as its product mix, business model and liquidity and risk governance framework, including scenarios involving system-wide events or events specific to the legal entity and any group to which it belongs and specific stress to the individual clearing members of the CCP or, where appropriate, a linked FMI;

(22) taking into account Article 34, and Article 49(1), of Regulation (EU) No 648/2012, a range of scenarios that would severely affect the financial soundness or operational viability of the CCP and result both from the stress or default of one or more of its members, including scenarios going beyond the stress or default of at least the two clearing members to which the CCP has the largest exposures under extreme but plausible market conditions, and from other reasons including losses from the CCP's investment activities or from operational problems, including severe external threats to a CCP's operations due to an external disruption, shock or cyber-related incident.

9. In summary, based on the CCPRRR requirements, the scenarios should:

- include default events, non-default events and a combination of both;
- include both system-wide events and events specific to the CCP and any group to which it belongs and specific stress to the individual clearing members of the CCP or, where appropriate, a linked FMI;
- take into account the potential impact of contagion in a crisis, both domestic and cross-border;
- severely affect the financial soundness or operational viability of the CCP;
- go beyond the stress or default of at least the two clearing members to which the CCP has the largest exposures under extreme but plausible market conditions;
- be more severe than those used for the purposes of regular stress testing pursuant to Article 49 of EMIR, while remaining plausible;
- include stresses or threats resulting from other reasons including losses from the CCP's investment activities or from operational problems, including severe external threats to a CCP's operations due to an external disruption, shock or cyber-related incident; and
- be relevant to the CCP's specific conditions such as its product mix, business model and liquidity and risk governance framework.

10. The objective of preparing scenarios of severe distress is to specify a set of hypothetical events against which the effectiveness of recovery plan measures and the adequacy of indicators contained in the recovery plan shall be tested. The objective of the recovery plan is then to identify the options and measures that might be available to counter the scenarios of severe distress and to assess whether they are sufficiently robust and if their nature is sufficiently varied to cope with a wide range of shocks of different natures that a CCP may face.
11. Therefore, the recovery plan scenarios should be designed to capture events that could severely affect the financial soundness or operational viability of the CCP if recovery measures were not implemented in a timely manner.
12. On 12 July 2021, ESMA launched a public consultation on the draft Guidelines on recovery plan scenarios with the deadline for consultation responses on 20 September 2021.
13. In the CPESMA proposed five Guidelines that should be followed by CCPs when designing and maintaining their recovery plan scenarios. In order to establish and maintain a suitable range of scenarios, ESMA proposed that a CCP considers all the Guidelines as they cover different aspects of the process of designing and maintaining the suitable scenarios for the CCP, for example, establishing the appropriate number of scenarios, identifying the relevant types and sources of risk to be covered by the scenarios, determining the magnitude of the scenarios and how to provide information on the relevance and suitability of the scenarios to the CCP.
14. The public consultation aimed at receiving stakeholders' feedback on a list of questions and on the draft Guidelines. ESMA received 6 responses to the consultation. All respondents were either CCPs/associations representing CCPs or associations representing clearing members. This Final Report, and the accompanying final Guidelines, take into account the feedback provided by the respondents to the public consultation.
15. In accordance with Article 9(12) of EMIR, ESMA has cooperated with, and taken into account the feedback provided by, the ESRB in finalising these Guidelines. ESMA has also sought advice from the Securities and Markets Stakeholder Group.

## 4 Feedback Statement

### 4.1 Guideline 1

#### 4.1.1 Consultation Paper (and accompanying draft Guidelines)

16. In the draft Guideline (Guideline 1) presented in the CP and based on the requirements regarding recovery plans and recovery plan scenarios set out in CCPRRR, ESMA proposed that each CCP includes in its recovery plan at least one actual scenario for each of the seven types of scenarios set out in the draft Guidelines. These seven types of scenarios were:

- a. Default event causing financial losses that propagate through the CCP's default waterfall with return to a matched book through voluntary, market-based tools;
- b. Default event causing financial losses with a default management process that necessitates the use of mandatory, rules-based arrangements (as set out in the CCP's recovery plan) in order to re-establish a matched book;
- c. Non-default event preventing the CCP from performing its critical functions;
- d. Non-default event causing financial losses;
- e. Default event causing a liquidity shortfall;
- f. Non-default event causing a liquidity shortfall;
- g. Event(s) causing simultaneous default and non-default losses.

17. However, ESMA also proposed that CCPs should design or build each actual scenario in a way that best fits their specific characteristics and level of complexity.

18. ESMA also proposed that CCPs should assess whether it is necessary to create additional actual scenarios to accommodate for further granularity due to the specificities of the CCP beside the one actual scenario required for each type of scenario. A set of factors was provided for each type of scenario to evaluate the need for such additional scenarios.

19. In addition, CCPs would also be able to create further scenarios, not specified in the draft Guidelines, tailored to the specificities and operations of the CCP, if they consider it appropriate.

#### 4.1.2 Summary of Consultation Responses

20. Respondents representing clearing members considered that creating at least one actual scenario for the seven types of scenarios should be the absolute minimum. These respondents also agreed with ESMA's proposal that CCPs should further assess whether

it is necessary to create additional actual scenarios to accommodate for further granularity due to the specificities of the CCP beside the one actual scenario required for each type of scenario.

21. Respondents representing CCPs agreed in principle with the proposed types of scenarios and considered the list as complete. However, they cautioned against an overly prescriptive approach and advised against requiring CCPs to include at least one actual scenario for each of the seven types of scenarios as these scenarios may overlap and not be necessarily relevant for all CCPs. Instead, they suggested that some flexibility be left to CCPs to create a smaller number of actual scenarios that are most meaningful to their risk profile, to combine scenarios, where feasible, and to tailor the scenarios to their specific risk profiles and characteristics. Most of these respondents also agreed in principle that while the proposed types of scenarios are complete, CCPs should have the flexibility (on a voluntary basis only) to further assess whether creating additional scenarios is necessary.
22. Two respondents argued that since the proposed type of scenario 2 (default event causing financial losses with a default management process that necessitates the use of mandatory, rules-based arrangements in order to re-establish a matched book) would require the full default fund of a CCP and its additional amount of pre-funded dedicated own resources (Second Skin-in-the-Game, SSITG) to be fully depleted, such a scenario may be well beyond the extreme but plausible principle. They therefore proposed removing this type of scenario.

#### 4.1.3 ESMA's feedback

23. ESMA is of the view that the seven types of scenarios included in the draft Guidelines cover events or situations that are highly relevant for every EU CCP regardless of its size, complexity, business model, ownership structure, products cleared, risk profile and other characteristics. In addition, ESMA would like to reiterate that the seven types of recovery plan scenarios, as presented in the draft Guidelines, are general enough and meant to be built and adapted further by each CCP, depending on its specific characteristics. As a result, ESMA does not share the view that the draft Guidelines presented in the CP were overly prescriptive and believes that the draft Guidelines as such already allowed for sufficient flexibility.
24. Therefore, ESMA does not propose in the final Guidelines to delete any of the seven types of scenarios or any of the underlying considerations (including the '*issues and aspects to consider when building the scenario*' and '*factors to evaluate the creation of additional scenarios*'). However, taking stock of the points made by respondents representing CCPs regarding the need to allow for some flexibility to create a smaller number of scenarios and avoid overlaps, while at the same time striking the right balance between the views expressed by CCPs on the one hand and clearing members on the other, the final Guidelines (presented in this Final Report) give a CCP the possibility to combine two types of scenarios into one actual scenario, as long as i) such combination of scenarios does not impact the overall coverage of all seven types of scenarios (i.e. the '*issues and aspects to*

consider when building the scenario') as well as the coverage of all relevant types and sources of risk faced by the CCP; ii) such combination is accompanied by a rationale explaining the reasoning behind such combination to the competent authority and is subject to the competent authority's prior approval; and iii) the CCP would still create at least one actual 'pure' default event scenario (i.e. a scenario of type 1, 2 or 5 or a combination thereof) and one actual 'pure' non-default event scenario (i.e. a scenario of type 3, 4 or 6 or a combination thereof), as required by CCPRRR. However, a CCP may not combine more than two types of scenarios into one actual scenario (e.g. a CCP may not combine three types of scenarios into one actual scenario).

25. Furthermore, as some CCPs may be more complex and face more risks than others, ESMA does not propose to change the approach regarding additional and further scenarios in the final Guidelines. This also means that even where a CCP combines two types of scenarios into one actual scenario, the CCP should still assess, based *inter alia* on the 'factors to evaluate the creation of additional scenarios', whether it is necessary to create additional actual scenarios for each of the seven types of scenarios.
26. Regarding the proposal by some respondents to remove the type of scenario 2, ESMA notes that all CCPs are required to include mandatory rules-based arrangements and measures in their recovery plans (as stipulated in point 15 of Section A of the Annex of CCPRRR). Therefore, ESMA is of the view that this type of scenario is relevant for recovery planning and does not propose to delete it.

## 4.2 Guideline 2

### 4.2.1 Consultation Paper (and accompanying draft Guidelines)

27. The draft Guidelines (Guideline 2) presented in the CP also specified what types and sources of risk CCPs need to take into consideration when building their recovery plan scenarios. ESMA proposed that a CCP provides in its range of recovery plan scenarios a comprehensive coverage of all types and sources of risk (and their most plausible combinations) that are relevant to that CCP. ESMA also clarified that 'relevant types and sources of risk' are those that may severely affect the financial soundness or operational viability of that particular CCP and create extreme stress situations, while remaining plausible, that would exceed the CCP's risk mitigation measures required under EMIR (i.e. 'business as usual' risk management tools) and may put at risk the CCP's ability to perform its critical functions.

### 4.2.2 Summary of Consultation Responses

28. Respondents representing clearing members agreed with the proposed Guideline 2 and the types and sources of risk that CCPs should cover in their recovery plan scenarios. In addition, they argued that especially for non-default loss scenarios, CCPs should address all risk factors identified in Guideline 2, by either confirming the risk factor as not being relevant or including the risk factor in their recovery plan.

29. Respondents representing CCPs agreed in general with the proposed Guideline 2. However, they considered the proposed list of types and sources of risk as too prescriptive and advocated that a CCP has some flexibility in assessing the risks to be reflected in its recovery plan scenarios based on its risk profile and characteristics, account taken of the principle of proportionality.
30. One respondent representing CCPs argued that environmental and climate risk is not relevant to CCPs and that for this reason it should be removed from the proposed list of types and sources of risk.

#### 4.2.3 ESMA's feedback

31. ESMA would like to emphasise that the draft Guideline 2 as proposed in the CP already provided for flexibility to a CCP to assess which types and sources of risk are relevant to that CCP (based on its risk profile and characteristics), and only to include those types and sources of risk in its recovery plan scenarios that the CCP assesses as relevant. Therefore, ESMA does not see the need to change the approach for the final Guideline 2. However, ESMA has tried to clarify the wording of this Guideline to avoid any misunderstandings or misinterpretations in terms of which types and sources of risk need to be included in the CCP's recovery plan scenarios.
32. ESMA does not share the view that environmental and climate risks are not relevant to CCPs. For example, natural disasters are relevant for CCPs clearing products directly impacted by climate risk, such as energy derivatives. Therefore, ESMA does not propose to delete environmental and climate risks from the final Guideline 2.
33. In order to avoid any repeating of CCPRRR (in particular Article 9(1) and points (21) and (22) of Section A of the Annex), and thus to avoid potential misunderstandings or inconsistencies, ESMA has removed, from the final Guideline 2, the reference to the obligation for CCP recovery plan scenarios to cover default and non-default events, and a combination of both; and idiosyncratic and systemic sources of risk. In fact, this is already provided in CCPRRR and CCPs shall therefore comply with this obligation (hence it is not necessary to repeat it in the Guidelines).

### 4.3 Guideline 3

#### 4.3.1 Consultation Paper (and accompanying draft Guidelines)

34. The draft Guidelines (Guideline 3) presented in the CP also explained the principles for determining the magnitude of CCP recovery plan scenarios, with reference to the relevant requirements under EMIR, Delegated Regulation 152/2013 and Delegated Regulation 153/2013. The aim was to ensure that the recovery plan scenarios are of such a magnitude that they could severely affect the financial soundness or operational viability of the CCP.

#### 4.3.2 Summary of Consultation Responses

35. All respondents agreed in principle with the proposed Guideline 3 and the principles for determining the magnitude of the recovery plan scenarios.
36. All respondents also agreed in general with the proposed approach that the recovery plan scenarios should include scenarios in which all resiliency measures that form part of the policies and procedures required by Article 34 of EMIR are surpassed, leading to a failure in one or more critical functions of the CCP that exceed the requirement set out in Article 17(6) of Delegated Regulation 153/2013.

#### 4.3.3 ESMA's feedback

37. Considering the overall support expressed in the consultation responses, ESMA does not propose to make any substantial changes to the final Guideline 3.

### 4.4 Guideline 4

#### 4.4.1 Consultation Paper (and accompanying draft Guidelines)

38. The draft Guidelines (Guideline 4) presented in the CP provided guidance on what information should be included by a CCP to describe the recovery plan scenarios, such as how the circumstances that pose risk to the CCP could materialise, the relevant types and sources of risk, the types of impact, etc. The aim of this was to aid the CCP, as well as the competent authority and college when assessing the recovery plan, in ensuring that the recovery plan scenarios are suitable for the particular CCP.

#### 4.4.2 Summary of Consultation Responses

39. All respondents agreed with the proposed Guideline 4 and the information to be included when describing the recovery plan scenarios.
40. One respondent requested that the recovery plan scenarios be made publicly available or accessible to clearing members at least partially.

#### 4.4.3 ESMA's feedback

41. Considering the overall support expressed in the consultation responses, ESMA does not propose to make any changes in substance to the final Guideline 4.
42. ESMA fully appreciates the wish of some stakeholders for transparency regarding recovery plan scenarios. However, ESMA considers that access to recovery plan scenarios should be commensurate to a) recovery plans' needs to ensure their feasibility and operationality and b) the usability of such plans for a CCP. Consequently, access to parts of the recovery plan scenarios should be left for each CCP to decide with a view of ensuring that the recovery plan is usable and operational in times of need. In any case, ESMA does not





believe it is appropriate to foresee such an expectation via guidelines. Instead, if deemed appropriate and proportionate by the co-legislators, an obligation in this sense could be included directly in CCPRRR.

## **4.5 Guideline 5**

### **4.5.1 Consultation Paper (and accompanying draft Guidelines)**

43. The draft Guidelines (Guideline 5) presented in the CP also captured the expectation for CCPs to review and where necessary to update their scenarios, following Guidelines 1 – 4, every time they review their recovery plans in accordance with Article 9(9) of CCPRRR.

### **4.5.2 Summary of Consultation Responses**

44. All respondents agreed with the draft Guideline 5.

### **4.5.3 ESMA's feedback**

45. Considering the overall support expressed in the consultation responses, ESMA does not propose to make any changes in substance to the final Guideline 5.

## **4.6 General Issues**

### **4.6.1 Summary of Consultation Responses**

46. A respondent expressed a general remark on the timeline for implementation and compliance with the Guidelines as the respondent expected the final Guidelines would be published at the end of 2021. According to the respondent, CCPRRR will come into effect in February 2022 which will leave up a limited amount of time for adapting to potential changes. The respondent therefore proposed that ESMA and the competent authorities find a reasonable and practicable approach how CCPs should deal with potential last-minute Guidelines.

### **4.6.2 ESMA's feedback**

47. In accordance with Article 9(12) of CCPRRR, ESMA is required to issue the Guidelines on recovery plan scenarios by 12 February 2022. ESMA notes that the legal deadlines for the issuance of Guidelines under CCPRRR as well as the applicability of CCPRRR in general are set directly in CCPRRR as agreed by the co-legislators. Therefore, ESMA does not have any legal means to change these deadlines via Level 3 measures.

## 4.7 Cost and Benefit Analysis

### 4.7.1 Consultation Paper (and accompanying draft Guidelines)

48. In the CP, ESMA considered three policy options:

- a. Option 1: To specify highly prescriptive recovery plan scenarios that every CCP should include in its recovery plan without providing much flexibility for the CCP to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP.
- b. Option 2: To specify a minimum high-level list of recovery plan scenarios (without providing any factors/criteria/further guidance that CCPs should consider when creating the scenarios) allowing each CCP much flexibility to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP.
- c. Option 3: To specify a minimum list of recovery plan scenarios that each CCP should include in its recovery plan and provide a set of factors/criteria/further guidance that the CCP should use when creating each scenario as well as the overall range of its recovery plan scenarios.

49. ESMA chose Option 3, given that Option 1 could be seen as too prescriptive (without allowing much flexibility for a CCP to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP) and Option 2 could be seen as too vague and may fall short of the aim of ensuring convergence and that recovery plans are sufficiently detailed and overall effective.

### 4.7.2 Summary of Consultation Responses

50. Four respondents expressed their support for Option 3 while one respondent preferred Option 2. The one respondent that advocated for Option 2 however did not provide an answer to the question of how the different option would impact the cost and benefit assessment.

### 4.7.3 ESMA's feedback

51. Considering that the majority of respondents supported Option 3 and also the overall responses to the consultation, ESMA does not propose to change its approach in the Final Report and the accompanying final Guidelines.



## 5 Annexes

### Annex I: Legislative mandate to develop the Guidelines

Article 9 of the CCPRRR provides that:

*“1. CCPs shall draw up and maintain a recovery plan providing for measures to be taken in the case of both default and non-default events and combinations of both, in order to restore their financial soundness, without any extraordinary public financial support, and allow them to continue to provide critical functions following a significant deterioration of their financial situation or a risk of breaching their capital and prudential requirements under Regulation (EU) No 648/2012.*

*(...) 12. ESMA shall, in cooperation with the ESRB, by 12 February 2022 issue guidelines in accordance with Article 16 of Regulation (EU) No 1095/2010 further specifying the range of scenarios to be considered for the purposes of paragraph 1 of this Article. In issuing such guidelines, ESMA shall take into account, where appropriate, supervisory stress testing exercises.”*



## Annex II: Cost and benefit analysis

### Introduction

Pursuant to the Article 9(12) of CCPRRR, ESMA shall, in cooperation with the ESRB, by 12 February 2022, issue guidelines in accordance with Article 16 of Regulation (EU) No 1095/2010 to further specify the range of scenarios to be considered for the purposes of Article 9(1) of CCPRRR. The objective of the Guidelines is therefore to specify the range of recovery plan scenarios to be considered by CCPs when drawing up and maintaining their recovery plans and by competent authorities when assessing those recovery plans.

Article 16 of the ESMA Regulation requires ESMA, where appropriate, to analyse the potential costs and benefits relating to the proposed Guidelines. It also states that cost-benefit analyses must be proportionate in relation to the scope, nature and impact of the proposed Guidelines.

The objective of performing a cost-benefit analysis is to assess the costs and benefits of the various policy or technical options which were analysed during the process of drafting the Guidelines.

The final Guidelines included in this Final Report are of a mandatory nature, i.e. they are envisaged in CCPRRR in order to ensure uniform, consistent and coherent application of Union Law.

In carrying out a cost-benefit analysis on the Guidelines it should be noted that the main policy decisions have already been taken under the primary legislation (CCPRRR) and the impact of such policy decisions have already been analysed to some extent by the Impact Assessment by the European Commission<sup>6</sup>.

### Cost and benefit analysis

Below are detailed the different corresponding policy options on how to promote the consistent application of Article 9(1) of CCPRRR regarding the range of CCP recovery plan scenarios.

<b>Specific objective</b>	The objective of the Guidelines is to further specify the range of scenarios of severe distress for the purposes of CCP recovery plans.
<b>Policy option 1</b>	To specify highly prescriptive recovery plan scenarios that every CCP should include in its recovery plan without providing much flexibility for the CCP to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP.

<sup>6</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD%3A2016%3A0368%3AFIN>

<p>How would this option achieve the objective?</p>	<p>This option would create a high level of convergence as the scenarios would be prescribed in detail by the Guidelines and each CCP would apply the same scenarios.</p> <p>However, this option would not provide much flexibility for a CCP to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP. It would therefore mean the scenarios may not be particularly relevant for the given CCP, may not accurately reflect the risk profile of the CCP or its complexity and characteristics etc, which could negatively affect the effectiveness of the whole recovery plan.</p> <p>Therefore, it is questionable whether this option would meet i) the legal mandate as CCPRRR stipulates that the scenarios should be relevant to the CCP’s specific conditions and ii) the overall objectives regarding recovery planning.</p>
<p><b>Policy option 2</b></p>	<p>To specify a minimum high-level list of recovery plan scenarios (without providing any factors/criteria/further guidance that CCPs should consider when creating the scenarios) allowing each CCP much flexibility to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP.</p>
<p>How would this option achieve the objective?</p>	<p>This option would meet the mandate as it would specify the minimum range of recovery plan scenarios. It would also allow every CCP to customise each scenario and the overall range of its recovery plan scenarios based on the characteristics of the CCP.</p> <p>However, this option would create a low level of convergence across CCPs and may result in some recovery plans being less detailed than others and therefore also less effective.</p> <p>Therefore, it is questionable whether this option would meet the overall objectives regarding recovery planning.</p>
<p><b>Policy option 3</b></p>	<p>To specify a minimum list of recovery plan scenarios that each CCP should include in its recovery plan and provide a set of factors/criteria/further guidance that the CCP should use when creating each scenario as well as the overall range of its recovery plan scenarios.</p>
<p>How would this option achieve the objective?</p>	<p>This option would meet the mandate as it would specify the minimum range of recovery plan scenarios as well as provide further guidance on how each scenario should be built, whether it</p>

	<p>is necessary to create additional scenarios, how to determine an appropriate range of recovery plan scenarios, etc.</p> <p>This option would also create a relatively high level of convergence while at the same time leaving the necessary flexibility to every CCP to create each scenario, as well as the overall range of its recovery plan scenarios, taking into account the CCP's characteristics, level of complexity, risk profile, etc. This should also ensure the overall effectiveness of the CCP's recovery plan and therefore achieve the overall objectives regarding recovery planning.</p>
<p><b>Which policy option is the preferred one?</b></p>	<p>Option 3, given that Option 1 could be seen as too prescriptive (without allowing much flexibility for a CCP to customise each scenario, as well as the overall range of its recovery plan scenarios, based on the specificities and characteristics of the CCP) and Option 2 could be seen as too vague and may fall short of the aim of ensuring convergence and that recovery plans are sufficiently detailed and overall effective.</p> <p>Option 3 is the most appropriate and also proportionate approach as, it is detailed enough to ensure consistency and convergence across CCPs (i.e. it proposes the seven types of scenarios and their underlying assumptions), and at the same time it provides sufficient flexibility for CCPs to customise each of these types scenarios into actual scenarios based on the CCP's characteristics such its risk profile.</p> <p>This should also ensure the overall effectiveness of the CCP's recovery plan and therefore achieve the overall objectives regarding recovery planning, while at the same time ensuring proportionality.</p>
<p>Is the policy chosen within the sole responsibility of ESMA? If not, what other body is concerned / needs to be informed or consulted?</p>	<p>ESMA is responsible, in cooperation with the ESRB, for issuing the Guidelines and the mandate is of a mandatory nature, i.e. the Guidelines are envisaged in CCPRRR in order to ensure uniform, consistent and coherent application of Union Law.</p> <p>ESMA has cooperated with the ESRB in issuing the Guidelines.</p>

Impacts of the proposed policies:	
<b>Policy option 1</b>	
Benefits	It will provide a high level of convergence as the scenarios would be prescribed in detail by the Guidelines and each CCP would apply the same scenarios. It would also result in lower maintenance costs.
Regulator's costs	The costs for competent authorities will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them.
Compliance costs	<p>The compliance costs for CCPs will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them. Nevertheless, the costs for this option will most likely be higher than for option 2 and 3 due to the highly prescriptive nature of this option.</p> <p>While the maintenance costs for CCPs may be lower for this option than the other options, this option may result in less appropriate scenarios for the given CCP and in effect also a less effective recovery plan, which could ultimately lead to higher costs for the CCP.</p>
<b>Policy option 2</b>	
Benefits	It would provide a lot of flexibility to CCPs to customise each scenario and the overall range of their recovery plan scenarios based on the characteristics of each CCP.
Regulator's costs	The costs for competent authorities will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them.
Compliance costs	The compliance costs for CCPs will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them. Nevertheless, the costs for this option will most likely be lower than for option 1 and 3 due to the less prescriptive nature of this option.
<b>Policy option 3</b>	

Benefits	It would provide a relatively high level of convergence while at the same time leaving the necessary flexibility to every CCP to create each scenario, as well as the overall range of its recovery plan scenarios, taking into account the CCP's characteristics, level of complexity, risk profile, etc. This should also ensure the overall effectiveness of the CCP's recovery plan.
Regulator's costs	The costs for competent authorities will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them.
Compliance costs	The compliance costs for CCPs will be moderate, however already envisaged by CCPRRR due to the detailed requirements regarding recovery plans and recovery plan scenarios and the Guidelines envisaged to further specify them. Nevertheless, the costs for this option should be lower than for option 1 but may be higher than for option 2.





## **Annex III: Advice of the Securities and Markets Stakeholder Group**

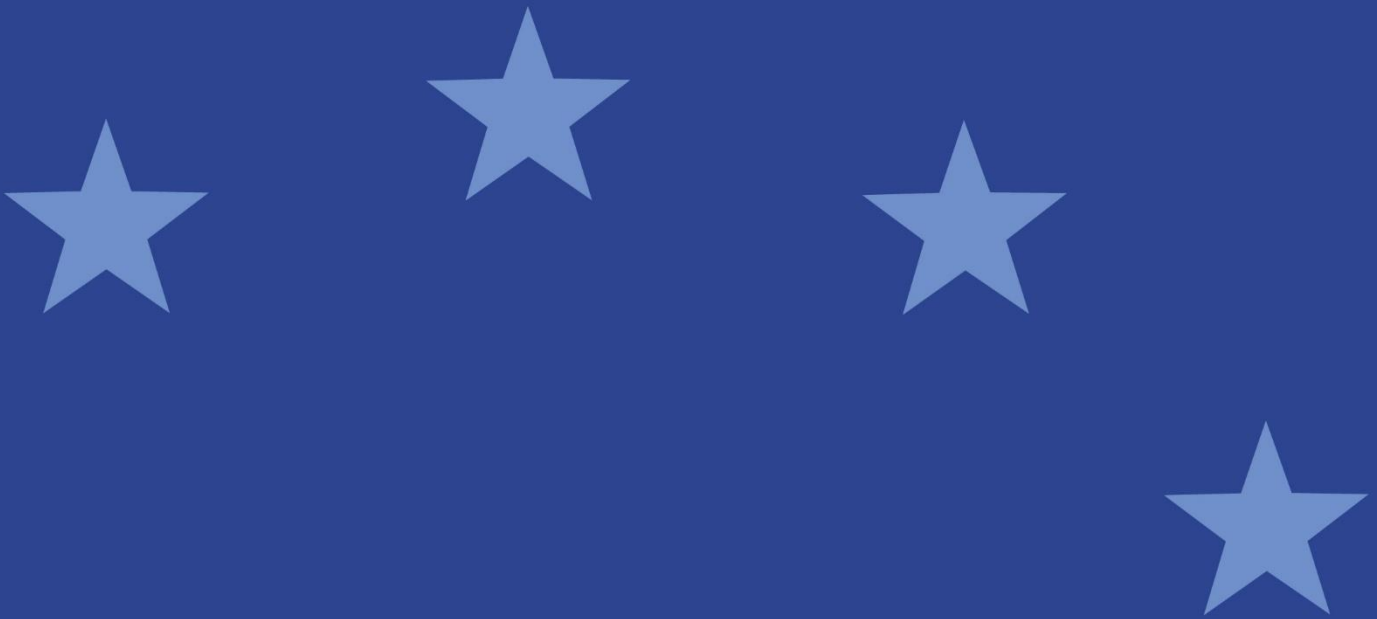
In accordance with Article 16 of the ESMA Regulation, ESMA has requested the advice of the Securities and Markets Stakeholder Group (SMSG). The SMSG has not provided any comment.



## **Annex IV: Final Guidelines (without explanatory notes)**

# **Guidelines**

**On CCP recovery plan scenarios (Article 9(12) of CCPRRR)**





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# 1 Scope

## Who?

1. These Guidelines apply to competent authorities as defined in point (7) of Article 2 of CCPRRR and to CCPs authorised under Article 14 of EMIR.

## What?

2. These Guidelines apply in relation to Article 9(12) of CCPRRR, which mandates ESMA to further specify the range of recovery plan scenarios that should be considered for the purposes of CCP recovery plans referred to in Article 9(1) of CCPRRR.
3. These Guidelines should be read in conjunction with the ESMA Guidelines on CCP recovery plan indicators (ESMA91-372-1702).

## When?

4. These Guidelines have now been published.
5. Pursuant to Article 16(3) of ESMA Regulation, competent authorities must inform ESMA of whether they (i) comply, (ii) do not comply but intend to comply, or (iii) do not comply and do not intend to comply with these Guidelines. In case of non-compliance, competent authorities must state their reasons for non-compliance, within two months from the date of publication of the Guidelines on ESMA's website in all EU official languages of their reasons for not complying with the Guidelines.



## 2 Legislative references, abbreviations and definitions

### Legislative references

CCPRRR	Regulation (EU) 2021/23 of the European Parliament and of the Council of 16 December 2020 on a framework for the recovery and resolution of central counterparties and amending Regulations (EU) No 1095/2010, (EU) No 648/2012, (EU) No 600/2014, (EU) No 806/2014 and (EU) 2015/2365 and Directives 2002/47/EC, 2004/25/EC, 2007/36/EC, 2014/59/EU and (EU) 2017/1132 <sup>7</sup>
EMIR	Regulation (EU) 648/2012 of 4 July 2012 of the European Parliament and Council on OTC derivatives, central counterparties and trade repositories <sup>8</sup>
ESMA Regulation	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC <sup>9</sup>
Delegated Regulation 152/2013	Commission Delegated Regulation (EU) No 152/2013 of 19 December 2012 on capital requirements for central counterparties <sup>10</sup>
Delegated Regulation 153/2013	Commission Delegated Regulation (EU) No 153/2013 of 19 December 2012 on requirements for central counterparties <sup>11</sup>

### Abbreviations

<i>CCP</i>	Central Counterparty
<i>EC</i>	European Commission
<i>EEA</i>	European Economic Area
<i>ESFS</i>	European System of Financial Supervision
<i>ESMA</i>	European Securities and Markets Authority

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<sup>7</sup> OJ L 22, 22.1.2021, p. 1–102

<sup>8</sup> OJ L 201, 27.7.2012, p. 1

<sup>9</sup> OJ L 331, 15.12.2010, p. 84

<sup>10</sup> OJ L 52, 23.2.2013, p. 37

<sup>11</sup> OJ L 52, 23.2.2013, p. 41



*ESRB*

European Systemic Risk Board

*EU*

European Union

### **Definitions**

6. Unless otherwise specified, the terms used in these Guidelines have the same meaning as in CCPRRR, EMIR and the Delegated Regulations 152/2013 and 153/2013.

### **3 Purpose**

7. These Guidelines are based on Article 9(12) of CCPRRR and issued in accordance with Article 16(1) of the ESMA Regulation. The objectives of these Guidelines are to establish consistent, efficient and effective supervisory practices within the ESFS and to ensure the common, uniform and consistent application of Article 9(1) of CCPRRR. They aim at specifying the range of recovery plan scenarios to be considered by CCPs when drawing up and maintaining their recovery plans and by competent authorities when assessing those recovery plans.
8. The objective of preparing the range of recovery plans scenarios is to identify a range of forward-looking events of severe distress, a CCP may face, against which the effectiveness of recovery measures and the adequacy of indicators contained in the CCP recovery plan can be tested.

## **4 Compliance and reporting obligations**

### **Status of the Guidelines**

9. In accordance with Article 16(3) of the ESMA Regulation, competent authorities and CCPs must make every effort to comply with these Guidelines.
10. Competent authorities to which these Guidelines apply should comply by incorporating them into their national legal and/or supervisory frameworks as appropriate, including where particular Guidelines are directed primarily at CCPs. In this case, competent authorities should ensure through their supervision that CCPs comply with the Guidelines.

### **Reporting requirements**

11. Within two months of the date of publication of the Guidelines on ESMA's website in all EU official languages, competent authorities to which these Guidelines apply must notify ESMA whether they (i) comply, (ii) do not comply, but intend to comply, or (iii) do not comply and do not intend to comply with the Guidelines.
12. In case of non-compliance, competent authorities must also notify ESMA within two months of the date of publication of the Guidelines on ESMA's website in all EU official languages of their reasons for not complying with the Guidelines.
13. A template for notifications is available on ESMA's website. Once the template has been filled in, it shall be transmitted to ESMA.
14. CCPs to which these Guidelines apply shall report to their competent authorities, in a clear and detailed way, whether they comply with these Guidelines.



## 5 Guidelines on CCP recovery plans scenarios

### 5.1 Guideline 1: Establishing the appropriate number of scenarios to be included in CCP recovery plans

15. A CCP should include in its recovery plans at least one actual scenario for each of the seven types of scenarios (as set out in Table 1 in Annex). The CCP should build each of these actual scenarios in a way that best fits its specific characteristics and level of complexity. When building these actual scenarios, the CCP should consider *inter alia* the list of 'issues and aspects to consider when building the scenario' (as set out in Table 1 in Annex).
16. By a way of derogation from the previous paragraph, a CCP may combine two types of scenarios into one actual scenario, as long as i) such combination of types of scenarios covers the full range of the underlying assumptions and considerations (i.e. the 'issues and aspects to consider when building the scenario') as well as all relevant types and sources of risk faced by the CCP; ii) such combination is accompanied by a rationale by the CCP explaining the reasoning behind such combination to its competent authority and be subject to the competent authority's prior approval; and iii) the CCP still creates at least one actual 'pure' default event scenario (i.e. a scenario of type 1, 2 or 5 or a combination thereof) and one actual 'pure' non-default event scenario (i.e. a scenario of type 3, 4 or 6 or a combination thereof). For the avoidance of doubt, a CCP may not combine more than two types of scenarios into one actual scenario.
17. A CCP should further assess, based *inter alia* on the list of 'factors to evaluate the creation of additional scenarios' (as set out in Table 1 in Annex), whether it is necessary to create additional actual scenarios for each type of scenario. The general principle to interpret the factors when evaluating the need to create the additional actual scenarios should be:
  - The applicability of any of the factors to the CCP's characteristics leading to a material difference in the:
    - Availability or usage of recovery measures;
    - Order of usage of the recovery measures;
    - Path of loss propagation (e.g. from the CCP to the clearing members), which will greatly depend on the rules of loss allocation, which may be different depending on the origin of the loss (e.g. a different waterfall depending on the service considered, a different loss allocation depending on the origin or on the magnitude of an investment loss, etc.);
    - Impact on stakeholders;
  - The existence of subset(s) of entities that due to their material impact should be addressed with an individualised scenario.

For the avoidance of doubt, this paragraph applies even where the CCP combines two types of scenarios into one actual scenario.

18. In addition, when evaluating the need to create the additional actual scenarios, a CCP should ensure, as outlined in Guideline 2, that its range of recovery plan scenarios provides a comprehensive coverage of all relevant types and sources of risk.
19. A CCP may test the related recovery measures using *inter alia* the list of ‘*quantitative assessment tools*’ included for each type of scenario (as set out in Table 1 in Annex) to produce quantitative impacts for the scenarios.
20. A CCP may include in its recovery plans further scenarios not specified in these Guidelines tailored to the specificities and operations of the CCP.

## **5.2 Guideline 2: Types and sources of risk to be covered by CCP recovery plan scenarios**

21. The range of recovery plan scenarios of a CCP should provide a comprehensive coverage of all ‘relevant types and sources of risk’. ‘Relevant types and sources of risk’, for the purposes of these Guidelines, should be understood as types and sources of risk (and their most plausible combinations) that may severely affect the financial soundness or operational viability of the CCP and create extreme stress situations, while remaining plausible, that would exceed the CCP’s risk mitigation measures required under EMIR (i.e. ‘business as usual’ risk management tools, such as changes in risk parameters, increase of guarantees, trading limits, etc.), and may put at risk the CCP’s ability to perform its critical functions.
22. Therefore, a CCP should assess which of the types and sources of risk, from the list below, are relevant to the CCP, and should ensure that its range of recovery plan scenarios covers all of those that the CCP assesses as ‘relevant types and sources of risk’:
  - Legal risk;
  - Credit risk;
  - Liquidity risk;
  - General business risk;
  - Custody risk;
  - Settlement risk;
  - Investment risk;
  - Operational risk (including fraud risk and cyber risk);



- Systemic risk;
- Environmental and Climate risk;
- Market risk:
  - Linked to market movements;
  - Linked to the reduction of market availability (tradable volumes, availability and willingness to trade of market counterparties).
- Any interconnected entity or service provider (in isolation or in combination), including:
  - Clearing members and clients, both direct and indirect;
  - Issuers of collateral or investment assets;
  - Interoperable CCPs;
  - CSDs;
  - Payments systems;
  - Securities settlement systems;
  - Nostro agents;
  - Custodian banks;
  - Settlement banks;
  - Concentration banks;
  - Payment banks;
  - Liquidity providers;
  - Group entities;
  - Other service providers required to perform critical functions during business as usual or default management situations.

### **5.3 Guideline 3: Principles for determining the magnitude of CCP recovery plan scenarios**

23. A CCP should ensure that its recovery plan scenarios cover the situations that due to their severity would exceed the CCP's risk mitigation measures required under EMIR (i.e. business as usual risk management tools) and put at risk the viability of the CCP if no recovery actions are taken.

24. In this respect, the recovery plan scenarios should be focused on:

- Scenarios of financial losses due to default events of a magnitude that would consume resources through the waterfall exceeding the prefunded resources calculated in accordance with Article 43(2) of Delegated Regulation 153/2013 or involving failures in the execution of business as usual risk management tools;
- Scenarios generating liquidity needs in excess of the amounts calculated in accordance with Article 44(1) of Delegated Regulation 153/2013, involving failures in the execution of business as usual risk management tools or using different assumptions with regards to liquidity needs or availability of resources that generate as a result higher levels of stress;
- Scenarios of financial losses due to non-default events of a magnitude that is likely to deplete a significant proportion of the amount of required capital to cover non-default losses as calculated in line with Delegated Regulation 152/2013.

25. Furthermore, with respect to operational risk:

- The recovery plan scenarios should not cover the scenarios of operational resiliency already covered by the relevant policies and procedures required by Article 34 of EMIR (Business Continuity Policy, Disaster Recovery Plan, Business Impact Analysis, Crisis Management). The recovery plan scenarios should however include, if deemed relevant, scenarios in which all resiliency measures that form part of the policies and procedures required by Article 34 of EMIR are surpassed, leading to a failure in one or more critical functions of the CCP that exceed the requirement set out in Article 17(6) of Delegated Regulation 153/2013;
- Furthermore, the recovery plan scenarios should cover the systemic risk effects caused by operational risk events affecting entities which are service providers to the CCP.

### **5.4 Guideline 4: Information to be included in the description of CCP recovery plan scenarios**

26. In order to ensure that the range of the recovery plan scenarios, detailed by a CCP, are overall relevant and suitable, a CCP should aim at including the necessary information in

its recovery plan scenarios to describe the circumstances and the relevant types and sources of risk that could put at risk the CCP's ability to perform its critical functions. In this regard, the CCP may include the following information when describing the scenarios, account taken of the different range of scenarios:

- The types and sources of risk relevant to the scenario; This includes secondary effects of the scenario that could materialise as long as the risk is relevant;
- If multiple types of entities are sources of risk, how they are identified and how they could combine or interact;
- The type of impacts: financial loss, liquidity shortfall, threat to operational viability;
- The specific circumstances that could materialise and pose risk to the CCP; The scenario should not just identify the relevant types and sources of risk but also aim to specify how the risks could materialise;
- Any specific particularities of the scenario regarding the path of loss propagation with respect to the CCP or affected stakeholders derived from segregation, ring-fencing or any operational rule that affects the path of loss propagation;
- Any other specific clauses or legal aspects from the operational rules of the CCP or the national legal framework that needs to be taken into account for the scenario;
- Any obstacles or circumstances that could create substantial practical impediments to implementing recovery measures.

## **5.5 Guideline 5: Maintenance of CCP recovery plan scenarios**

27. A CCP should review and where necessary update its recovery plan scenarios, following Guidelines 1 – 4, every time the CCP reviews its recovery plan in accordance with Article 9(9) of CCPRRR.

## 6 Annexes

**Table 1: Matrix for building the range of CCP recovery plan scenarios**

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
<p><b>1. Default event causing financial losses that propagate through the CCP's default waterfall with return to a matched book through voluntary, market-based tools</b></p> <p><i>(This scenario should cover the situation of the CCP having to absorb losses through its waterfall due to clearing members and/or interoperable CCPs defaulting on their payments.)</i></p>	<ul style="list-style-type: none"> <li>The need for the CCP to absorb losses in excess of the prefunded resources calibrated with extreme but plausible scenarios through their stress testing framework, either due to a higher number of defaults than the cover-2 requirement, shocks higher than modelled or liquidation costs of defaulter's portfolios higher than modelled, or resources depleted by a previous event which have not yet been replenished.</li> </ul>	<ul style="list-style-type: none"> <li>The existence of characteristics regarding the default fund structure, rules of the waterfall or applicable ring-fencing rules that would lead to different paths of loss propagation.</li> <li>Where the effect of defaults happening at different time intervals could affect differently the CCP in light of the CCP's operational rules and possible behaviours of non-defaulting clearing members.</li> <li>The possibility of market-wide liquidity strains</li> </ul>	<ul style="list-style-type: none"> <li>CCPs should use as a starting point the existing framework of stress test scenarios, as it should already be adapted to the products cleared by the entity and should cover comprehensively idiosyncratic and systemic market shocks that could be sources of stress.</li> <li>Using the existing set of CCP's stress test scenarios, the CCP should use a reverse stress testing methodology to scale up the scenarios, quantify potential losses and assess the possible outcomes.</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
	<ul style="list-style-type: none"> <li>• The need for the CCP to replenish prefunded resources.</li> <li>• Any cost incurred during the process, including the default management process or any costs from managing liquidity needs.</li> </ul>	<p>impacting the prompt availability of voluntary, market-based tools.</p>	<ul style="list-style-type: none"> <li>• Reverse stress testing may take into account:               <ul style="list-style-type: none"> <li>○ Higher number of defaults than two and a broader array of defaulting entities;</li> <li>○ More severe shocks than specified in the existing set of stress test scenarios;</li> <li>○ Increased costs from the liquidation of portfolios, either due to higher impact from market liquidation or due to difficulties in allocating positions during the default management process;</li> <li>○ Increases in severity of other assumptions on which the stress scenarios rely, such as decorrelation risk.</li> </ul> </li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
<p><b>2. Default event causing financial losses with a default management process that necessitates the use of mandatory, rules-based arrangements (as set out in the CCP's recovery plan) in order to re-establish a matched book</b></p> <p><i>(This scenario addresses the situation in which a CCP is not able to re-establish a matched book through voluntary, market-based tools and necessitates the use of mandatory, rules-based arrangements such as cash calls, variation margin haircutting, forced allocation or tear-up of contracts.)</i></p>	<ul style="list-style-type: none"> <li>• Potential events that could affect the default management process leading to difficulties reestablishing a matched book or increasing the costs of doing so. It should take into account:               <ul style="list-style-type: none"> <li>○ Obligations of clearing members with regard to the default management process;</li> <li>○ Potential lack of risk appetite in the market for auctioned portfolios;</li> <li>○ Possible difficulty to access the market (e.g. due to the liquidity of the market) either for the cleared positions or the collateral, or both.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Where depending on the source or circumstances of the issues there is a material difference in the available recovery measures, order of usage, path of loss propagation or impact on stakeholders.</li> <li>• Potential operational risk events that could affect the default management process.</li> </ul>	<ul style="list-style-type: none"> <li>• Same as the type of scenario 1, but modelling the impact of the mandatory, rules-based arrangements.</li> </ul>



Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
<p><b>3. Non-default event preventing the CCP from performing its critical functions</b></p> <p><i>(This scenario addresses the situation of a non-default event preventing the CCP from continuing to perform services.)</i></p>	<ul style="list-style-type: none"> <li>• Operational or other events that could impair:               <ul style="list-style-type: none"> <li>○ Clearing activities (e.g. affecting trade novation);</li> <li>○ Collateral management (e.g. receiving or returning collateral).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• How these would be mitigated by back-up solutions.</li> <li>• How clearing members or connected FMIs could be impacted.</li> </ul>	<ul style="list-style-type: none"> <li>• Using expert judgment to assess the length of time of the disruption and the impact of other FMIs.</li> <li>• Assessing if the return to normal is possible in full after a period of non-availability.</li> <li>• Effectiveness of mitigants such as back-up payment systems.</li> </ul>
<p><b>4. Non-default event causing financial losses</b></p> <p><i>(This scenario addresses the situation of a non-default event causing financial losses that is likely to deplete a significant proportion of the CCP's capital resources.)</i></p>	<ul style="list-style-type: none"> <li>• Financial losses that may have immediate or deferred impact towards the CCP or its participants due to any:               <ul style="list-style-type: none"> <li>○ Investment losses;</li> <li>○ Losses arising from failures of securities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Where there is a group structure with respect to the layers of capital or tools available to absorb losses, specific scenarios contemplating potential failures in the execution of group agreements, contractual commitments, parental guarantees or other relevant provisions</li> </ul>	<ul style="list-style-type: none"> <li>• The various sources of non-default losses are very differentiated and may warrant different approaches.</li> <li>• CCPs may use scenario analysis with expert judgment to estimate potential non-default losses under extreme but plausible scenarios</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
	<p>custodians or settlement banks;</p> <ul style="list-style-type: none"> <li>○ Losses caused by fraud, theft or other misconduct of employees and/or third parties;</li> <li>○ Losses resulting from cyber-attacks;</li> <li>○ Losses from operational or systems failures;</li> <li>○ General business risks;</li> <li>○ Any other non-default loss applicable to the CCP.</li> </ul>	<p>should be created (in accordance with Article 9(13) of CCPRRR).</p> <ul style="list-style-type: none"> <li>• Where depending on the source or circumstances of the loss there is a material difference in the available recovery measures, order of usage, path of loss propagation or impact on stakeholders.</li> <li>• Where applicable, obligations of clearing members in terms of loss allocation for specific types of non-default losses risks.</li> <li>• Any other type of third-party funding (e.g. insurance), contemplating potential funding gaps, delays or failures in pay-outs.</li> </ul>	<p>derived from the different sources of risk.</p> <ul style="list-style-type: none"> <li>• CCPs may wish to use crisis simulation and stress-testing exercise to assess whether their suggested approaches to fully absorb non-default losses and recapitalise the CCP would be comprehensive and credible.</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
		<ul style="list-style-type: none"> <li>Market-based tools to recapitalise the CCP, and their prospective reliability in extreme stress situations.</li> </ul>	
<p><b>5. Default event causing a liquidity shortfall</b></p> <p><i>(This scenario addresses the situation in which there is a default event that creates a liquidity shortfall exceeding the business as usual liquidity management tools.)</i></p>	<ul style="list-style-type: none"> <li>Liquidity shortfalls that may result from a higher number of clearing member defaults than two, market shocks higher than modelled by the CCP's stress testing framework or liquidation costs of defaulter's portfolios higher than modelled.</li> <li>Operational funding liquidity needs and potential increases in</li> </ul>	<ul style="list-style-type: none"> <li>The existence of tools used as part of the business as usual liquidity framework the availability of which depends on third parties, group entities or general access to financial markets and the failure of which would have a material impact on the liquidity management capabilities of the CCP.</li> </ul>	<ul style="list-style-type: none"> <li>Liquidity reverse stress testing using similar principles as described in the quantitative tools of the type of scenario 1 for the calculation of potential liquidity needs.</li> <li>Scenario analysis to assess the impact from the failure of liquidity tools used in the liquidity risk management framework that depend on third parties, group entities or general access to financial markets.</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
	<p>these needs due to clearing member defaults.</p>		<ul style="list-style-type: none"> <li>Risk assessment and scenario analysis of FMI, service providers and interconnected entities.</li> </ul>
<p><b>6. Non-default event causing a liquidity shortfall</b></p> <p><i>(This scenario addresses the situation in which there is a non-default event that creates a liquidity shortfall exceeding the business as usual liquidity management tools.)</i></p>	<ul style="list-style-type: none"> <li>Liquidity shortfalls generated as a result of an entity that could fail due to financial or operational reasons from the list provided in Guideline 2 generating as a result a liquidity shock to the CCP.</li> <li>Operational funding liquidity needs and potential increases in these needs due to failures of entities provided in Guideline 2.</li> </ul>	<ul style="list-style-type: none"> <li>The existence of multiple entities from the list provided in Guideline 2 whose operational failure would cause a material liquidity impact to the CCP.</li> <li>The existence of tools used as part of the business as usual liquidity framework the availability of which depends on third parties, group entities or general access to financial markets and the failure of which would have a material impact on the liquidity</li> </ul>	<ul style="list-style-type: none"> <li>Liquidity reverse stress testing using similar principles as described in the quantitative tools of the type of scenario 1 (with the exception of the elements of the reverse stress tests describing defaulting clearing members) for the calculation of potential liquidity needs.</li> <li>Scenario analysis to assess the impact from the failure of liquidity tools used in the liquidity risk management framework that depend on third parties, group entities or</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
		<p>management capabilities of the CCP.</p> <ul style="list-style-type: none"> <li>Differences in the available recovery measures, order of usage or impact on stakeholders that depend on the type of entity or event generating the liquidity shortfall.</li> </ul>	<p>general access to financial markets.</p> <ul style="list-style-type: none"> <li>Risk assessment and scenario analysis of FMIs, service providers and interconnected entities.</li> </ul>
<p><b>7. Event(s) causing simultaneous default and non-default losses</b></p> <p><i>(This scenario addresses the situation in which there are concurrent default and non-default losses as a result of a single event or as a result of multiple events that occur in a reduced time span.)</i></p>	<ul style="list-style-type: none"> <li>How the two paths of loss propagation (through the waterfall for default losses and through CCP's capital for non-default losses) would behave and potentially converge.</li> </ul>	<ul style="list-style-type: none"> <li>Where there are specific entities that are material sources of both default and non-default losses, specific scenarios analysing the effects of default events affecting these entities may be relevant.</li> <li>Where non-default losses would be borne by clearing</li> </ul>	<ul style="list-style-type: none"> <li>Combinations of tools from types of scenarios 1, 2, 3 and 4.</li> </ul>

Types of Scenarios	Issues and aspects to consider when building the scenario	Factors to evaluate the creation of additional scenarios	Quantitative assessment tools
		<p>members affecting the path of loss propagation.</p> <ul style="list-style-type: none"> <li>• Where there are material differences between different combinations of default and non-default events with respect to the available tools, usage of tools, paths of losses or impact on stakeholders.</li> </ul>	