



European Securities and
Markets Authority

Final report

Technical advice on third country regulatory equivalence under EMIR – Singapore



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Key to the references and terms used in this technical advice

ACH: Approved Clearing Houses.

CCP: Central Counterparty.

CG Regs: Securities and Futures (corporate governance of Approved Exchanges, Designated Clearing Houses and Approved Holding Companies) Regulations.

EMIR: Regulation (EU) No. 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories.

ESAs: European Supervisory Authorities, i.e. ESMA, EBA and EIOPA.

ESMA: European Securities and Markets Authority.

FMI: Financial market Infrastructure.

MAS: Market Authority of Singapore.

NCA: National Competent Authority from the European Union.

RCH: recognised clearing houses.

RTS: Regulatory Technical Standards.

SFA: Securities and Futures Act.

SF(A)A: Securities and Futures (Amendment) Act.

SF(CF)R Securities and Futures (Clearing Facilities) Regulations.

SFA: Securities and Futures Act.

SGX: Singapore Exchange.

SGX-CDP: Singapore Exchange Central Depository.

SGX-DC: Singapore Exchange Derivatives Clearing.

SGX-DT: SGX's Derivatives Trading Division.

SGX-ST: SGX's Securities Trading Division.



Section I

Executive summary

1. The European Commission mandated ESMA on 11 October 2012 to provide it with technical advice on the equivalence between the Singaporean regulatory regime and different aspects of the EU regulatory regime under Regulation (EC) No. 648/2012 of the European Parliament and the Council on OTC derivatives, central counterparties (CCPs) and trade repositories (TRs).
 2. The specific area of concern was the recognition of third country CCPs. On 13 June 2012 the European Commission mandated ESMA to provide it with technical advice on the equivalence between the Singaporean regulatory regime on a second aspect of the EU regulatory regime under EMIR, namely the recognition of third country TRs.
 3. **This report sets out ESMA's advice to the European Commission in respect of the equivalence between the Singaporean regulatory regime and the EU regulatory regime under EMIR in respect of the recognition of third country CCPs. Singapore is still in the process of finalising its regulatory regime for TRs. ESMA is therefore still in the process of preparing its technical advice under these limbs of the European Commission's mandate. That technical advice will be delivered at a later date.**
 4. The equivalence assessment conducted by ESMA follows an objective-based approach, where the capability of the regime in the third country to meet the objectives of the EU Regulation is assessed from a holistic perspective. The analysis of the differences and similarities has been conducted as factually as possible. The advice to the Commission has been based on that factual assessment but has also taken into account the analysis of the consequences for the stability and protection of EU entities and investors that an equivalence decision would have in those specific areas where the legally binding requirements are not considered equivalent.
 5. The European Commission is expected to use ESMA's technical advice to prepare possible implementing acts concerning the equivalence between the legal and supervisory framework of Singapore under EMIR. Where the European Commission adopts such an implementing act then ESMA may recognise a CCP authorised in that third country. ESMA's conclusions in respect of this technical advice should not be seen to prejudge any final decision of the European Commission or of ESMA.
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Introduction

1. The European Commission mandated ESMA on 11 October 2012 to provide it with technical advice on the equivalence between the Singaporean regulatory regime and one aspect of the EU regulatory regime under EMIR. On 27 February 2013, the Commission amended the original mandate to postpone the deadlines for the delivery of the technical advice by ESMA. For Singapore the original deadline of 15 June 2013 was changed to 15 July 2013. On 13 June 2013, the European Commission further amended the mandate to postpone the deadlines for the delivery of technical advice by ESMA and to change its scope in respect of certain jurisdictions. For Singapore the revised deadline of 15 July 2013 was changed to 1 October 2013. The European Commission also extended the scope of the mandate to request that ESMA provide it with technical advice on the equivalence between the Singaporean regulatory regime and the EU regulatory regime under EMIR regarding the recognition of third country TRs (see Annex I and II).
2. The mandate on equivalence for Singapore originally covered one specific area: 1) the recognition of third country CCPs; and was later on, on 11 April 2013, extended to a second one: 2) the recognition of third country TRs.
3. **This report sets out ESMA's advice to the European Commission in respect of the equivalence between the Singaporean regulatory regime and the EU regulatory regime under EMIR in respect of the recognition of third country CCPs. Singapore is still in the process of finalising its regulatory regime for TRs. ESMA is therefore still in the process of preparing its technical advice under these limbs of the European Commission's mandate. That technical advice will be delivered at a later date.**
4. ESMA has liaised with its counterparts in Singapore (MAS) in the preparation of this report and has exchanged materials and views on the key areas of the analysis. However, the views expressed in this report are those of ESMA and ESMA alone is responsible for the accuracy of this advice. ESMA has decided not to launch a public consultation on this advice. The advice is not about a policy option or a legislative measure that could be subject to improvement or reconsideration due to market participants' views or comments. It is a factual comparison of the respective rules of two foreign jurisdictions with the EU regime and an advice on how to incorporate these differences in a possible equivalence decision. ESMA is aware about the effects that such a decision by the Commission could have on market participants, but considers that the key element of this advice is of a factual nature, not a policy one.

Purpose and use of the European Commission's equivalence decision

5. According to Article 25(6) and 75(1) of EMIR, the European Commission may adopt an implementing act determining that the legal and supervisory arrangements of a third country ensure that CCPs and TRs, which are established or authorised in a specific third country, comply with legally binding requirements which are equivalent to the requirements laid down in EMIR.

CCPs

6. ESMA may recognise a CCP authorised in a third country under certain conditions. According to Article 25(2)(a) of EMIR, one of those conditions is that the Commission has adopted an implementing act in accordance with Article 25(6) of EMIR determining that the legal and supervisory regime in the country in which the CCP is authorised ensures that CCPs authorised there comply with legally binding requirements which are equivalent to those of Title IV of EMIR, that those CCPs are subject to effective on-going supervision and enforcement in the third country, and that its legal framework provides for an effective equivalent system for the recognition of CCPs authorised under the legal regime of that third country.

7. The European Commission has requested ESMA's technical advice in respect of Singapore to prepare possible implementing acts under Article 25(6) of EMIR. **This report contains ESMA's advice in respect of Singapore under Article 25(6) of EMIR.**

Trade repositories

8. TRs authorised in a third country that intend to provide services and activities to entities established in the EU for the purpose of the reporting obligation, must be recognised by ESMA. Such recognition also requires an implementing act of the Commission under Article 75(1) of EMIR determining that the legal and supervisory regime in the country in which the TR is authorised ensure that TRs authorised there comply with legally binding requirements which are equivalent to those of EMIR, that those TRs are subject to effective on-going supervision and enforcement in the third country, and guarantees of professional secrecy exist that are at least equivalent to those of EMIR.
9. The European Commission has requested ESMA's technical advice in respect of Singapore to prepare possible implementing acts under Article 75(1) of EMIR. . **This report does not contain ESMA's advice in respect of Singapore under Article 75(1) of EMIR. That technical advice will be delivered at a later date.**

Determination of equivalence is one of a number of criteria that have to be met

10. The adoption of an implementing act by the European Commission is required to enable a third country CCP or TR to apply to ESMA for recognition. However ESMA reiterates that this technical advice should not be seen to prejudge the European Commission's final decision on equivalence. Furthermore, a determination of equivalence by the European Commission is just one of a number of criteria that have to be met in order for ESMA to recognise a third country CCP or TR so that they may operate in the EU for regulatory purposes. Positive technical advice or a positive equivalence determination by the European Commission should not be understood as meaning that a third country CCP or TR will automatically be granted recognition by ESMA. Only if all the other conditions set out in Articles 25 and 77 of EMIR are met, can a third country CCP or TR be granted recognition¹

ESMA's Approach to assessing equivalence

11. Concerning the assessment approach taken in preparing this technical advice, ESMA has followed an objective-based approach, where the capability of the regime in the third country to meet the objectives of the EU Regulation is assessed from a holistic perspective. Annex III contains a line-by-line analysis of the differences and similarities between the requirements of the third country and those provided for in EMIR. The advice to the Commission which is set out in this section of the report has been based on that line-by-line factual assessment but takes an objective-based approach to determining whether there is equivalence between the requirements of the third country and those provided for in EMIR. In particular, the final column of the table at Annex III includes conclusions which have been drawn, on a holistic basis, for each topic. These have been drawn by taking into account the fundamental objectives that an equivalence assessment under EMIR should look at (i.e. the promotion of financial stability, the protection of EU entities and investors and the prevention of regulatory arbitrage in respect of CCPs).
12. In providing its technical advice ESMA has taken account of the following:

¹ One of these requirements is that ESMA has established cooperation arrangements with the relevant competent authorities of the third country. ESMA is currently in discussions with the jurisdictions subject to this technical advice regarding such cooperation arrangements.

- The requirements of the ESMA Regulation.
- The principle of proportionality: that the technical advice should not go beyond what is necessary to achieve the objective of the implementing acts set out in the legislative act.
- The objectives of coherence with the regulatory framework of the Union.
- That ESMA is not confined to elements that should be addressed by the implementing acts but may also indicate guidelines and recommendations that it believes should accompany the delegated acts to better ensure their effectiveness.
- The need for horizontal questions to be dealt with in a similar way to ensure coherence between different areas of EMIR.
- The desirability that ESMA's technical advice cover the subject matters described by the delegated powers included in the relevant provisions of the legislative act and its corresponding recitals as well as in the relevant Commission's request for technical advice.
- That ESMA should address to the Commission any question it might have concerning the clarification on the text of the legislative act.

Section II. Technical advice on CCPs

Part I – Effective on-going supervision and enforcement

13. Regulation and supervision of financial market infrastructures are entrusted to the MAS. The MAS is Singapore's central bank and unified financial sector regulator. It is legally and institutionally independent of the executive and legislative branches of the government and accountable to the public.
14. The MAS' responsibilities with respect to securities regulation are clearly stated in the applicable legislation and rules in the SFA of 2001 and related regulations. It has the duty to foster a sound and progressive financial sector and is to conduct integrated supervision of financial services and financial stability surveillance. The MAS has both prudential and conduct of business responsibility for financial market infrastructures.
15. MAS regulatory powers also include powers to impose restrictions (including access restrictions), conditions and directions and remove chief executive officers and directors, approve substantial shareholders and other controllers and conduct inspections of the operations. On-site-inspections are conducted once a year and key risk areas and market control operations are inspected. Besides MAS leverages on the work done by external auditors, internal auditors and compliance units. Finally MAS maintains an on-going dialogue with the risk management units on day-to-day risk monitoring and new business integration for example.
16. The Singapore regulatory regime governing OTC derivatives, CCP requirements and derivatives reporting to trade repositories has recently been reviewed. The changes are set out in SF(A)A, which was passed by Parliament on 15 November 2012 and gazetted on 26 December 2012. The SF(A)A represents the first of a two-phase review of the SFA, Chapter 289 of Singapore that implementing policy proposals to regulate, inter alia, OTC derivatives, in line with recommendations by the G20 and the Financial Stability Board.
17. Amendments to the subsidiary legislation on the regulation of clearing facilities, in the form of the SF(CF)R to operationalise the SFA requirements, have been recently consulted on and both the amendments to the SFA and SF(CF)R took effect on 1 August 2013.
18. The SF(A)A introduces:
 - (a) a new licensing regime for the regulation of trade repositories as licensed trade repositories or licensed foreign trade repositories;
 - (b) a new authorisation/recognition regime for all persons operating clearing facilities to be regulated as ACH or RCH. This regime will replace the existing regulatory regime governing clearing facilities for futures contracts under the SFA, and the regulatory regime governing clearing facilities for OTC commodity derivatives under the Commodity Trading Act, Chapter 48A of Singapore;
 - (c) mandatory reporting of prescribed OTC derivatives contracts by financial institutions and large non-financial entities to a Licensed TR; and
 - (d) mandatory clearing of prescribed OTC derivatives contracts through a CCP.
19. The SF(A)A repeals the previous framework on clearing facilities and introduces an authorisation/recognition approach for all clearing facilities. A corporation seeking to operate a clearing facility in Singapore may do so only if it is either approved as an ACH or recognised as an RCH by the MAS. It appears that as a general principle, locally-incorporated companies operating clearing facilities that are systemically-important, such as those performing the role of CCPs, will be regulated by the MAS as ACHs. Other corporations operating clearing facilities, including overseas corporations, will be regulated by the MAS as RCHs. .

20. In general, ACHs are subject to a higher level of statutory obligations compared to RCHs. However, in deciding whether to recognise a foreign corporation as an RCH, the MAS may have regard to whether the foreign corporation is, in its home jurisdiction, subject to comparable requirements and supervision to the requirements under the SFA in respect of ACHs and RCHs.

ESMA's assessment

21. The supervisory and enforcement regime for CCPs in Europe envisages the establishment of colleges for CCPs. This provision introduces a certain degree of harmonisation of the practices to be followed, e.g. need for a NCA to present a risk assessment to the college and the functioning of colleges will necessarily harmonise the supervisory practices among European NCAs.
22. EMIR introduces minimum standards of supervision and enforcement among NCAs, e.g. that CCPs should be subject to on-site inspections and that NCAs have the necessary powers to take effective, proportionate and dissuasive measures against CCPs, but EMIR leaves to the Member States the duty to define those measures at national level.
23. On the basis of ESMA's experience in assessing common supervisory practices among European authorities, ESMA can conclude that these are not dissimilar to the ones applicable in Singapore.
24. Together with assessing the soundness of the regime directly, ESMA has also relied on independent assessments carried out by the International Monetary Fund through its Financial Sector Assessment Program (FSAP) of the Singaporean financial supervisory system (IMF Country Report No. 04/104) which includes a detailed assessment of the IOSCO Objectives and Principles of Securities Regulation. The FSAP and assessment of IOSCO Objectives and Principles of Securities Regulation are assessments of the supervisory regulations, arrangements and practices in a jurisdiction against the most relevant international standards in each field.
25. The last FSAP for Singapore was published in February 2004 and therefore does not cover the CPSS-IOSCO Principles for Financial Market Infrastructures, since those principles were not yet established at that time, or the revised IOSCO Objectives and Principles of Securities Regulation, which were updated in 2010. The report did however conclude that at that time, and based on the previous IOSCO Objectives and Principles of Securities Regulation, all of the general preconditions for an effective securities regulatory regime appeared to be in place in Singapore.
26. The main findings in the FSAP report, although they point out several areas for possible improvement, depict the compliance with the IOSCO principles of securities regulation as broadly in compliance with international standards then.
27. **Against this background ESMA advises the Commission to consider that CCPs are subject to effective supervisory and enforcement in Singapore.**

Part II - Effective equivalent system for the recognition of CCPs authorised under the legal regime of a third country

28. An equivalent system for the recognition of CCPs authorised under the legal regime of a third country exists in Singapore, insofar as there is a legislative framework under which third country CCPs can apply for an RCH authorisation enabling them to provide financial market infrastructure services in Singapore provided that:
- The regulatory regime in the home jurisdiction of the FMI is comparable, in the degree to which MAS' objectives of regulation are achieved, to the requirements and supervision to which a locally-incorporated FMI in Singapore is subject under the SFA. The home jurisdiction should be one which applies the PFMI in its supervision of the overseas-incorporated FMI; and
 - Adequate arrangements have been made for cooperation with the home regulator of the FMI, generally through a memorandum of understanding or similar formal documentation, on information exchange and mutual assistance between MAS and the home regulator of the FMI.
29. Overseas RCH are subject to certain provisions, general obligations, established under the Singaporean regulatory framework even though MAS will exercise less intrusive approach in view of their home jurisdiction supervision. Under EMIR a recognised CCP is subject only to the direct supervision of the authorities in the third country jurisdiction in which the CCP is authorised, however the content of the obligations RCHs are under is not deemed to be significant enough for the Singaporean regime to be considered more onerous than the European system.
30. **Against this background ESMA advises the Commission to consider the legal framework of Singapore as providing for an equivalent system for the recognition of CCPs authorised under third-country legal regimes.**

Part III – Legally binding requirements which are equivalent to those of Title IV of EMIR

Jurisdictional level requirements

31. ESMA has undertaken a comparative analysis of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore and the corresponding legally binding requirements for CCPs under EMIR. The substantive analysis is set out in Annex III.
32. As set out in the detailed analysis included in Annex III, there are a number of areas where the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore are not broadly equivalent to the legally binding requirements for CCPs under EMIR.
33. It should however be noted that ESMA's detailed analysis has been restricted to reviewing primary and secondary legislation, rules and regulations promulgated under primary and secondary legislation and legally binding documentation issued by MAS. This is in line with the mandate given to ESMA by the European Commission.

Other legal and supervisory arrangements

34. In addition to the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, ESMA is aware that some CCPs authorised in Singapore might, on an individual basis, have adopted (or may in future adopt) internal policies, procedures, rules, models and methodologies,

based amongst others on MAS Monographs and Guidelines², which have the effect of subjecting the CCP to standards that are broadly equivalent to the legally binding requirements for CCPs under EMIR.

35. The internal policies, procedures, rules, models and methodologies that some CCPs authorised in Singapore might, on an individual basis, have adopted, could constitute legally binding requirements for the purposes of Article 25(6) of EMIR where (a) such internal policies, procedures, rules, models and methodologies cannot be changed without the approval or non-objection of MAS and (b) any departure by the CCP from, or failure to implement, such internal policies, procedures, rules, models and methodologies can give rise to possible enforcement action.
36. ESMA considers that where such internal policies, procedures, rules, models and methodologies do constitute legally binding requirements in accordance with the tests set out in paragraph 35 above, then these should also be taken into account. This solution should avoid any market disruption which might occur in the absence of a recognition regime for Singaporean CCPs.
37. **Taking into account that the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore and the other legal and supervisory arrangements present in Singapore, ESMA advises the Commission to consider that CCPs authorised in Singapore do comply with legally binding requirements which are equivalent to the requirements laid down in Title IV of EMIR in respect of CCPs that have adopted internal policies, procedures, rules, models and methodologies that constitute legally binding requirements in accordance with the tests set out in paragraph 35 above and where they incorporate provisions which, on a holistic basis, are broadly equivalent to the legally binding requirements for CCPs under EMIR (i.e. where the internal policies, procedures, rules, models and methodologies include provisions which, on a holistic basis, address the gaps identified in the relevant section of the detailed analysis set out at Annex III) in the following areas:**
 - (1) **Organisational requirements, including all the requirements under this section (governance, compliance, audit, etc.).**
 - (2) **Requirements for senior management and the Board.**
 - (3) **Risk Committee requirements.**
 - (4) **Record keeping requirements.**
 - (5) **Conflict of interest requirements**
 - (6) **Business continuity requirements.**
 - (7) **Outsourcing requirements.**
 - (8) **General conduct of business requirements.**
 - (9) **Participation requirements**
 - (10) **Margin requirements.**

² Objectives and Principles of Financial Supervision in Singapore (2004), MAS Framework for Impact and Risk Assessment of Financial Institutions (2007), Tenets of Effective Regulation (2010) Supervision of Financial Market Infrastructures in Singapore (2013) Guidelines on the Regulation of Clearing Facilities, Guidelines on Risk Management Practices – Board and Senior Management, Guidelines on Internal Controls, Business Continuity Management Guidelines, Guidelines on Outsourcing.

- (11) **Default fund requirements.**
 - (12) **Other financial resources requirements.**
 - (13) **Liquidity risk control requirements.**
 - (14) **Default waterfall requirements.**
 - (15) **Collateral requirements.**
 - (16) **Investment policy requirements.**
 - (17) **Default procedure requirements.**
 - (18) **Review of models, stress testing and back testing requirements.**
 - (19) **Settlement requirements.**
38. **In order to achieve the fundamental objectives that an equivalence assessment under EMIR should look at in respect of CCPs (i.e. the avoidance of risk importation to the EU, the protection of EU entities and investors and the prevention of regulatory arbitrage), the solution proposed in this draft advice requires that a CCP applying for recognition under EMIR has adopted internal policies, procedures, rules, models and methodologies that address the differences identified in the final column of the table at Annex III for the areas highlighted above.**

Conclusion

39. **ESMA advises the Commission to consider that CCPs authorised in Singapore are subject to effective supervision and enforcement on an on-going basis and that the legal framework of Singapore provides for an effective equivalent system for the recognition of CCPs authorised under third-country legal regimes.**
40. **ESMA also advises the Commission to consider that the legal and supervisory arrangements of Singapore ensure that CCPs authorised in Singapore comply with legally binding requirements which are equivalent to the requirements laid down in Title IV of EMIR in respect of CCPs that have adopted internal policies, procedures, rules, models and methodologies that constitute legally binding requirements in accordance with the tests set out in paragraph 35 above and where they incorporate provisions which, on a holistic basis, are broadly equivalent to the legally binding requirements for CCPs under EMIR in the areas set out in paragraph 37 above.**
41. **On this basis, therefore, ESMA would only grant recognition to CCPs authorised in Singapore which have in fact adopted internal policies, procedures, rules, models and methodologies which, on a holistic basis, incorporate provisions that are broadly equivalent to the legally binding requirements for CCPs under EMIR in the specific areas identified above and where ESMA has assessed that the relevant internal policies, procedures, rules, models or methodology do constitute a legally binding requirement in accordance with the tests set out in paragraph 35 above.**
42. **If a CCP authorised in Singapore that was granted recognition by ESMA subsequently made changes to its internal policies, procedures, rules, models and methodologies in a way which meant that the CCP no longer complied with standards that were broadly equivalent to the legally binding requirements for CCPs under EMIR, then that CCP would no longer qualify for recognition, and would be subject to the withdrawal of its recognition pursuant to Article 25(5) of EMIR.**



ANNEX I – Mandate from the European Commission – 11 October 2012

FORMAL REQUEST TO ESMA FOR TECHNICAL ADVICE ON POSSIBLE IMPLEMENTING ACTS CONCERNING REGULATION 648/2012 ON OTC DERIVATIVES, CENTRAL COUNTERPARTIES AND TRADE REPOSITORIES (EMIR)

With this formal mandate the Commission seeks ESMA's technical advice to prepare possible implementing acts concerning the **equivalence** between the legal and supervisory frameworks of certain third countries and Regulation No 648/2012 of 4 July 2012 on OTC derivatives, central counterparties and trade repositories ('EMIR' or the "**legislative act**"). Any such implementing acts that may be proposed by the Commission must be adopted in accordance with Article 291 of the Treaty on the Functioning of the European Union (TFEU).

The Commission reserves the right to revise and/or supplement this formal mandate and revise the timetable if the scope is amended. The technical advice received on the basis of this mandate should not prejudice the Commission's final decision.

This mandate is based on Regulation No 1095/2010 of the European Parliament and the Council of 24 November 2010 establishing a European Securities and Markets Authority (the "**ESMA Regulation**")³ and Regulation (EU) No 182/2011 of the European Parliament and the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers⁴.

According to Articles 25(6) and 75(1) of the legislative act the Commission may adopt an implementing act determining that the legal and supervisory arrangements of a third country ensure that CCP's and trade repositories, which are respectively established or authorized in a specific third country comply with legally binding requirements which are equivalent to the requirements laid down in EMIR. Furthermore, according to Article 13(2) of the legislative act, the Commission may also adopt implementing acts declaring that the legal, supervisory and enforcement arrangements of a third country are equivalent to the clearing and reporting requirements laid down in EMIR (Articles 4,9,10 and 11) to avoid duplicative or conflicting rules.

The European Parliament and the Council shall be duly informed about this mandate.

In accordance with the established practice within the European Securities Committee,⁵ the Commission will continue, as appropriate, to consult experts appointed by the Member States in the preparation of these possible implementing acts.

The powers of the Commission to adopt implementing acts are subject to Articles 13(2), 25(6) and 75(1) of the Legislative act. As soon as the Commission adopts an implementing act, the Commission will notify it simultaneously to the European Parliament and the Council.

³ OJ L 331, 15.12.2010, p. 84 - 119.

⁴ OJ L55/13, 28.2.2011, p. 13-18

⁵ Commission's Decision of 6.6.2001 establishing the European Securities Committee, OJ L191, 17.7.2001, p.45-46.



1. Context.

1.1 Scope.

CCPs

ESMA may recognise a *CCP* established in a third country under certain conditions. According to Article 25 (2a) EMIR one of those conditions is that the Commission has adopted an implementing act in accordance with Article 25 (6) EMIR determining that the legal and supervisory regime in the country in which the CCP is established ensure that CCPs established there comply with legally binding requirements which are equivalent to those of Title IV of EMIR, that those CCPs are subject to effective ongoing supervision and enforcement in the third country, and that its legal framework provides for an effective equivalent system for the recognition of CCPs authorised under the legal regime of a third country.

Trade repositories

Trade repositories established in a third country that intend to provide services and activities must be recognized by ESMA. Such recognition also requires an implementing act of the Commission under Article 75(1) of EMIR determining that the legal and supervisory regime in the country in which the trade repository is established ensure that trade repositories authorised there comply with legally binding requirements which are equivalent to those of EMIR, that those trade repositories are subject to effective ongoing supervision and enforcement in the third country, and guarantees of professional secrecy exist that are at least equivalent to those of EMIR.

Potential duplicative or conflicting requirements on market participants

In accordance with Article 13(1) EMIR, the Commission, assisted by ESMA, must monitor, prepare reports and recommend possible action to the European Parliament and the Council on the international application of the clearing and reporting obligations, the treatment of non-financial undertakings and the risk mitigation techniques for OTC trades that are not cleared by a CCP, in particular with regard to potential duplicative or conflicting requirements on market participants.

The Commission may adopt implementing acts declaring that the legal, supervisory and enforcement arrangements of a third country are equivalent to the respective requirements in EMIR, ensure an equivalent protection of professional secrecy, and are being applied in an equitable and non-distortive manner so as to ensure effective supervision and enforcement in that third country. An implementing act adopted by the Commission declaring that the above-mentioned conditions have been fulfilled for a third country shall imply, according to Article 13(3), that if at least one of the counterparties entering into an OTC derivatives transaction is established in that third country and the contract is subject to EMIR, the counterparties will be deemed to have fulfilled the requirements of EMIR.

1.2 Principles that ESMA should take into account.

In providing its technical advice ESMA is invited to take account of the following principles:

- It should respect the requirements of the ESMA Regulation, and, to the extent that ESMA takes over the tasks of CESR in accordance with Art 8(1)(l) of the ESMA Regulation,

take account of the principles set out in the Lamfalussy Report⁶ and those mentioned in the Stockholm Resolution of 23 March 2001⁷.

- The principle of proportionality: the technical advice should not go beyond what is necessary to achieve the objective of the implementing acts set out in the legislative act.
- While preparing its advice, ESMA should seek coherence within the regulatory framework of the Union.
- In accordance with the ESMA Regulation, ESMA should not feel confined in its reflection to elements that it considers should be addressed by the implementing acts but, if it finds it appropriate, it may indicate guidelines and recommendations that it believes should accompany the delegated acts to better ensure their effectiveness.
- ESMA will determine its own working methods depending on the content of the provisions being dealt with. Nevertheless, horizontal questions should be dealt with in such a way as to ensure coherence between different standards of work being carried out by the various expert groups.
- ESMA should provide comprehensive technical analysis on the subject matters described below covered by the delegated powers included in the relevant provision of the legislative act and its corresponding recitals as well as in the relevant Commission's request included in this mandate.
- The technical advice given by ESMA to the Commission should not take the form of a legal text. However, ESMA should provide the Commission with an "articulated" text which means a clear and structured text, accompanied by sufficient and detailed explanations for the advice given, and which is presented in an easily understandable language respecting current terminology in the Union.
- ESMA should address to the Commission any question they might have concerning the clarification on the text of the legislative act, which they should consider of relevance to the preparation of its technical advice.

2. Procedure.

The Commission is requesting the technical advice of ESMA in view of the preparation of the possible implementing acts to be adopted pursuant to the legislative act and in particular regarding the questions referred to in section 3 of this formal mandate.

The mandate takes into account the ESMA Regulation and Regulation (EU) No 182/2011 of the European Parliament and the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers.

⁶ Final Report of the Committee of Wise Men on the Regulation of European Securities Markets, chaired by M. Lamfalussy, Brussels, 15 February 2001. (http://ec.europa.eu/internal_market/securities/docs/lamfalussy/wisemen/final-report-wise-men_en.pdf)

⁷ Results of the Council of Economics and Finance Ministers, 22 March 2001, Stockholm Securities legislation, (<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/01/105&format=HTML&aged=0&language=EN&guiLanguage=en>).

The Commission reserves the right to revise and/or supplement this formal mandate and revise the timetable if the scope is amended. The technical advice received on the basis of this mandate will not prejudice the Commission's final decision in any way.

In accordance with established practice, the Commission may continue to consult experts appointed by the Member States in the preparation of the implementing acts relating to the legislative act.

The Commission has duly informed the European Parliament and the Council about this mandate. As soon as the Commission adopts possible delegated acts, it will notify them simultaneously to the European Parliament and the Council.

3. ESMA is invited to provide technical advice on the following issues with the following priorities.

Taking into account the existence or expected adoption of final primary and/or secondary legislation in third countries and in order to compare the provisions of EMIR to that legislation the following division and prioritisation of technical advice is required in two phases.

CCPs

ESMA is invited to provide technical advice on the legal and supervisory regime in specific third countries (specified below) applicable to CCPs and to advise whether they comply with legally binding requirements which are equivalent to those of Title IV of EMIR, that those CCPs are subject to effective ongoing supervision and enforcement in the third country, and that its legal framework provides for an effective equivalent system for the recognition of CCPs authorised under the legal regime of a third country.

The delivery of technical advice should be prioritised in two phases.

- Phase I: the USA and Japan;
- Phase II: Switzerland, Australia, Dubai, India, Singapore and Hong Kong.

Trade repositories

ESMA is invited to provide technical advice on the legal and supervisory regime in specific third countries (specified below) and to advise whether the legal and supervisory regime in the country in which the trade repository is established ensures that trade repositories authorised there comply with legally binding requirements which are equivalent to those of EMIR, that those trade repositories are subject to effective ongoing supervision and enforcement in the third country, and guarantees of professional secrecy exist that are at least equivalent to those of EMIR.

The delivery of technical advice should be prioritised in two phases.

- Phase I: the USA;
- Phase II: Hong Kong.

No further third countries are envisaged at this point in time.

Potential duplicative or conflicting requirements

ESMA is invited to provide technical advice on the legal and supervisory regime in specific third countries (specified below) and to advise whether the legal, supervisory and enforcement arrangements of a third country are equivalent to the respective requirements in EMIR, ensure an equivalent protection of professional secrecy, and are being applied in an equitable and non-distortive manner so as to ensure effective supervision and enforcement in that third country.

The determination of any such requirements and arrangements for the obligations for clearing, reporting and non-financial counterparties (Articles 4, 9 and 10 of EMIR) should be prioritised in two phases.

- Phase I: the USA and Japan;
- Phase II: Hong Kong, Switzerland, Canada and Australia.

The determination of any such requirements and arrangements for the obligations for risk mitigation techniques for OTC trades that are not cleared by a CCP (Article 11 of EMIR) should be prioritised in two phases.

- Phase I: the USA, Japan;
- Phase II: Hong Kong, Switzerland, Canada and Australia.

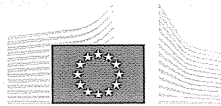
4. Indicative timetable.

This mandate takes into consideration that ESMA requires sufficient time to prepare its technical advice and that the Commission may seek to adopt any implementing acts according to Article 291 of the TFEU. The powers of the Commission to adopt implementing acts are subject to the control mechanisms for Member States laid down in Regulation 182/2011.

The deadlines set to ESMA to deliver technical advice are as follows:

- Phase I: 15 March 2013
- Phase II: within 3 months after the entry into force of the European Commission's Regulations with regard to regulatory and implementing technical standards for EMIR but at the latest by 15th June 2013.

ANNEX II – Updated mandate from the European Commission – 13 June 2013



EUROPEAN COMMISSION
Directorate General Internal Market and Services
FINANCIAL MARKETS

Director

Brussels, 13 June 2013
DG Markt/G2/MJ/kc (2013) 2224977

Mr Steven Maijoor
Chair of ESMA
ESMA
103, rue de Grenelle
75007 Paris
France

Subject: Revised request for ESMA technical advice on the equivalence between certain third country legal and supervisory frameworks and the Regulation No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR)

Dear Mr Maijoor,

On 11th October 2012, I sent you a formal request for ESMA technical advice on the equivalence between certain third country legal and supervisory frameworks in respect of Regulation No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR).

This request has then been subsequently amended to revise the list of countries to be considered and extend the deadline for ESMA to deliver its technical advice, with the view to better take into account on-going international discussions and developments in this area.

This technical advice is an important element for the development of European Union's policy for third countries in the field of OTC derivatives regulation. At this stage, we consider that the deadlines for the submission of ESMA technical advice need to be reviewed in order to allow ESMA more time to take account of international on-going developments and to consider their implications fully.

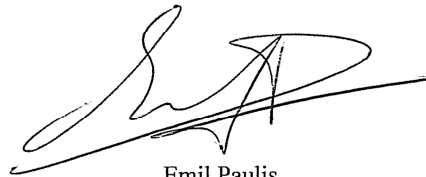
As discussed between our staff, I would therefore like to formally revise the deadlines indicated in the Commission's request for technical advice and ask ESMA to deliver its advice on Japan and the USA by 1 September 2013 and, for the remaining countries, to deliver its advice by 1 October 2013. The table in annex summarises the list of technical advice requested to ESMA, as well as their respective deadlines.

In any case, I would like to highlight that the extension of ESMA deadline to deliver its technical advice affects neither the procedure nor the timeline for recognition of third-country central counterparties or trade repositories.

In particular, as explained in our memo on the *Practical implementation of the EMIR framework to non-EU central counterparties*¹, third-country central counterparties that are currently providing services to EU clearing members should apply by 15 September 2013 in order to benefit from the transitional provisions provided by EMIR and continue providing services to EU clearing members until a decision is made by ESMA on their recognition.

In accordance with EMIR, ESMA will have 180 working days after the receipt of a complete application by a third-country CCP to make a decision on its recognition. The Commission will work in parallel to ensure the timely adoption of any equivalence decisions, as appropriate, in order to enable ESMA to adopt its recognition decision within this timeframe. I look forward to continuing working with you in close cooperation during this important work ahead.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Emil Paulis', is positioned above the printed name.

Emil Paulis

Enclosures: Table on the deadlines for ESMA Technical Advice

Copies: N. Calviño

Contact:

Muriel Jakubowicz, Telephone: +32 229-58154, Muriel.Jakubowicz@ec.europa.eu

¹ http://ec.europa.eu/internal_market/financial-markets/docs/derivatives/130513_equivalence-procedure_cn.pdf

13 June 2013

Deadlines for ESMA Technical Advice
In view of the European Commission's Decisions on Equivalence

Third Country	CCPs	Trade Repositories	Potential Duplicative or Conflicting Requirements
US	1 September 2013	1 September 2013	1 September 2013
Japan	1 September 2013	1 September 2013	1 September 2013
Australia	1 October 2013	1 October 2013	1 October 2013
Canada			1 October 2013
Hong Kong	1 October 2013	1 October 2013	1 October 2013
India	1 October 2013		<i>To be determined</i>
Singapore	1 October 2013	1 October 2013	<i>To be determined</i>
South Korea	1 October 2013		<i>To be determined</i>
Switzerland	1 October 2013	<i>To be determined</i>	1 October 2013
Dubai	<i>Withdrawn</i>		

ANNEX III - Legally binding requirements which are equivalent to those of Title IV of EMIR (CCP Requirements)

Description of the provision in Title IV of EMIR	Description of the corresponding [SFA/SFR] provisions	Assessment of equivalence
<p>Organisational requirements</p> <p>A CCP must have robust governance arrangements, including a clear organisational structure with well-defined, transparent, and consistent lines of responsibility, effective processes to identify, manage, monitor and report the risks to which it is or might be exposed and adequate internal control mechanisms, including sound administrative and accounting procedures.¹</p> <p>Governance arrangements.</p> <p>A CCP must define its organisational structure as well as the policies, procedures and processes by which its board and senior management operate. These governance arrangements must be clearly specified and well-documented.²</p> <p>They should include: (i) the composition, role and responsibilities of the board and any board committees; (ii) the roles and responsibilities of the management; (iii) the senior management structure; (iv) the reporting lines between the senior management and the board; (v) the procedures for the appointment of board members and senior management; (vi) the design of the risk management, compliance and internal control functions; (vii) the processes for ensuring accountability to stakeholders.³</p> <p>The risk management policies, procedures, systems and controls must be part of a coherent and consistent governance framework</p>	<p>Organisational requirements</p> <p>An ACH shall maintain governance arrangements that are adequate for the clearing facility to be operated in a safe and efficient manner. [Section 57 of the SFA]</p> <p>An ACH shall submit to MAS within 3 months after the end of its financial year a copy of its – (i) annual report and directors’ report prepared in accordance with the provisions of the Companies Act; and (ii) auditors’ long form report. The auditors’ long form report shall include the findings and recommendations of the auditors on the internal controls of the ACH and the non-compliance with any provision of the SFA, direction issued by MAS or other relevant laws or regulations. [Regulation 14 of the SF(CF)R]</p> <p>An ACH shall submit to MAS within 45 days after the end of each of the first 3 quarters of its financial year a copy of its – (i) profit and loss accounts; and (ii) balance sheet, for the preceding quarter, in such form as may be approved by MAS. [Regulation 14 of the SF(CF)R]</p> <p>Governance arrangements</p> <p>An ACH shall have sufficient financial, human and system resources to operate a safe and efficient clearing facility, to meet contingencies or disasters and to provide adequate security arrangements. [Section 57 of the SFA]</p>	<p>Organisational requirements</p> <p><i>The Singaporean regime for CCPs includes organisational requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>Governance arrangements.</p> <p>Like EMIR, the Singaporean regime requires CCPs to establish robust governance arrangements and refer to internal controls including a mechanism for internal audit, and that identify, document, and manage the</p>

which is reviewed and updated regularly.⁴

A CCP which is part of a group must consider the group's implications for its own governance arrangements, including (i) whether it has the necessary level of independence to meet its regulatory obligations as a separate legal entity, and (ii) whether its independence could be compromised by its group structure or any board members shared with other group entities.⁵

A CCP must have adequate human resources to meet all of its obligations under EMIR, and should not share such resources with other group entities, unless under the terms of an outsourcing arrangement in accordance with EMIR, Art. 35.⁶

To ensure that CCPs have the necessary levels of human resources, that CCPs are accountable for their activities, and that CCPs Competent Authorities have relevant points of contact within the CCPs they supervise, all CCPs should have at least a chief risk officer, a chief compliance officer and chief technology officer, which positions must be filled by dedicated employees of the CCP.⁷

Risk management and internal control mechanisms. A CCP must have a sound framework for the comprehensive management of all material risks, and must establish documented policies, procedures and systems and controls to identify measure, monitor and manage such risks. These must be structured to ensure that Clearing Members properly manage and contain the risks they pose to a CCP.⁸

A CCP must take an integrated and comprehensive view of, and ensure that its risk management tools can manage and report on, all relevant risks, including risks from and to its Clearing Members (and to the extent practicable, their clients), and risks from and to other entities including interoperable CCPs, securities

An ACH shall ensure that it appoints or employs fit and proper persons as its chairman, chief executive officer, directors and key management officers. [Section 57 of the SFA]

An ACH shall obtain MAS' approval prior to appointing a person as its chairman, chief executive officer, director or key management officer. [Section 71 of the SFA]

The CG Regs set out requirements on ACHs with regard to the composition of the board, independence of directors and formation of board committees.

- Independence of directors: An independent director means a director who is independent from any management and business relationship with the ACH, and independent from any substantial shareholder of the ACH.
- Formation of board committees: An ACH is required to have a Nominating Committee, Remuneration Committee, Audit Committee and Conflicts Committee.
- Composition of board and board committees: The composition of the board and board committees has to meet various independence requirements.

The Conflicts Committee (a board committee) shall be responsible for:

- Reviewing the adequacy of arrangements within the ACH and its subsidiaries for dealing with any perceived or actual conflict between any of the following:
 - The interests arising from the regulation and supervision of (i) the members of the ACH and its subsidiaries; and (ii) corporations whose securities are listed for quotation on a securities market operated by a related corporation of the ACH;
 - The commercial interests of the ACH or any of its subsidiaries,

including any conflict of interests or potential conflict of interest arising as a result of the listing of the shares of the

range of risks to which the CCP is exposed.

However there is no reference to transparency, or clear organisational structure with consistent lines of responsibility. EMIR includes more specific governance framework requirements while the Singaporean regime prescribes broader and more general requirements and relies more heavily on supervisory processes.

In particular, Singaporean CCPs are not specifically restricted to only share human resources with other group entities under the terms of an outsourcing arrangement.

A Singaporean CCP is also not specifically required to have a chief risk officer, a chief technology officer or a chief compliance officer or specifically required to ensure that the chief risk officer is a "dedicated employee" of the CCP. However, a Singaporean CCP is required to have sufficient resources (including human resources) to carry out its functions and required to consider any conflicts of interest or other issues such as the availability of resources where it utilises staff that are employed by other group entities.

There is no specific requirement for a

settlement and payment systems, settlement banks, liquidity providers, central securities depositories, trading venues served by the CCP and other critical service providers.⁹

A CCP must have robust information and risk-control systems which allow the CCP and where appropriate, its Clearing Members, and to the extent practicable, their clients, to obtain timely information and apply risk management policies and procedures appropriately (including sufficient information to ensure that credit and liquidity exposures are monitored continuously at CCP-level, Clearing Member-level and, to the extent practicable, client-level).¹⁰

A CCP must ensure that its risk management function has the necessary authority, expertise and access to all relevant information, and that it is sufficiently independent from the CCP's other functions.

The chief risk officer must implement the CCP's risk management framework.¹¹

A CCP must have adequate internal control mechanisms to assist the board in monitoring the adequacy and effectiveness of its risk management policies, procedures and systems (including sound administrative and accounting procedures, a robust compliance function and an independent internal audit function).¹²

A CCP's financial statements must be prepared annually and audited by statutory auditors / audit firms within the meaning of Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts.¹³

Compliance policy, procedures and Compliance func-

ACH on any market operated by the ACH or any of its subsidiaries; and

- Carrying out regular reviews of the adequacy of the plans, budget and resources of the ACH and its subsidiaries in relation to the regulation and supervision of (i) the members of the ACH and its subsidiaries; and (ii) corporations whose securities are listed for quotation on a securities market operated by a related corporation of the ACH, and reporting to the board of directors if it is of the view that insufficient funding and resources are being devoted by the ACH or its subsidiary, as the case may be, to the supervision of the members, their subsidiaries and the corporations whose securities are listed for quotation on a securities market operated by any of the related corporations of the ACH. [Regulation 15 of CG Regs]

Risk management and internal control mechanisms

An ACH is obliged to manage any risks associated with its business and operations prudently. [Section 57 of the SFA]

An ACH shall: (i) ensure that the systems and controls concerning the assessment and management of risks to its clearing facility are adequate and appropriate for the scale and nature of its operations; (ii) obtain MAS' approval to the limits (and any variance of the limits) which the ACH intends to establish on the number of open positions which may be held by any person under any futures contract cleared or settled with the ACH; and (iii) obtain MAS' approval if the ACH does not intend to establish limits on the number of open positions which may be held by any person under any futures contract cleared or settled with the ACH. [Section 59 of the SFA]

An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH's risk

Singaporean CCP that is part of a group to consider the group's implications for its own governance arrangements.

Risk management and internal control mechanisms.

EMIR specifically requires consideration of certain risks, for example, by interoperable CCPs, liquidity providers, central securities depositories, trading venues served by the CCP or other critical service providers. The Singaporean regime however, relies on more general requirements regarding the risk management and internal control functions of the CCP.

A Singaporean CCP is not specifically required to have systems that allow clearing members or their clients to obtain information to apply their risk management policies and procedures appropriately.

Compliance policy, procedures and Compliance function.

Singaporean CCPs are not specifically required to establish and maintain a compliance function, operating independently from the other functions of

tion. A CCP must establish, implement and maintain adequate policies and procedures to detect any risk of failure by the CCP and its managers and employees to comply with the CCP’s obligations under EMIR.¹⁴

A CCP must ensure that its rules, procedures and contractual arrangements are clear and comprehensive and ensure compliance with EMIR, as well as all other applicable regulatory and supervisory requirements. These rules, procedures and contractual arrangements should be accurate, up-to-date and readily available to the CCPs Competent Authority, Clearing Members and (where appropriate) Clients. A CCP must have a process for proposing and implementing changes to its rules and procedures and, prior to implementing any material changes, should consult with all affected Clearing Members and submit the proposed changes to its CCPs Competent Authority.

A CCP must identify and analyse potential conflicts of law issues and develop rules and procedures to mitigate legal risks resulting from such issues.¹⁵

A CCP must establish and maintain a permanent and effective compliance function, which operates independently from the other functions of the CCP and has the necessary authority, resources, expertise and access to all relevant information.

A CCP’s chief compliance officer must, *inter alia*: (i) monitor the adequacy and effectiveness of a CCP’s compliance policies; (ii) administer the compliance policies established by senior management and the board; (iii) report regularly to the board on compliance by the CCP and its employees with EMIR; (iv) establish procedures for the remediation of instances of non-compliance; and (v) ensure that persons involved in the compliance function do not perform the services or activities they

exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]

An ACH shall submit to MAS within 3 months after the end of its financial year a copy of its – (i) annual report and directors’ report prepared in accordance with the provisions of the Companies Act; and (ii) auditors’ long form report. The auditors’ long form report shall include the findings and recommendations of the auditors on the internal controls of the ACH and the non-compliance with any provision of the SFA, direction issued by MAS or other relevant laws or regulations. [Regulation 14 of the SF(CF)R]

An ACH shall submit to MAS within 45 days after the end of each of the first 3 quarters of its financial year a copy of its – (i) profit and loss accounts; and (ii) balance sheet, for the preceding quarter, in such form as may be approved by MAS. [Regulation 14 of the SF(CF)R]

An ACH shall submit to MAS within 3 months after the end of its financial year a report on how the ACH has discharged its responsibilities under the SFA and SF(CF)R during that financial year. [Regulation 14 of the SF(CF)R]

Compliance policy, procedures and Compliance function

An ACH is obliged to maintain business rules that make satisfactory provision for the clearing facility to be operated in a safe and efficient manner, and the proper regulation and supervision of its members. The ACH shall enforce compliance by its members with the business rules. [Section 57 of the SFA]

An ACH shall make provision in its business rules to the satisfaction of the MAS for –

- (a) the criteria that it would use to determine the admission or

the CCP. The focus is more on the compliance by the clearing members than the compliance by the CCP.

The Singaporean regime does not require that a CCP analyse potential conflicts of law.

Organisational structure and separation of reporting lines.

The Singaporean regime also does not define the responsibilities of a CCP’s board in such detail and there is no requirement regarding the separation of reporting lines. The Singaporean regime does not require a CCP’s board to oversee accountability to shareholders, employees, customers or other stakeholders.

The Singaporean regime does not define the responsibilities of a CCP’s senior management including requiring it to be responsible for ensuring the consistency of a CCP’s activities with the objectives and strategies determined by the board.

Remuneration policy.

Even though a Singaporean CCP is required to have a remuneration committee. There is no description of what should be the rationale and

monitor.

- **Organisational structure and separation of reporting lines.** A CCP must define the composition, role and responsibilities of board and senior management, and any board committees (including an audit committee and a remuneration committee).¹⁶

A CCP's board must be responsible for: (i) establishing the CCP's objectives and strategies; (ii) monitoring of senior management; (iii) establishing appropriate remuneration policies; (iv) establishment of the risk management function and oversight of the risk management, compliance, internal control and outsourcing functions; (v) oversight of compliance with EMIR; and (vi) accountability to shareholders, employees, customers and other stakeholders.¹⁷

A CCP's senior management must be responsible for: (i) ensuring consistency of a CCP's activities with the objectives and strategies determined by the board; (ii) designing and establishing compliance and internal control procedures promoting the CCP's objectives; (iii) regularly reviewing and testing internal control procedures; (iv) ensuring that sufficient resources are devoted to risk management and compliance; (v) the risk control process; and (vi) ensuring that risks posed to the CCP by its clearing and related activities are addressed.¹⁸

A CCP must maintain a clear separation between the reporting lines for risk management and those for the other operations of the CCP.¹⁹

A CCP must have clear and direct reporting lines between its

denial of admission of persons from membership;

(b) continuing requirements for each member, including requirements –

(i) relating to the proper conduct of the member when participating in any clearing facility operated by the approved clearing house;

(ii) that the member has sufficient financial resources to reasonably fulfil all its financial obligations arising out of its activities of any clearing facility operated by the approved clearing house;

(iii) that facilitate the monitoring by the approved clearing houses of the compliance of the member with the business rules of the approved clearing house; and

(iv) that provide for the expulsion, suspension or disciplining of the member for a contravention of the business rules of the approved clearing house;

(c) the class or classes of transactions that may be cleared or settled on any clearing facility that it operates;

(d) the terms and conditions under which transactions will be cleared or settled on any clearing facility that it operates;

(e) matters relating to risks in the operation of any clearing facility that it operates;

(f) the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member's obligations for all unsettled or open market contracts to which the member is a party; and

(g) the carrying on of business of the approved clearing house with due regard to the interests and protection of the investing public.

[Regulation 29 of SF(CF)R]

underlying principles for the remuneration policy as in EMIR.

Information technology systems.

The Singaporean regime only lacks a reference to the capacity to process all transactions by the end of the day.

Disclosure.

Singaporean CCPs are not specifically required to publicly disclose contracts with clearing members and clients or the list of clearing members. However a Singaporean CCP is required to disclose upon request all information on all services and products the outcomes of which be considered as broadly equivalent.

Auditing. In this regard, the Singaporean does not provide any details regarding the independence of the internal audit function, the need for an audit plan, event driven audits or compulsory annual audits for some functions.

On balance, overall those differences do not undermine the consistency of the objectives of the Singaporean and

board and senior management. The reporting lines for risk management, compliance and internal audit must be clear and separate from those of a CCP's other operations.²⁰

Remuneration policy.

A CCP must adopt, implement and maintain a remuneration policy which promotes sound and effective risk management and does not create incentives to relax risk standards.²¹ The policy must be designed, overseen and reviewed at least annually by the remuneration committee. The remuneration policy should be designed to align the level and structure of remuneration with prudent risk management, taking into account prospective risks as well as existing risks. In the case of variable remuneration, the policy must take into account possible mismatches of performance and risk periods, and ensure payments are deferred appropriately. The fixed and variable components of total remuneration must be balanced and must be consistent with risk alignment. The remuneration of staff engaged in risk management, compliance and internal audit should be independent of the CCP's business performance.²²

The remuneration policy should be independently audited on an annual basis (with the results being made available to the relevant CCPs Competent Authority).²³

Information technology systems.

A CCP must maintain information technology systems which are adequate to deal with the complexity, variety and type of services and activities it performs.²⁴ In particular, a CCP should ensure that its systems are reliable, secure and resilient (including in stressed market conditions), are scalable, and have sufficient redundancy capacity to process all remaining transactions before the end of the day in circumstances in which a major disruption has occurred.²⁵

- An ACH which intends to amend its business rules shall, prior to making the amendment, notify the MAS of the proposed amendment, the purpose of the proposed amendment; and the date on which the amendment is proposed to come into force. The ACH shall, prior to notifying MAS, consult its clearing members on the proposed amendment, unless the proposed amendment would have limited impact on its clearing members. [Regulation 30 of SF(CF)R]

Organisational structure and separation of reporting lines.

The CG Regs sets out the board committees an ACH shall have, and the responsibilities of each committee.

The Remuneration Committee of the ACH shall be responsible for recommending (i) a framework for determining the remuneration of directors and executive officers of the ACH and (ii) the remuneration of each executive director and the chief executive officer of the ACH. [Regulation 13 of the CG Regs]

See Auditing point below for requirement on Audit Committee

Remuneration policy

The Remuneration Committee of the ACH shall be responsible for recommending (i) a framework for determining the remuneration of directors and executive officers of the ACH and (ii) the remuneration of each executive director and the chief executive officer of the ACH. [Regulation 13 of the CG Regs]

Information technology systems

An ACH shall have sufficient financial, human and system resources to operate a safe and efficient clearing facility, to meet contingencies or disasters and to provide adequate security arrangements. [Section 57 of the SFA]

EMIR regimes.

A CCP must base its information technology systems on internationally recognized technical standards and industry best practices.

A CCP must maintain a robust information security framework that appropriately manages its information security risk, including policies to protect information from unauthorised disclosure, ensure data accuracy and integrity and guarantee the availability of the CCP's services.²⁶

Disclosure. A CCP must make information relating to the following available to the public free of charge: (i) its governance arrangements; (ii) its rules (including default procedures, risk management systems, rights and obligations of Clearing Members and Clients, clearing services and rules governing access to the CCP (including admission, suspension and exit criteria for clearing membership), contracts with Clearing Members and Clients, interoperability arrangements and use of collateral and default fund contributions); (iii) eligible collateral and applicable haircuts; and (iv) a list of all current Clearing Members.²⁷

Auditing. A CCP must be subject to frequent and independent audits, the results of which must be communicated to the board and made available to the CCP's Competent Authority.²⁸

A CCP must establish and maintain an internal audit function which is separate and independent from the other functions (including management) and reports directly to the board. Its role is to (i) establish, implement and maintain an audit plan to examine and evaluate the adequacy and effectiveness of the CCP's systems, internal control mechanisms and governance arrangements, (ii) issue recommendations based on the result of work carried out in accordance with item (i), (iii) verify compliance with those recommendations and (iv) report internal

An ACH shall: (i) ensure that the systems and controls concerning the assessment and management of risks to its clearing facility are adequate and appropriate for the scale and nature of its operations. [Section 59 of the SFA]

An ACH shall, as soon as practicable after the occurrence of any disruption of or delay in any clearing or settlement procedures of the ACH, including those resulting from any system failure, notify the MAS of the circumstance. An ACH shall, within 14 days of the occurrence of the circumstances, submit a report to the MAS of the circumstances relating to the occurrence, the remedial actions taken at the time of the occurrence, and the subsequent follow up actions that the ACH has taken or intends to take. [Regulation 11 of the SF(CF)R]

An ACH shall take all reasonable measures to maintain the integrity and security of the transmission and storage of its user information. [Regulation 19 of the SF(CF)R]

Disclosure

An ACH shall make available to any person upon his request or publish in a manner that is accessible, information on all services of the ACH, all products that may be cleared or settled on the ACH and applicable fees and charges. [Regulation 18 of the SF(CF)R]

An ACH shall make provision in its business rules to the satisfaction of the MAS for –

(a) the criteria that it would use to determine the admission or denial of admission of persons from membership;

(b) continuing requirements for each member, including requirements –

(i) relating to the proper conduct of the member when participating in any clearing facility operated by the approved clearing house;

audit matters to the board.

Internal audit must assess the effectiveness of a CCP’s risk management processes and control mechanisms, in a manner proportionate to the risks faced by the different business lines.

Internal audit assessments must be based on a comprehensive audit plan that is reviewed and reported to its CCPs Competent Authority at least annually.

A CCP should also ensure that audits may be performed on an event-driven basis at short notice.²⁹

A CCP’s clearing operations, risk management processes, internal control mechanisms and accounts must be subject to independent audit at least annually.³⁰

(ii) that the member has sufficient financial resources to reasonably fulfil all its financial obligations arising out of its activities of any clearing facility operated by the approved clearing house;

(iii) that facilitate the monitoring by the approved clearing houses of the compliance of the member with the business rules of the approved clearing house; and

(iv) that provide for the expulsion, suspension or disciplining of the member for a contravention of the business rules of the approved clearing house;

(c) the class or classes of transactions that may be cleared or settled on any clearing facility that it operates;

(d) the terms and conditions under which transactions will be cleared or settled on any clearing facility that it operates;

(e) matters relating to risks in the operation of any clearing facility that it operates;

(f) the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member’s obligations for all unsettled or open market contracts to which the member is a party; and

(g) the carrying on of business of the approved clearing house with due regard to the interests and protection of the investing public.

[Regulation 29 of SF(CF)R]

Auditing

	<p>The Audit Committee shall be responsible for the adequacy of the external and internal audit functions of the ACH, including reviewing the scope and results of audits carried out in respect of the operations of the ACH and the independence and objectivity of the ACH’s external auditors.</p> <p>[Regulation 14 of the CG Regs]</p> <p>An ACH shall submit to the MAS within 3 months after the end of its financial year, a copy of its auditors’ long form report. The auditors’ long form report shall include the findings and recommendations of the auditors, if any, on –</p> <ul style="list-style-type: none"> ○ The internal controls of the ACH ○ The non-compliance with any provision of the SFA, direction issued by the MAS under the SFA or other relevant laws or regulations. [Regulation 14 of the SF(CF)R] <p>An ACH shall, in respect of each financial year, cause its auditors to submit 2 reports to MAS, once before the end of the seventh month from the start of the financial year and another before the end of one month from the end of the financial year and each report shall in respect of the preceding 6 months of that financial year –</p> <ul style="list-style-type: none"> ○ Certify that the money and assets deposited with or paid to the ACH by a member under regulation 23(3), in respect of or in relation to a contract of a customer of the member, are (i) segregated from other money and assets deposited by the member with the ACH; (ii) deposited in a trust account or custody account in accordance with regulation 23(3)(b) and are not commingled with the money and assets of the ACH; and (iii) used only as permitted or in accordance with regulation 23(3)(b), 24 or 25; and ○ Certify that the money and assets deposited with or paid to the ACH by a member under regulation 23(2), in respect of or in relation to a contract of a customer 	
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	<p>of the member, are (i) recorded in books separate from books for money or assets deposited or paid for or in relation to contracts of other customers of the member; (ii) segregated from other money and assets deposited by the member with the ACH; (iii) deposited in a trust account or custody account in accordance with regulation 23(2)(b) and are not commingled with the money and assets of the ACH; and (iv) used only as permitted under or in accordance with regulation 23(2)(b), 24 or 25; and</p> <p>Set out the amount, on an aggregated basis, of all money and assets deposited by the member with the ACH in respect of or in relation to (i) each contract of the customer of the member; and (ii) any other market contract. [Regulation 27 of SF(CF)R]</p>	
<p>Senior Management and the Board</p> <p>The senior management of a CCP must be of sufficiently good repute and have sufficient experience to ensure the sound and prudent management of the CCP.³¹</p> <p>A CCP must have a board. At least one third, and no less than two, members of the board must be independent.³²</p> <p>"Independent member" of the board means a member of the board who has no business, family or other relationship that raises a conflict of interests regarding the CCP concerned or its controlling shareholders, its management or its clearing members, and who has had no such relationship during the five years preceding his membership of the board.³³</p> <p>All members of a CCP's board (including independent directors) must be of good repute and have adequate expertise in financial services, risk management and clearing services.³⁴ Representatives of Clients must be invited to board meetings for</p>	<p>Senior Management and the Board</p> <p>An ACH shall ensure that it appoints or employs fit and proper persons as its chairman, chief executive officer, directors and key management officers. [Section 57 of the SFA]</p> <p>An ACH shall obtain MAS' approval prior to appointing a person as its chairman, chief executive officer, director or key management officer. [Section 71 of the SFA]</p> <p>An independent director means a director who is independent from any management and business relationship with the ACH, and independent from any substantial shareholder of the ACH. For ACHs, a director (or any member of his immediate family) who is also a director, substantial shareholder, employee or otherwise compensated by a corporation which is a member of the ACH or a related corporation of a member of the ACH or any of its subsidiaries would be considered non-independent from business relationship with the ACH. [CG Regs]</p> <p>The ACH shall have a board of directors comprising at least one third of directors who are independent directors. [Regulation 6 of</p>	<p>Senior Management and the Board</p> <p><i>The Singaporean regime for CCPs includes requirements for senior management and the Board. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically</p>

<p>matters relating to transparency and segregation requirements. The compensation of independent and other non-executive board members may not be linked to the business performance of the CCP.</p> <p>A CCP’s board’s roles and responsibilities should be clearly defined. Minutes of board meetings should be made available to a CCP’s competent authority.³⁵</p> <p>A CCP’s governance arrangements must ensure that the board assumes final responsibility and accountability for managing the CCP’s risks. The board must define, determine and document an appropriate level of risk tolerance and risk bearing capacity; the board and senior management must ensure that the CCP’s policies, procedures and controls are consistent with such levels.³⁶</p>	<p>CG Regs]</p> <p>The board of directors of an ACH shall maintain records of all its meetings. [Regulation 6 of CG Regs]</p> <p>An ACH should have a nominating committee, remuneration committee, audit committee and conflicts committee. [Regulation 8 of CG Regs]</p> <p>An ACH which intends to amend its business rules shall, prior to making the amendment, notify the MAS of the proposed amendment, the purpose of the proposed amendment; and the date on which the amendment is proposed to come into force. The ACH shall, prior to notifying MAS, consult its clearing members on the proposed amendment, unless the proposed amendment would have limited impact on its clearing members. [Regulation 30 of SF(CF)R]</p>	<p>required to ensure that compensation of independent and other non-executive board members is not linked to the business performance of the CCP and a Singaporean CCP is not specifically required to invite representatives of clients to board meetings for matters relating to transparency and segregation requirements.</p> <p>The Singaporean regime does not require all minutes of CCP board meetings to be made available to the Singaporean authorities.</p> <p>The Singaporean regime does not specifically require that a CCP’s board defines, determines and documents an appropriate level of risk tolerance and risk bearing capacity, that the board and senior management ensure policies, procedures and controls are consistent with those levels or that the CCP’s board assumes final responsibility for managing the CCP’s risks.</p>
<p>Risk committee</p> <p>All CCPs must establish a risk committee, composed of representatives of its Clearing Members, independent members of the board and representatives of its Clients. None of these groups may have a majority of members. CCPs Competent Authorities may request to attend risk committee meetings, and be informed</p>	<p>Risk committee</p> <p>An ACH is obliged to manage any risks associated with its business and operations prudently. [Section 57 of the SFA]</p> <p>Risk management measures must be set out in the ACH’s business rules where relevant and such rules are subject to public consultation as well as notification to MAS.</p> <p>An ACH shall make provision in its business rules to the satisfac-</p>	<p>Risk committee</p> <p><i>The Singaporean regime for CCPs includes risk committee requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these</i></p>

<p>of the risk committee’s activities and decisions.³⁷</p> <p>The risk committee should be chaired by an independent member of the board, hold regular meetings and report directly to the board.³⁸</p> <p>The risk committee must advise the board on any arrangements that may impact the risk management of the CCP. The risk committee’s advice must be independent of any direct influence by the management of the CCP.³⁹ A CCP must promptly inform the competent authority of any decision in which the board decides not to follow the advice of the risk committee.</p>	<p>tion of the MAS for –</p> <ul style="list-style-type: none"> (a) the criteria that it would use to determine the admission or denial of admission of persons from membership; (b) continuing requirements for each member, including requirements – <ul style="list-style-type: none"> (i) relating to the proper conduct of the member when participating in any clearing facility operated by the approved clearing house; (ii) that the member has sufficient financial resources to reasonably fulfil all its financial obligations arising out of its activities of any clearing facility operated by the approved clearing house; (iii) that facilitate the monitoring by the approved clearing houses of the compliance of the member with the business rules of the approved clearing house; and (iv) that provide for the expulsion, suspension or disciplining of the member for a contravention of the business rules of the approved clearing house; (c) the class or classes of transactions that may be cleared or settled on any clearing facility that it operates; (d) the terms and conditions under which transactions will be cleared or settled on any clearing facility that it operates; (e) matters relating to risks in the operation of any clearing facility that it operates; (f) the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member’s obligations for all unsettled or open market contracts to which the member is a party; and (g) the carrying on of business of the approved clearing house with due regard to the interests and protection of the investing public. [Regulation 29 of SF(CF)R] 	<p><i>requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>The Singaporean regime does not require CCPs to set-up a risk committee. The public consultation mechanism in case of changes to the rules which must contain risk management measures does not cover all the scope of the risk committee (e.g. ensure that there is no conflict of interest). Besides the Singaporean regime does not anticipate any reporting to the board.</p>
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	<p>Any amendments to an ACH’s business rules in relation to the proper regulation and supervision of its members and in relation to the interests and protection of the investing public are subject to public consultation and prior notification to MAS. [Regulations 29 and 30 of the SF(CF)R]</p>	
<p>Record keeping</p> <p>A CCP must maintain, for at least 10 years, records relating to the services and activities it provides which are sufficient to enable its CCPs Competent Authority to monitor the CCP’s compliance with EMIR.⁴⁰</p> <p>A CCP must maintain, for at least 10 years following the termination of a contract, all information relating to that contract (including sufficient information to enable the CCP to identify the original terms of that contract pre-clearing).⁴¹</p> <ul style="list-style-type: none"> • General requirements. Such records must be available upon request to the competent authorities, ESMA and the relevant members of the ESCB.⁴² <p>Records kept by CCPs should facilitate a thorough knowledge of CCPs’ credit exposure towards Clearing Members and allow monitoring of the implied risk. They should enable Competent Authorities, ESMA and the relevant members of the ESCB to adequately re-construct the clearing process, in order to assess compliance with regulatory requirements.⁴³</p> <ul style="list-style-type: none"> • Transaction records. A CCP must maintain records of all transactions in all contracts it clears, including sufficient information to comprehensively and accurately reconstruct the clearing process for each contract;⁴⁴ • Position records. A CCP must maintain records of all 	<p>Record keeping</p> <p>An ACH shall maintain a record of all transactions effected through its clearing facility. [Section 61 of the SFA]</p> <p>Every ACH shall ensure that all relevant books and other information as may be required by MAS for the purposes of the SFA are kept for a minimum of 5 years and made accessible to MAS upon request. [Regulation 5 of SF(CF)R]</p>	<p>Record keeping</p> <p><i>The Singaporean regime for CCPs includes record keeping requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP’s record retention requirement is 5 years, whereas under EMIR a CCP must maintain records for at least 10 years.</p> <p>EMIR contains significantly more details on the specific records to be kept by a CCP whereas the Singaporean regime follows a more general approach.</p>

<p>positions held by each Clearing Member, including sufficient information to comprehensively and accurately reconstruct the transactions that established the position. Separate records must be kept for each account held for a Clearing Member on an “omnibus client segregation” and “individual client segregation” basis;⁴⁵</p> <ul style="list-style-type: none"> • Business records. A CCP must maintain records of all activities relating to its business and internal organisation (which must be updated every time there is a material change to the relevant document);⁴⁶ and • Records of data reported to a trade repository. A CCP must maintain records of all information and data required to be reported to a trade repository (including time and date reported).⁴⁷ 		<p>In particular, Singaporean CCPs are not specifically required to keep records of all transactions they clear in sufficient detail so as to enable the CCP to identify the original terms of that contract pre-clearing or to reconstruct the clearing process, records of the CCP’s credit exposure, or all positions held by each clearing member so as to accurately reconstruct the transactions that established the positions.</p> <p>Singaporean CCPs are also not specifically required to maintain records of all activities relating to their business and internal organisation which are updated every time there is a material change to the relevant documents nor to maintain records of all information and data required to be reported to a trade repository.</p>
<p>Shareholders and members with qualifying holdings</p> <p>A Competent Authority must not authorise a CCP unless it has been informed of the identities of the CCP’s shareholders or members (whether direct or indirect, natural or legal persons) which have qualifying holdings⁴⁸ (“Qualifying Shareholders”).⁴⁹</p> <p>A Competent Authority must refuse authorisation if it is not satisfied of the suitability of Qualifying Shareholders, taking into account the need to ensure the sound and prudent management of the CCP.⁵⁰</p> <p>If a CCP’s Qualifying Shareholders exercise influence over it which</p>	<p>Shareholders and members with qualifying holdings</p> <p>MAS may refuse to approve a CCP as an ACH if the CCP or its substantial shareholder is not financially competent (e.g. being wound up, in receivership, in a scheme of arrangement with creditors). [Section 51 of the SFA]</p> <p>MAS may not approve a CCP as an ACH if the CCP fails to satisfy MAS that the corporation is a fit and proper person, or that all of its officers, employees and substantial shareholders are fit and proper persons. [Section 51 of the SFA]</p> <p>MAS’ prior approval is needed for a person acquiring shares in an ACH, who would consequently become a substantial shareholder</p>	<p>Shareholders and members with qualifying holdings</p> <p><i>The Singaporean regime for CCPs includes requirements for shareholders with qualifying holdings which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.</i></p> <p>The qualifying shareholders thresholds</p>



<p>is likely to be prejudicial to the CCP’s sound and prudent management, the Competent Authority must take appropriate measures to remedy the situation (including by withdrawing the CCP’s authorisation).⁵¹</p> <p>A Competent Authority must not authorise a CCP with close links to other natural or legal persons if:</p> <ul style="list-style-type: none"> • those links prevent the effective exercise of the Competent Authority’s supervisory functions;⁵² or • (i) the laws, regulations or administrative provisions of a third country which apply to such persons, or (ii) difficulties associated with the enforcement of such provisions, prevent the effective exercise of the Competent Authority’s supervisory functions.⁵³ 	<p>(5% stake) or a controller of a 12% or 20% stake. [Section 70 of the SFA]</p>	<p>start lower in Singapore however are broadly equivalent to the close links provisions prescribed for in EMIR.</p> <p>On balance, this difference does not undermine the consistency of the objectives of the Singaporean and EMIR regimes.</p>
<p>Information to competent authorities</p> <p>Changes to Management. A CCP must report to its CCPs Competent Authority any changes to its management, and must provide the competent authority with all the information necessary to assess the compliance of the new management with EMIR’s obligations relating to the board and senior management of a CCP.⁵⁴ When the conduct of a member is likely to be prejudicial to the sound and prudent management of the CCP, the competent authority must take appropriate measures, which may include removing the member from the board.⁵⁵</p> <p>Changes to Shareholders. Any natural or legal person (or persons acting in concert) (the “proposed acquirer”) who decides to (i) acquire a qualifying holding⁵⁶ in a CCP, or (ii) to increase a qualifying holding as a result of which (x) the proportion of voting rights or capital held would reach or exceed 10%, 20%, 30% or 50% or (y) the CCP would become the subsidiary of the proposed acquirer (the “proposed acquisition”), must first notify the relevant CCPs Competent Authority and provide certain relevant</p>	<p>Information to competent authorities</p> <p>Changes to Management</p> <p>An ACH shall ensure that it appoints or employs fit and proper persons as its chairman, chief executive officer, directors and key management officers. [Section 57 of the SFA]</p> <p>An ACH shall obtain MAS’ approval prior to appointing a person as its chairman, chief executive officer, director or key management officer. [Section 71 of the SFA]</p> <p>Changes to shareholders</p> <p>MAS’ prior approval is needed for a person acquiring shares in an ACH, who would consequently become a substantial shareholder (5% stake) or a controller of a 12% or 20% stake. [Section 70 of the SFA]</p> <p>Any person applying for approval shall submit to the MAS a written application that sets out: (i) the name of the applicant; (ii) in the case where the applicant is a corporation, its place of incorpo-</p>	<p>Information to competent authorities</p> <p><i>The Singaporean regime for CCPs includes requirements for the provision of information on qualifying holdings which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.</i></p> <p>While EMIR prescribes a range of specific reporting obligations, under the Singaporean regime a CCP is only required to report information to the Singaporean authorities when there are changes to a CCP’s key personnel or when an individual becomes a shareholder with greater than 5, 12 or 20% of the voting power in the CCP.</p>

<p>information.</p> <p>Any natural or legal person (the “proposed vendor”) who decides to (i) dispose of a qualifying holding, or (ii) reduce its qualifying holding as a result of which (x) the proportion of voting rights or capital held would fall below 10%, 20%, 30% or 50% or (y) the CCP would cease to be the subsidiary of the proposed vendor, must first notify the relevant CCPs Competent Authority and provide certain relevant information.</p> <p>Within two working days of receipt of the notifications referred to above, the CCPs Competent Authority must acknowledge receipt. Within a further 60 working days (the “assessment period”) the CCPs Competent Authority must assess the suitability of the proposed acquirer and the financial soundness of the proposed acquisition, in accordance with the criteria set out in EMIR, Art. 32.⁵⁷ Within the first 50 working days of the assessment period, the CCPs Competent Authority may request any further information necessary to complete the assessment.⁵⁸</p> <p>If the CCPs Competent Authority decides to oppose the proposed acquisition, it must inform the proposed acquirer within two working days. If the CCPs Competent Authority does not oppose the proposed acquisition within the assessment period, the proposed acquisition must be deemed approved.⁵⁹</p>	<p>ration, substantial shareholders, directors, chief executive officer and its principal place of business; (iii) in the case where the applicant is a natural person, his nationality, principal occupation and directorships; (iv) all the corporations in which the applicant has a substantial shareholding; (v) the percentage of shareholding and voting power the applicant has in the ACH; (vi) the percentage of shareholding and voting power the applicant is seeking to have in the ACH; (vii) the reasons for making the application; (viii) the mode and structure under which the increase in shareholding would be carried out; (vix) whether the applicant will seek representation on the board of directors of the ACH; and (x) any other information that may facilitate the determination of MAS as to whether the applicant is a fit and proper person. [Regulation 31 of SF(CF)R]</p>	<p>These requirements, both the trigger level and the information to be provided, are not as granular as those prescribed under EMIR; however the Singaporean regime has the same objectives as EMIR, namely the assessment of the CCP’s continued compliance with the CCP obligations.</p> <p>The Singaporean authorities are not expressly required to take appropriate measures when the conduct of a member is likely to be prejudicial to the sound and prudent management of a CCP, however the Singaporean authorities could achieve this by preventing individuals from being involved in the CCP.</p> <p>On balance, these differences do not undermine the consistency of the objectives of the Singaporean and EMIR regimes.</p>
<p>Assessment of qualifying holdings</p> <p>When assessing the notifications referred to above, a CCPs Competent Authority must consider the suitability of the proposed acquirer and the financial soundness of the proposed acquisition against the following criteria, having regard to the likely influence of the proposed acquirer on the CCP:</p> <ul style="list-style-type: none"> the reputation and soundness of the proposed acquirer and any person who will direct the CCP’s business as a result of the proposed acquisition (with particular regard to the type of 	<p>Assessment of qualifying holdings The MAS may approve an application if it is satisfied that: (i) the applicant is a fit and proper person to be a substantial shareholder (5%), or a 12% controller or 20% controller of the ACH; (ii) having regard to the applicant’s likely influence, the ACH will or will continue to conduct its business prudently and in compliance with the provisions of the SFA; and (iii) it would not be contrary to the interests of the public to do so. [Regulation 31 of the SF(CF)R]</p> <p>MAS may consider the following factors when approving the</p>	<p>Assessment of qualifying holdings</p> <p><i>The Singaporean regime for CCPs includes requirements for the assessment of qualifying holdings which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.</i></p>

<p>business pursued by the CCP);</p> <ul style="list-style-type: none"> • whether the CCP will be able to comply and continue to comply with EMIR (with particular regard to whether the corporate group which the CCP will enter post-acquisition has a structure which makes it possible for the CCPs Competent Authority to exercise effective supervision, to exchange information with other Competent Authorities and to determine the allocation of responsibility among Competent Authorities); and • whether there are reasonable grounds to suspect that money laundering or terrorist financing is being or has been committed in connection with the proposed acquisition, or that the proposed acquisition could increase the risk thereof.⁶⁰ <p>A Competent Authority may only oppose a proposed acquisition where (i) there are reasonable grounds for doing so on the basis of the criteria set out above, or (ii) the proposed acquirer has provided incomplete information.⁶¹</p> <p>Member States must not impose any conditions on the levels of holdings in CCPs that may be acquired, or allow their Competent Authorities to examine proposed acquisitions in terms of the economic needs of the market.⁶² Member States must specify publicly the information necessary to carry out the assessment, which information must be (i) proportionate and appropriate to the nature of the proposed acquirer and acquisition, and (ii) limited to information relevant for a prudential assessment.⁶³</p> <p>If the proposed acquirer is (i) another CCP, a credit institution, an assurance, insurance or reinsurance undertaking, an investment firm, a market operator, an operator of a securities settlement system, a UCITS management company or an AIFM authorised in another Member State, or (ii) the parent undertaking of or a natural or legal person controlling an entity specified in</p>	<p>chairman, chief executive officer, director and key management officers of an ACH: (i) whether the person is fit and proper to be so appointed; (ii) whether the appointment of the person would be consistent with any applicable written law relating to the qualifications for the position or the requirements for the composition of the board of directors or any committee of the ACH; and (iii) whether it would be contrary to the interests of the public to approve the appointment of the person. [Regulation 33 of SF(CF)R]</p>	<p>It replicates the range of specific considerations that authorities must make when considering the suitability of a proposed CCP shareholder under EMIR except for the money laundering/terrorist consideration specified in EMIR, however the general reference law and public interest provisions in the Singaporean regime can be considered as encompassing those specific items.</p> <p>On balance, this difference does not undermine the consistency of the objectives of the Singaporean and EMIR regimes.</p>
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<p>subparagraph (i), the relevant Competent Authorities must cooperate closely in carrying out the assessment, and provide each other with all essential information (on their own initiative) and all relevant information (upon request) without undue delay.⁶⁴</p>		
<p>Conflicts of interest</p> <p>A CCP must maintain effective written organisational and administrative arrangements⁶⁵ to identify and manage potential conflicts of interest between (i) itself, including its management, employees, and close associates, and (ii) its Clearing Members, including Clients of a Clearing Member which are known to the CCP. It must maintain and implement adequate procedures to resolve possible conflicts of interest.⁶⁶</p> <p>If such arrangements are not sufficient to ensure that damage to the interests of a Clearing Member or Client are prevented, the CCP must clearly disclose the general nature or source of conflicts of interest to the Clearing Member (and, if known to the CCP, the Client) before accepting new transactions from that Clearing Member.⁶⁷</p> <p>A CCP must take reasonable steps to prevent any misuse of information held in its systems and must prevent the use of that information for other business activities.</p> <p>CCPs should adequately assess and monitor the extent to which board members that sit on the boards of different entities have conflicts of interest, whether within or outside the group of the CCP.⁶⁸</p>	<p>Conflicts of interest</p> <p>An ACH should have a nominating committee, remuneration committee, audit committee and conflicts committee. [Regulation 8 of CG Regs]</p> <p>Independence of directors: An independent director means a director who is independent from any management and business relationship with the ACH, and independent from any substantial shareholder of the ACH. For ACHs, a director (or any member of his immediate family) who is also a director, substantial shareholder, employee or otherwise compensated by a corporation which is a member of the ACH or a related corporation of a member of the ACH or any of its subsidiaries would be considered non-independent from business relationship with the ACH. [Regulation 3(3) of the CG Regs]</p> <p>The Nominating Committee of an ACH shall identify the candidates and review all nominations for the appointment of each director, each member of each board committee, and the chief executive officer, deputy chief executive officer and chief financial officer. The criteria to be applied in identifying a candidate or reviewing a nomination shall include whether the candidate or nominee is a fit and proper person for the office and is qualified for the office, taking into account the candidate's or nominee's track record, age, experience, capabilities and such other relevant factors as may be determined by the Nominating Committee. [Regulation 10 of the CG Regs]</p> <p>The Conflicts Committee shall be responsible for:</p> <ul style="list-style-type: none"> o Reviewing the adequacy of arrangements within the 	<p>Conflicts of interest</p> <p><i>The Singaporean regime for CCPs includes conflict of interest requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>Not only the Singaporean regime does not expressly impose a requirement such that a CCP discloses conflicts of interest to clearing members and client's, but it also restricts the provisions included to directors or cases where two companies of a group are involved, i.e. the requirements do not apply to the CCP's staff itself which is a part of EMIR's scope.</p> <p>A Singaporean CCP is not specifically</p>

	<p>ACH and its subsidiaries for dealing with any perceived or actual conflict between any of the following:</p> <ul style="list-style-type: none"> ▪ The interests arising from the regulation and supervision of (i) the members of the ACH and its subsidiaries; and (ii) corporations whose securities are listed for quotation on a securities market operated by a related corporation of the ACH; ▪ The commercial interests of the ACH or any of its subsidiaries, <p>including any conflict of interests or potential conflict of interest arising as a result of the listing of the shares of the ACH on any market operated by the ACH or any of its subsidiaries; and</p> <ul style="list-style-type: none"> ○ Carrying out regular reviews of the adequacy of the plans, budget and resources of the ACH and its subsidiaries in relation to the regulation and supervision of (i) the members of the ACH and its subsidiaries; and (ii) corporations whose securities are listed for quotation on a securities market operated by a related corporation of the ACH, ○ and reporting to the board of directors if it is of the view that insufficient funding and resources are being devoted by the ACH or its subsidiary, as the case may be, to the supervision of the members, their subsidiaries and the corporations whose securities are listed for quotation on a securities market operated by any of the related corporations of the ACH. [Regulation 15 of CG Regs] <p>Any amendments to an ACH’s business rules in relation to the proper regulation and supervision of its members and in relation to the interests and protection of the investing public are subject to public consultation and prior notification to MAS. [Regulations</p>	<p>required to take reasonable steps to prevent any misuse of information held in its systems or to prevent the use of that information for other business activities.</p>
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	29 and 30 of the SF(CF)R]	
<p>Business continuity</p> <p>The CCP must maintain an organisational structure that ensures continuity and orderly functioning in the performance of its services and activities.⁶⁹</p> <p>A CCP must implement and maintain a business continuity policy and disaster recovery plan to ensure the preservation of its functions, the recovery of operations and the fulfilment of its obligations. The disaster recovery plan must at least allow the recovery of all transactions at the time of disruption to allow the CCP to continue to operate with certainty and to complete settlement on the scheduled date.⁷⁰</p> <ul style="list-style-type: none"> • Strategy and policy. The business continuity policy and disaster recovery plan must be approved by the board and subject to independent reviews that are reported to the board. The business continuity policy must identify all critical business functions and related systems, and take into account external links and interdependencies within the financial infrastructure, including trading venues cleared by the CCP, securities settlement and payment systems and credit institutions used by the CCP or a linked CCP. It should also take into account critical functions or services which have been outsourced. The business continuity plan should, <i>inter alia</i>, identify the maximum acceptable down time for critical functions and systems, which must not be higher than two hours. End of day procedures and payments should be completed on the required day in all circumstances.⁷¹ • Business impact analysis. A CCP must conduct a business impact analysis to identify its critical functions and have in place arrangements to ensure the continuity of its critical functions based on various disaster scenarios⁷². 	<p>Business continuity</p> <p>An ACH shall maintain a business continuity plan (“BCP”) setting out the procedures and establishing the systems necessary to restore safe and efficient operations, in the event of any disruptions. [Regulation 16 of the SF(CF)R]</p> <p>An ACH shall review and test the procedures and systems on such regular basis as may be specified in the BCP. [Regulation 16 of the SF(CF)R]</p> <p>An ACH shall immediately notify the MAS of any activation of the BCP and of any action taken to restore safe and efficient operations [Regulation 16 of the SF(CF)R]</p> <p>An ACH shall within 14 days notify MAS of any material change to the BCP [Regulation 16 of the SF(CF)R]</p>	<p>Business continuity</p> <p><i>The Singaporean regime for CCPs includes business continuity requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically required to maintain an organisational structure that ensures continuity and orderly functioning in the performance of its services and activities, or to have a business continuity policy.</p> <p>The Singaporean regime does not specify the involvement of the board in business continuity and crisis management planning.</p> <p>A Singaporean CCP is not specifically required to have a maximum acceptable downtime no higher than 2 hours.</p> <p>A Singaporean CCP is not specifically</p>

<ul style="list-style-type: none"> • Disaster recovery. A CCP must maintain a secondary processing site capable of ensuring continuity of all of its critical functions, which must have a geographical risk profile which is different from that of the primary site.⁷³ • Testing and monitoring. A CCP must test and monitor its business continuity policy and disaster recovery plan at regular intervals taking into account scenarios of large scale disasters and switchovers between primary and secondary sites.⁷⁴ • Maintenance. A CCP must regularly review and update its business continuity policy and disaster recovery plan to include the most suitable recovery strategy, taking into consideration the outcome of tests and the recommendations of independent reviews and of the relevant CCPs Competent Authority.⁷⁵ • Crisis management. A CCP must have a crisis management function to act in case of emergency, which function must be monitored and reviewed by the board.⁷⁶ • Communications. A CCP must have clear procedures to manage internal and external crisis communications and a communication plan documenting how management and relevant external stakeholders will be kept adequately informed during a crisis).⁷⁷ 		<p>required to have a secondary processing site capable of ensuring continuity of all its critical functions, with a different geographical risk profile.</p> <p>The Singaporean regime does not specifically require CCPs to have a crisis management function to act in case of emergency.</p> <p>The Singaporean regime does not specifically require the CCP to retain the capacity to process all transactions by the end of the day.</p>
<p>Outsourcing</p> <p>Where a CCP outsources operational functions, services or activities, it remains responsible for discharging all of its obligations and must ensure that, <i>inter alia</i>: (i) outsourcing does not result in the delegation of its responsibilities; (ii) the CCP’s relationship and obligations towards its Clearing Members and their Clients are not altered; (iii) the conditions for authorizing of</p>	<p>Outsourcing</p> <p>No corresponding provisions.</p>	<p>Outsourcing</p> <p><i>The Singaporean regime for CCPs does not include outsourcing requirements that are legally binding at a jurisdictional level. However, the internal policies, procedures, rules, models and methodologies of</i></p>

<p>the CCP do not effectively change, (iv) outsourcing does not prevent the exercise of the CCP’s supervisory and oversight functions, or deprive the CCP of necessary systems and controls to manage its risks; (v) the service provider implements equivalent business continuity requirements to those required under EMIR; (vi) the CCP retains necessary expertise and resources to evaluate the quality of services provided, the organisational and capital adequacy of the service provider, and to manage the risks associated with outsourcing on an on-going basis; (vii) the CCP has direct access to relevant information relating to the outsourcing functions; and (viii) the service provider cooperates with the relevant CCPs Competent Authority, and (viii) .the service provider protects any confidential information relating to the CCP and its clearing members and clients or, where the service provider is established in a third country, ensures that the data protection standards of that third country, or those set out in the agreement between the parties concerned, are comparable to the data protection standards in effect in the Union.⁷⁸</p> <p>A CCP may not outsource major activities linked to risk management without approval from its Competent Authority. The Competent Authority will require the CCP to allocate and set out its rights and obligations and those of the service provider, clearly in a written agreement. ⁷⁹</p>		<p><i>individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>The Singaporean regime does not prescribe requirements for outsourcing arrangements, including that a CCP may not outsource major activities linked to risk management without approval from the Singaporean authorities or that where a CCP outsources operational functions, services or activities, it remains responsible for discharging all of its obligations.</p>
<p>Conduct of business rules – general provisions</p> <p>When providing services to its Clearing Members and their Clients, CCPs must act fairly and professionally in line with the best interests of such Clearing Members and Clients and sound risk management.⁸⁰</p> <p>A CCP must have accessible, transparent and fair rules for the prompt handling of complaints. ⁸¹</p>	<p>Conduct of business rules – general provisions</p> <p>An ACH shall not act contrary to the interests of the public, having particular regard to the interests of the investing public. [Section 57 of the SFA]</p> <p>An ACH shall ensure that access for participation in its clearing facility is subject to criteria that are fair and objective and that are designed to ensure the safe and efficient functioning of its facility</p>	<p>Conduct of business rules – general provisions</p> <p><i>The Singaporean regime for CCPs includes general business conduct requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in</i></p>

	<p>and to protect the interests of the investing public. [Section 57 of the SFA]</p>	<p><i>Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically required to act in the best interests of clearing members when providing services to them and the Singaporean provisions do not require the prompt handling of complaints.</p>
<p>Participation requirements</p> <p>A CCP must establish categories of admissible Clearing Members and admission criteria, following the advice of the risk committee. Such criteria must be non-discriminatory, transparent and objective so as to ensure fair and open access to the CCP and must ensure that clearing members have sufficient financial resources and operational capacity to meet the obligations arising from participation in a CCP. Criteria that restrict access may only be permitted if their objective is to control risk.⁸²</p> <p>Clearing members that clear transactions on behalf of their clients must have the necessary additional financial resources and operational capacity to perform this activity. The CCP's rules for clearing members must allow it to gather relevant basic information to identify, monitor and manage relevant concentrations of risk relating to the provision of services to clients. Clearing Members must, upon request, inform the CCP about the criteria and arrangements they adopt to allow their Clients to access the services of the CCP. Responsibility for</p>	<p>Participation requirements</p> <p>An ACH shall ensure that access for participation in its clearing facility is subject to criteria that are fair and objective and that are designed to ensure the safe and efficient functioning of its facility and to protect the interests of the investing public. [Section 57 of the SFA]</p> <p>An ACH shall make provision in its business rules to the satisfaction of the MAS for –</p> <p>(a) the criteria that it would use to determine the admission or denial of admission of persons from membership;</p> <p>(b) continuing requirements for each member, including requirements –</p> <p>(i) relating to the proper conduct of the member when participating in any clearing facility operated by the approved clearing house;</p> <p>(ii) that the member has sufficient financial resources to reasonably fulfil all its financial obligations arising out of its</p>	<p>Participation requirements</p> <p><i>The Singaporean regime for CCPs includes participation requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>The Singaporean regime does not specifically require that additional obligations imposed on clearing</p>



<p>ensuring that Clients comply with their obligations remains with Clearing Members.⁸³</p> <p>A CCP must have objective procedures for the suspension and exit of clearing members that no longer meet its admission criteria. A CCP may only deny access to Clearing Members meeting the criteria where justified in writing, based on a comprehensive risk analysis.⁸⁴</p> <p>A CCP may impose additional obligations on Clearing Members, such as participation in auctions of a Defaulting Clearing Member's (as defined below) position. Such additional obligations must be proportional to the risk brought by the Clearing Member and must not restrict participation to certain categories of Clearing Members.⁸⁵</p> <p>A CCP must ensure the application of the above criteria on an on-going basis and must annually conduct a comprehensive review of compliance with these provisions by its Clearing Members.⁸⁶</p>	<p>activities of any clearing facility operated by the approved clearing house;</p> <p>(iii) that facilitate the monitoring by the approved clearing houses of the compliance of the member with the business rules of the approved clearing house; or</p> <p>(iv) that provide for the expulsion, suspension or disciplining of the member for a contravention of the business rules of the approved clearing house;</p> <p>(f) the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member's obligations for all unsettled or open market contracts to which the member is a party;</p> <p>(g) the carrying on of business of the approved clearing house with due regard to the interests and protection of the investing public; and ...</p> <p>[Regulation 29 of SF(CF)R]</p>	<p>members be proportional to the risk brought by the clearing member.</p> <p>A Singaporean CCP is not specifically required to have rules that allow the CCP to identify, monitor and manage concentrations of risk relating to the clearing member's provision of services to clients.</p>
<p>Transparency</p> <p>A CCP and its Clearing Members must publicly disclose the prices and fees associated with each service provided separately (including discounts and rebates and the conditions to benefit from such reductions).⁸⁷</p> <p>A CCP must also publicly disclose (i) on an aggregated basis, the volumes of cleared transactions for each class of instruments cleared, (ii) the operational and technical requirements relating to communication protocols used with third parties, and (iii) any breaches by clearing members of its participation requirements, except where the competent authority, after consulting ESMA, considers that such disclosure would constitute a threat to</p>	<p>Transparency</p> <p>An ACH shall make available to any person upon his request or publish in a manner that is accessible, information on all services of the ACH, all products that may be cleared or settled on the ACH and applicable fees and charges. [Regulation 18 of the SF(CF)R]</p> <p>An ACH (specified by the MAS) shall not impose any clearing fee on its clearing members in respect of any service or services provided by the ACH; or modify, restructure or otherwise change any existing clearing fee imposed on its clearing members without the prior approval of MAS. [Regulation 21 of the SF(CF)R]</p> <p>Regulation of clearing fees of specified ACHs and RCHs</p>	<p>Transparency</p> <p><i>The Singaporean regime for CCPs includes transparency requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically required to disclose to the public the operational and technical requirements relating to communication protocols used with</p>

<p>financial stability or to market confidence or would seriously jeopardize the financial markets or cause disproportionate damage to the parties involved.⁸⁸</p> <p>A CCP must allow its Clearing Members and Clients separate access to the specific services provided.⁸⁹</p> <p>A CCP must inform Clearing Members and their Clients of the risks associated with the services provided.⁹⁰</p> <p>A CCP must disclose (i) to its Competent Authority the costs and revenues of the services and (ii) to its Competent Authority and Clearing Members the price information used to calculate its end-of-day exposures to its Clearing Members.⁹¹</p>	<p>Specified ACHs (which at this time only includes the Central Depository (Pte) Limited) and specified RCHs (there are no specified RCHs at this time) require MAS approval to impose or modify clearing fees.</p> <p>Obligation to notify the MAS of disciplinary action or default proceeding against a member</p> <p>An ACH must notify the MAS where:</p> <p>(a) it takes disciplinary action against a member (section 58(1)(e)); or</p> <p>(b) it is of the view that a member is likely to default on its obligations under the ACH’s business rules. The ACH may only commence default proceedings against the member after making such notification (regulation 11(4), Clearing Facilities Regulations).</p> <p>An RCH must notify the MAS of any disciplinary action taken against any clearing member in Singapore (regulation 39, Clearing Facilities Regulations).</p>	<p>third parties or the price information used to calculate its end-of-day exposures to its clearing members, however a Singaporean CCP is required to disclose information about its services.</p> <p>An Singaporean CCP is not specifically required to disclose to the public any breaches by clearing members of the CCP’s participation requirements, however a Singaporean CCP is required to notify the Singaporean authorities of such breaches, and as referenced, are required to notify disciplinary action or near defaults.</p> <p>A Singaporean CCP is not specifically required to allow its clearing members and clients separate access to the specific services it provides nor is it required to price each service separately.</p> <p>A Singaporean CCP is not specifically required to inform clearing members and their clients of the risks associated with the services provided.</p> <p>On balance, these differences do not undermine the consistency of the objectives of the Singaporean and EMIR regimes.</p>
<p><i>Segregation and portability</i></p> <p>A CCP must keep separate records and accounts that enable it to</p>	<p><i>Segregation and portability</i></p> <p>Under the SFA, an ACH is required to maintain a record of all</p>	<p><i>Segregation and portability</i></p> <p><i>The Singaporean regime for CCPs</i></p>

identify and segregate the assets and positions of one Clearing Member from the assets and positions of any other Clearing Member and from its own assets. In addition, a CCP must offer to keep separate records and accounts enabling each Clearing Member to either (i) distinguish the assets and positions of that Clearing Member from those held for the accounts of its Clients (“omnibus client segregation”) or (ii) distinguish the assets and positions held for the account of a Client from those held for the accounts of other Clients (“individual client segregation”).⁹²

A Clearing Member must keep separate records and accounts that enable it to distinguish both in accounts held with the CCP and in its own accounts its assets and positions from the assets and positions held for the account of its Clients.

A Clearing Member must offer its Clients, at least, the choice between omnibus client segregation and individual client segregation and inform them of the costs and level of protection (as further described below) associated with each option. The Client must confirm its choice in writing. When a Client opts for individual client segregation, any margin in excess of the Client’s requirement must also be posted to the CCP and distinguished from the margins of other Clients or Clearing Members and must not be exposed to losses connected to positions recorded in another account.⁹³

CCPs and Clearing Members must publicly disclose the levels of protection offered, including the costs and main legal implications (including information relating to treatment on insolvency) of each level of protection and must offer those services on reasonable commercial terms.⁹⁴

A CCP must have a right of use relating to the margins or default fund contributions collected via a security financial collateral arrangement, within the meaning of Article 2(1)(c) of Directive 2002/47/EC on financial collateral arrangements, provided that

transactions effected through the ACH. This will include maintaining separate records that will enable an ACH to identify and segregate the assets and positions of one Clearing Member from the assets and positions of any other Clearing Member, and from the positions and assets their customers. [Section 61(1) of SFA]

Under the SFA, a Clearing Member that receives money or assets from its clients, must record and maintain a separate book entry for each customer. A Clearing Member must not use such moneys and assets received from its clients for payment of the Clearing Member’s debts.

Under the SFR, a Clearing Member’s client can choose to keep its assets and positions in an omnibus client segregation or an individual client segregation (legally separated but operationally co-mingled) account. An ACH shall ensure that every member who accepts moneys or assets deposited or paid for or in relation to a market contract in a specified transaction from its customers shall inform each customer concerned that he can choose to have the books for such money or assets to be separated from the books or assets deposited or paid for or in relation to contracts of other customer or customers of that member. [Regulation 13 of SF(CF)R]

An ACH shall require each of its members to notify the ACH of: (i) whether a market contract is the contract of a customer of the member; (ii) whether the money or assets being deposited with or paid to the ACH is or are deposited or paid for or in relation to a contract of a customer of the member; and (iii) in the case of a market contract which is a specified transaction, whether the books for money or assets that are deposited or paid for or in relation to a market contract which is a specified contract of each customer of the member is to be separated from books for money or assets deposited or paid for or in relation to market contracts of

include segregation and portability requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.

Singaporean CCPs are required to offer the same minimum level of client asset protection as CCPs under EMIR (omnibus client segregation). The concept of individual segregation also features in the Singaporean regime.

The Singaporean regime requires that individual client segregation (where offered) meets the same level of protection as that provided for under EMIR.

In particular, the Singaporean regime requires that the collateral posted by one individually segregated client be deposited in a specific trust account which protects them from being used to cover losses connected to the positions of other clients.

However clearing members are not required to pass to the CCP excess margin received from clients.

A Singaporean CCP is not specifically required to publicly disclose the levels of protection offered, including the costs and main legal implications (including information relating to

the use of such arrangements is provided for in its operating rules. The Clearing Member must confirm its acceptance of the operating rules in writing. The CCP must publicly disclose that right of use, which shall be exercised in accordance with Article 47 (Investment Policy).⁹⁵

The requirement to distinguish assets and positions with the CCP in accounts is satisfied where:

- (a) the assets and positions are recorded in separate accounts;
- (b) the netting of positions recorded on different accounts is prevented;
- (c) the assets covering the positions recorded in an account are not exposed to losses connected to positions recorded in another account.⁹⁶

For purposes of the above, assets refer to collateral held to cover positions and include the right to the transfer of assets equivalent to that collateral or the proceeds of the realization of any collateral, but does not include default fund contributions.⁹⁷

other customers of the member, in accordance with the instructions given to the member by the customer concerned. [Regulation 23(1) of the SF(CF)R]

Where a member has notified the ACH that the moneys or assets are deposited or paid for in relation to a market contract which is a specified transaction of a customer of the member, and the books of such money or assets is to be separated from the books for money or assets deposited or paid for or in relation to market contracts of other customers of the member, the ACH shall:

- o subject to regulations 24 and 25, ensure that such money is deposited in a trust account, or such assets are deposited in a custody account, to be held for the benefit of the customers of the member;
- o Ensure that such money or assets are kept separate from all money and assets received by the ACH which are deposited or paid for or in relation to contracts of members;
- o Ensure that such moneys or assets are kept separate from the moneys or assets of the ACH; and
- o Keep books for such money or assets deposited or paid for or in relation to contracts of the customer separate from books for money or assets deposited or paid for or in relation to contracts of any other customer of any member. [Regulation 23(2) of SF(CF)R]

Where the money or assets are deposited or paid for or in relation to a market contract of a customer of a member, and the books of such money or assets is not to be separated from the books for money or assets deposited or paid for or in relation to other customers of the member, the ACH shall:

- o subject to regulations 24 and 25, ensure that such money is deposited in a trust account, or such assets are deposited in a custody account, to be held for the benefit of the customers of the member;

treatment on insolvency) of each level of protection or to offer those services on reasonable commercial terms however it must ensure that the clearing member informs its client of the possibility to have individual or omnibus segregation. Furthermore ACH are under a general obligation to make available information on all services of the ACH, all products that may be cleared or settled on the ACH and applicable fees and charges so the objectives of EMIR are reached.

On balance, these differences do not undermine the consistency of the objectives of the Singaporean and EMIR regimes.

	<ul style="list-style-type: none"> ○ Ensure that such money or assets are kept separate from all money and assets received by the ACH which are deposited or paid for or in relation to contracts of members; ○ Ensure that such moneys or assets are kept separate from the moneys or assets of the ACH; and ○ Keep books for such money or assets deposited or paid for or in relation to contracts customers of one member separate from books for money or assets deposited or paid for or in relation to contracts of customers of another member.[Regulation 23(3) of SF(CF)R] <p>An ACH shall, no less frequently than once each business day, compute –</p> <ul style="list-style-type: none"> (a) For the purposes of regulation 23(3), the total amount of customers’ money and assets held by the ACH including money that has been invested by the ACH under regulation 23(1); and (b) For the purposes of regulation 23(2), the amount of money and assets of each customer of the member held by the ACH including money that has been invested by the ACH under regulation 25(1). <p>Any computation in respect of each business day shall be completed no later than noon of the next business day and shall be kept by the ACH together with all supporting data. [Regulation 26 of SF(CF)R]</p> <p>An ACH shall in respect of each financial year, cause its auditors to submit 2 reports to the MAS, once before the end of the seventh month from the start of the financial year and another before the end of one month from the end of the financial year and each report shall in respect of the preceding 6 months of that financial year –</p> <ul style="list-style-type: none"> (a) Certify that the money and assets deposited with or paid to the ACH by a member under regulation 23(3), in re- 	
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	<p>spect of or in relation to a contract of a customer of the member, are –</p> <ul style="list-style-type: none"> Segregated from other money and assets deposited by the member with the ACH; Deposited in a trust account or custody account in accordance with regulation 23(3)(b) and are not commingled with the money and assets of the ACH; and Used only as permitted under or in accordance with regulation 23(3)(b), 24 or 25, and <p>(b) Certify that the money and assets deposited with or paid to the ACH by a member under regulation 23(2), in respect of or in relation to a contract of a customer of the member, are –</p> <ul style="list-style-type: none"> (i) Recorded in books separate from books for money or assets deposited or paid for or in relation to contracts of other customers of the member; (ii) Segregated from other money and assets deposited by the member with the ACH; (iii) Deposited in a trust account or custody account in accordance with regulation 23(2)(b) and are not commingled with the money and assets of the ACH; and (iv) Used only as permitted under or in accordance with regulation 23(2)(b), 24 and 25 <p>(c) Set out the amount, on an aggregated basis, of all money and assets deposited by the member with the ACH –</p> <ul style="list-style-type: none"> (i) In respect of, or in relation to, each contract of the 	
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	<p>customer of the member; and</p> <p>(ii) In respect of, or in relation to, any other market contract.[Regulation 27 of SF(CF)R]</p> <p>In the case where a member has notified the ACH that the books for money or assets deposited or paid for in relation to a contract of a customer of the member is to be separated from the books for money or assets deposited or paid for or in relation to contracts of other customers of the member, the ACH shall cause the member to submit records to the ACH on a quarterly basis or at such other time as the ACH may require, setting out the amount of money and assets deposited or paid to the ACH in relation to contracts of that customer. [Regulation 28(1) of SF(CF)R]</p> <p>An ACH shall ensure that the records it keeps in respect of the money or assets deposited or paid for in relation to a contract or contracts of a customer of a member are subject to controls adequate to maintain the accuracy of such records, including regular reconciliation of such records with the records submitted by the member concerned in accordance with regulation 28(1). [Regulation 28(2) of SF(CF)R]</p> <p>Regulation 23 (in relation to ACHs) and regulation 34 (in relation to RCHs) of the Clearing Facilities Regulations only allow the ACH/RCH to apply money and assets of customers of a member to meet obligations of the member to the RCH that arise from contracts of customers of the member where:</p> <p>(a) any money or assets deposited or paid for in relation to contracts of the member itself held by the ACH/RCH, and any money or assets deposited by the member with the ACH/RCH as collateral or guarantee for the purpose of satisfying all obligations of the member of the ACH/RCH (excluding any customers' money and assets) have been wholly utilised; or</p> <p>(b) the ACH/RCH has reasonable grounds for forming an</p>	
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	<p>opinion that the failure to use such customers' money or assets to meet the subject obligations may jeopardise the financial integrity of the ACH/RCH.</p> <p>However, these requirements do not prevent an ACH/RCH from using any money or assets that is deposited or paid for in relation to a contract of a customer of a member and which is held by the ACH/RCH where the member fails to meet its obligations to the ACH/RCH and where such failure is directly attributable to the failure of the customer under any market contract.</p>	
<p>Exposure management</p> <p>A CCP must measure and assess its liquidity and credit exposures to each Clearing Member and to any CCPs with which it has entered into interoperability arrangements (“Interoperable CCPs”), on a near to real-time basis.⁹⁸</p>	<p>Exposure management</p> <p>An ACH shall ensure that the systems and controls concerning the assessment and management of risks to its clearing facility are adequate and appropriate for the scale and nature of its operations. [Section 59(1) of the SFA]</p> <p>An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH’s risk exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]</p>	<p>Exposure management</p> <p><i>The Singaporean regime for CCPs includes exposure management requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, and which are broadly equivalent to those of EMIR.</i></p>
<p>Margin requirements</p> <p>A CCP must impose, call and collect margin to limit credit exposures from its Clearing Members and Interoperable CCPs. Margins must cover potential exposures that the CCP estimates will occur until the liquidation of the relevant positions. They should be sufficient to cover losses that result from at least 99% of the exposures movements over an approximate time horizon and they must ensure that a CCP fully collateralizes its exposures with all its Clearing Members and Interoperable CCPs, at least on a</p>	<p>Margin requirements</p> <p>An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH’s risk exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]</p>	<p>Margin requirements</p> <p><i>The Singaporean regime for CCPs includes margin requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of</i></p>

daily basis.⁹⁹

CCPs should follow principles to adequately tailor their margin levels to the characteristics of each financial instrument or portfolio they clear.¹⁰⁰ CCPs must regularly monitor and if necessary revise the level of their margins to reflect market conditions taking into account any potential procyclical effects of such revisions.¹⁰¹ A CCP must adopt models and parameters in setting its margin requirements that capture the risk characteristics of the products cleared and take into account the interval between margin collections, market liquidity and the possibility of changes over the duration of the transaction. The models and parameters must be validated by the Competent Authority and subject to an opinion in accordance with Article 19.¹⁰²

A CCP must call and collect margins on an intraday basis, at least when predefined thresholds are exceeded. A CCP must call and collect margins that are adequate to cover the risk stemming from the positions registered in each account with respect to specific financial instruments. A CCP may calculate margins with respect to a portfolio of financial instruments provided that the methodology used is prudent and robust.¹⁰³

The initial margin (“IM”) to be required by a CCP is defined as the amount of margin necessary to cover the exposures arising from market movements for each financial instrument margined on a product basis, expected to occur, based on data from an appropriate look back period, with a specified confidence interval and assuming a specified time period for the liquidation of positions (as all defined below).¹⁰⁴

- **Percentage.** When calculating IM, a CCP must use at least the following minimum confidence intervals: (i) for OTC derivatives, 99.5%; and (ii) for other financial instruments, 99%.¹⁰⁵ All classes of financial instruments are also subject to

individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.

When calculating IM, a Singaporean CCP is not required to use a specific confidence interval.

The Singaporean regime does not specifically subject financial instruments to a criteria-based approach that could increase the required confidence level.

A Singaporean CCP is not specifically required to calculate IM using historical volatility data from at least the latest 12-month period, which must capture a full range of market conditions, including periods of stress.

The Singaporean regime does not specify minimum liquidation times based on the specific characteristics of particular products or portfolios.

A Singaporean CCP is not required to have a theoretical basis or a statistical correlation for portfolio margining.

A Singaporean CCP is not required to take into account the procyclical effects of revisions to their margin levels and a Singaporean CCP is not specifically required to ensure that its policy for selecting and revising the confidence

a criteria-based approach that could increase the required confidence interval. The criteria-based approach should take into account factors including: (i) the complexities and level of pricing uncertainties of the class of financial products; (ii) the risk characteristics of the class (including volatility, duration, liquidity, non-linear price characteristics, jump to default risk and wrong way risk); (iii) the degree to which other risk controls do not adequately limit credit exposure; and (iv) the inherent leverage of the class of financial instrument (including volatility, concentration and difficulties in closing out).¹⁰⁶

However, CCPs may apply an alternative confidence interval of 99% to OTC derivatives that have the same risk characteristics as derivatives executed on a regulated market or equivalent third country market, provided that the risks of the OTC derivatives contracts cleared are appropriately mitigated, taking into account the criteria listed above.¹⁰⁷

CCPs must inform the Competent Authority and their Clearing Members of the criteria used to determine the margin percentage for each class of financial instruments.

- **Time horizon for the calculation of historical volatility.** A CCP must calculate IM using historical volatility data from at least the latest 12-month period, which must capture a full range of market conditions, including periods of stress. CCPs may decide how different observations are weighted in the model and may use other look back periods, provided that they result in IMs which are at least as high as those which would be required under the prescribed period. Margin parameters for financial instruments without historical observation period must be based on conservative assumptions.¹⁰⁸
- **Time horizons for the liquidation period.** The liquida-

interval, liquidation period and look back period deliver stable and prudent margin requirements that limit procyclicality to the extent the soundness and financial security of the CCP is not affected..

A Singaporean CCP is not specifically required to call and collect margins on an intraday basis when predefined thresholds are exceeded.

A Singaporean CCP is not specifically required to have its margin models reviewed and validated by a qualified and independent party, or by Singaporean authorities.

tion period used to calculate IM must be at least: (i) for OTC derivatives, 5 business days; and (ii) for other financial instruments, 2 business days, it being specified that the CCP must take into account relevant criteria (including characteristics of the financial instruments, markets where they are traded, period for calculation and collection of margin).¹⁰⁹ However, CCPs may use an alternative liquidation period of at least 2 business days for OTC derivatives that have the same risk characteristics as derivatives executed on regulated market or equivalent third country market, provided that it can prove to its competent authority that such a period would be more appropriate in view of the specific features of the relevant OTC derivative.¹¹⁰ In all cases, for the determination of the appropriate liquidation period, the CCP must evaluate and sum at least (i) the longest period that may elapse from the last collection of margins up to the declaration of default or activation of default management process by the CCP and (ii) the estimated period needed to design and execute the strategy for the management of default of a Clearing Member according to the characteristics of each class of financial instruments and (iii) where applicable, the period needed to cover the counterparty risk to which the CCP is exposed.

- **Portfolio margining.** A CCP may allow for offsets or reductions to the required margin across financial instruments cleared by the CCP if the price risk of one or a set of instruments is significantly and reliably correlated, or based on equivalent statistical parameters of dependence, with other instruments. The CCP must document its approach on portfolio margining and must at least establish that the relevant correlation is reliable over the relevant look back period and demonstrates resilience over stressed scenarios. The maximum reduction is 80% of the difference between (i) the sum of the IMs for each instrument calculated on an individual

<p>basis and (ii) the IM calculated based on a combined estimation of the exposure for the combined portfolio. Where a CCP is not exposed to any potential risk from the margin reduction, it may apply a reduction of up to 100% of this difference.¹¹¹</p> <ul style="list-style-type: none"> • Procyclicality. A CCP must ensure that its policy for selecting and revising the confidence interval, liquidation period and look back period deliver stable and prudent margin requirements that limit procyclicality to the extent the soundness and financial security of the CCP are not affected. A CCP must choose from a menu of margin-setting options to address procyclicality risks: (i) applying a margin buffer of at least 25% that the CCP allows to be temporarily exhausted in periods where IM requirements are rising significantly; (ii) assigning at least a 25% weight to stressed observations in the look back period; and (iii) ensuring that the CCP’s IM requirements are not lower than those that would be calculated using a volatility estimated over a ten-year historical look back period.¹¹² 		
<p>Default fund</p> <p>A CCP must maintain a pre-funded default fund to cover losses that exceed those losses to be covered by margin requirements arising from the default (including insolvency procedure) of one or more Clearing Members. A CCP must establish (i) a minimum amount below which the size of the default fund may not fall in any circumstances, and (ii) a minimum size and criteria to determine Clearing Member contributions to the default fund, which must be proportionate to the exposures of each Clearing Member.¹¹³</p> <p>The default fund must enable to the CCP to withstand, under</p>	<p>Default fund</p> <p>An ACH shall have sufficient financial, human and system resources to operate a safe and efficient clearing facility, and to meet contingencies or disaster. [Section 57(1) of SFA]</p> <p>An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH’s risk exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]</p>	<p>Default fund</p> <p><i>The Singaporean regime for CCPs includes default fund requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this</i></p>

extreme but plausible market conditions, the default of (i) the Clearing Member to which it has the largest exposure, or (ii) the Clearing Members to which it has the second and third largest exposures, if the sum of their exposures is greater. A CCP must develop scenarios of extreme but plausible market conditions, which take into account past volatility and scenarios of sudden sales of financial resources and rapid reductions in market liquidity.¹¹⁴ A CCP may establish more than one default fund for the different classes of financial instruments that it clears.¹¹⁵

- **Framework and governance.** In order to determine the minimum size of default fund, a CCP must implement an internal policy framework for defining the types of extreme but plausible market conditions that could expose it to the greatest risk.¹¹⁶
- **Identifying extreme but plausible market conditions.** This framework must:
 - (a) reflect the risk profile of the CCP, taking into account cross-border and cross-currency exposures;
 - (b) identify the market risks to which a CCP would be exposed following the default of one or more Clearing Members for all relevant markets;
 - (c) reflect additional risks to the CCP arising from the simultaneous failure of entities in the same group as the Defaulting Clearing Member;
 - (d) individually identify all of the markets to which a CCP is exposed in a Clearing Member default scenario, and for each identified market specify extreme but plausible conditions based on (i) a range of historical scenarios, including periods of extreme market movements observed over the previous 30 years (or as long as reliable data is available); and (ii) a range of potential future scenarios, considering the extent to which

An ACH shall make provision in its business rules to the satisfaction of MAS for the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member's obligations for all unsettled or open market contracts to which the member is a party. [Regulation 29 of SF(CF)R]

Under MAS' capital requirements on ACHs (proposed conditions pursuant to section 51(4) of the SFA), ACHs are required to maintain at all times a clearing fund which contains resources to meet any potential losses that may arise from a simultaneous default of the clearing member and its affiliates to which the ACH has the largest exposure, and the 2 financially weakest clearing members. 100% of the clearing fund needed to meet such potential losses must be pre-funded

assessment, may contain legally binding provisions equivalent to those of EMIR.

A Singaporean CCP is not specifically required to maintain pre-funded financial resources sufficient to meet its financial obligations to its clearing members notwithstanding a default by the clearing member creating the largest financial exposure for the CCP or the default of the clearing members to which it has the second and third largest exposures, if the sum of their exposures is greater than the clearing member to which it has the largest exposure but the simultaneous default of the clearing member and its affiliates to which the ACH has the largest exposure, and the 2 financially weakest clearing members.

A Singaporean CCP is not specifically required to define the types of extreme but plausible market conditions that would expose it to the greatest risk or to perform stress testing that will allow it to make a reasonable calculation of the financial resources needed to meet its financial resources requirement.

The Singaporean regime does not specifically require a CCP's board to annually or more frequently review its minimum financial resources



<p>extreme price movements could occur on multiple markets simultaneously.¹¹⁷</p> <ul style="list-style-type: none"> • Reviewing extreme but plausible scenarios. The framework must be discussed by the risk committee, approved by the board and subject to review at least annually and more frequently if justified by market developments or material changes to the contracts cleared by the CCP. Material changes to the framework must be reported to the board.¹¹⁸ 		<p>framework.</p>
<p>Other financial resources</p> <p>A CCP must maintain sufficient pre-funded available financial resources (“pre-funded financial resources”) to cover potential losses that exceed losses to be covered by margin requirements and the default fund. The combination of a CCP’s default fund and pre-funded financial resources must be sufficient to cover the default of the two Clearing Members to which it has the largest exposure under extreme but plausible market conditions. Pre-funded financial resources must include dedicated resources of the CCP, must be freely available to the CPP and may not be used to meet a CCP’s regulatory capital requirements under EMIR, Art. 16.¹¹⁹</p> <p>A CCP may require a non-defaulting Clearing Member to provide additional funds in the event of a default of another Clearing Member. The Clearing Members of a CCP must have limited exposure to the CCP.¹²⁰</p>	<p>Other financial resources</p> <p>An ACH shall have sufficient financial, human and system resources to operate a safe and efficient clearing facility, and to meet contingencies or disaster. [Section 57(1) of SFA]</p>	<p>Other financial resources</p> <p><i>The Singaporean regime for CCPs includes other financial resources requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP only has a general obligation to have rules relating to risk management and maintain financial resources sufficient to meet its financial obligations to its clearing members including in case of a clearing member default.</p>

		<p>A Singaporean CCP is not specifically required to maintain pre-funded financial resources sufficient to cover the default of the two clearing members to which it has the largest exposure under extreme but plausible market conditions freely available to the CCP and not used to meet regulatory capital requirements.</p> <p>Clearing members are not required to have limited exposure to a Singaporean CCP.</p>
<p>Liquidity risk controls</p> <p>A CCP must at all times have access to adequate liquidity to perform its services and activities.¹²¹ To this effect, it must obtain the necessary credit lines or similar arrangements to cover its liquidity needs in case the financial resources at its disposal are not immediately available. A CCP must measure its potential liquidity needs daily, taking into account the liquidity risk generated by the default of at least the two Clearing Members to which it has the largest exposures.¹²²</p> <p>A CCP must establish a robust liquidity risk management framework to identify measure and monitor its settlement and funding flows, including its use of intraday liquidity. The CCP's liquidity risk management framework must ensure with a high level of confidence that the CCP is able to effect payment and settlement obligations in all relevant currencies as they fall due, including where appropriate intraday.</p> <ul style="list-style-type: none"> • Assessment of liquidity risk. The framework should also include: (i) the assessment of potential future liquidity needs under a wide range of stress scenarios, including the default 	<p>Liquidity risk controls</p> <p>An ACH shall manage any risks associated with its business and operations prudently. [Section 57 of the SFA]</p> <p>An ACH shall seek MAS' approval prior to making any change to its risk management methodologies, including methodologies for collateral valuation, determination of margins and the appropriate size of the financial resources available to the clearing house. [Regulation 12 of the SF(CF)R]</p> <p>An ACH shall make provision in its business rules to the satisfaction of MAS for the terms and conditions under which transactions will be cleared or settled on any clearing facility it operates, and for matters relating to risks in the operation of any clearing facility that it operates. [Regulation 29 of the SF(CF)R]</p>	<p>Liquidity risk controls</p> <p><i>The Singaporean regime for CCPs includes liquidity risk control requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>The Singaporean regime does not specifically require CCPs to establish a robust liquidity risk management framework that includes the assessment of potential future liquidity</p>

of the two Clearing Members to which it has the largest exposure from the date of default until the end of the liquidation period; and (ii) the liquidity risk generated by its investment policy in extreme but plausible conditions.¹²³

The framework must include a liquidity plan approved by the board after consultation of the risk committee containing procedures relating to the monitoring and management of liquidity risk (including inter alia identification of sources of liquidity risk, daily assessment and valuation of liquid assets to cover liquidity needs, assessing timescales over which liquid financial resources should be available, processes in the event of liquidity shortfalls, etc.).

The CCP should assess the liquidity risk it faces including where the CCP or its Clearing Members cannot settle their payment obligations when due as part of the clearing or settlement process, taking also into account the CCP's investment activities. The risk management framework must address the liquidity needs stemming from the CCP's relationship with any entity towards which the CCP has a liquidity exposure, including settlement banks, payment systems, securities settlement systems, liquidity providers, custodian banks, etc. as well as interdependencies between such entities.

- **Access to liquidity.** A CCP must maintain, in each relevant currency, liquid resources commensurate with its liquidity requirements, which are limited to: (i) cash deposited at a central bank; (ii) cash deposited at authorised credit institutions; (iii) committed lines of credit with non-Defaulting Clearing Members; (iv) committed repurchase agreements; and (v) highly marketable financial instruments which can demonstrably be converted into cash on a same-day basis including in stressed market conditions.¹²⁴

needs under a wide range of stress scenarios or the liquidity risk generated by its investment policy in extreme but plausible conditions.

A Singaporean CCP is not specifically required to assess the liquidity risk it faces where it or its clearing members cannot settle their payment obligations when due.

A Singaporean CCP is not specifically required to measure its liquidity needs by taking into account a default by the two clearing members to which it has the largest exposures.

The Singaporean regime does not specifically require a CCP to have a liquidity plan approved by the board after consultation with the risk committee.

The Singaporean regime does not specifically require a CCP to maintain, in each relevant currency, liquid resources commensurate with its liquidity requirements.

A Singaporean CCP is not specifically required to monitor the concentration of its liquidity risk exposure or to apply exposure or concentration limits.

<ul style="list-style-type: none"> • Concentration risk. A CCP must closely monitor the concentration of its liquidity risk exposure, and the framework should include the application of exposure and concentration limits.¹²⁵ 		
<p>Default waterfall</p> <p>Losses caused by the default of a Clearing Member (a “Defaulting Clearing Member”) should be covered by, in order: (i) the margins posted by the Defaulting Clearing Member; (ii) the default fund contribution of the Defaulting Clearing Member; (iii) the CCP’s dedicated financial resources; and (iv) the default fund contributions of other Clearing Members (the “default waterfall”). A CCP must use its own dedicated resources before using the default fund contributions of non-defaulting Clearing Members and may not use margin posted by non-defaulting Clearing Members to cover losses caused by a Defaulting Clearing Member.¹²⁶</p> <ul style="list-style-type: none"> • Calculation of the amount of the CCP’s own resources to be used in the default waterfall. A CCP must keep, and indicate separately in its balance sheet, an amount of dedicated financial resources for the purposes of item (iii) of the default waterfall. This amount should at least equal 25% of the CCP’s minimum capital (including retained earnings and reserves) pursuant to EMIR, Art. 16.¹²⁷ This amount will be revised on a yearly basis. Where the CCP has established more than one default fund for the different classes of financial instruments it clears, the total dedicated own resources must be allocated to each default fund in proportion to its size, to be separately indicated in the balance sheet and used for defaults arising in the relevant market segments. No resources other than capital can be used to comply with this requirement. • Maintenance of the amount of the CCP’s own re- 	<p>Default waterfall</p> <p>An ACH shall make provision in its business rules to the satisfaction of MAS for the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member’s obligations for all unsettled or open market contracts to which the member is a party. [Regulation 29 of SF(CF)R]</p>	<p>Default waterfall</p> <p><i>The Singaporean regime for CCPs includes default waterfall requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically required to apply the same default waterfall sequence as prescribed under EMIR for a CCP or to include a prescribed amount of its own resources as part of the default waterfall as is required under EMIR of a CCP (on top of the CCP’s contribution to the default fund if any).</p> <p>Furthermore, a CCP’s reporting obligations to the Singaporean authorities relate to its financial resources overall, whereas a under</p>



<p>sources to be used in the default waterfall. A CCP must immediately inform its CCPs Competent Authority if the amount of dedicated financial resources falls below the required amount, together with the reason for the breach and a description of the measures to be taken to remedy the breach (which must be remedied within one month).¹²⁸</p>		<p>EMIR a CCP’s obligation to report arises if its dedicated financial resources fall below the required amount.</p>
<p>Collateral requirements</p> <p>A CCP must only accept highly liquid collateral with minimal credit and market risk to cover initial and on-going exposure to its Clearing Members. Bank guarantees may be posted as collateral by non-financial counterparties, provided that the CCP takes such guarantees into account when calculating exposure to a bank that is a Clearing Member. A CCP must apply adequate haircuts to reflect the potential for collateral’s value to decline over the interval between their last revaluation and the time by which they can be liquidated, taking into account the liquidity risk that may follow the default of a market participant and the concentration risk on certain assets.¹²⁹</p> <ul style="list-style-type: none"> • General policies and valuing collateral. A CCP may accept as collateral, where appropriate and sufficiently prudent, the underlying asset of a derivative contract or the financial instrument that generates the CCP exposure. A CCP must establish and implement transparent policies to assess and monitor the liquidity of assets accepted as collateral and take remedial action where appropriate. For the purpose of valuing highly liquid collateral, a CCP must establish and implement policies and procedures to monitor on a near to real-time basis the credit quality, market liquidity and price volatility of each asset accepted as collateral. These policies must be reviewed at least annually and whenever a material change occurs that affects the CCP’s risk exposure. A CCP must mark-to-market its collateral on a near to real-time basis and, where 	<p>Collateral requirements</p> <p>An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH’s risk exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]</p>	<p>Collateral requirements</p> <p><i>The Singaporean regime for CCPs includes collateral requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>A Singaporean CCP is not specifically required to accept only highly liquid collateral and the Singaporean regime does not specify the types of collateral that are deemed highly liquid or a criteria-based approach to determine whether assets are highly liquid.</p> <p>The Singaporean regime does not specifically address whether CCPs may accept as collateral the underlying asset of a derivative contract or the</p>

not possible, a CCP must be able to demonstrate to the competent authorities that it is able to manage the risks.¹³⁰

- **Cash collateral.** Cash must be deemed highly liquid collateral if it is denominated in: (i) a currency in which the CCP clears transactions (in the limit of the collateral required to cover the CCP’s exposure in that currency); or (ii) a currency the risk of which the CCP can demonstrate with a high degree of confidence to its competent authority that it is able to manage.¹³¹
- **Financial instruments, bank guarantees and gold.** A criteria-based approach should be followed to determine other types of assets that can be considered highly liquid (including financial instruments, bank guarantees, and gold). There is no requirement for a minimum amount of collateral to be in cash.¹³²
- **Haircuts.** A CCP must establish and implement policies to determine prudent haircuts to apply to collateral value. The CCP must demonstrate to the competent authorities that haircuts are calculated in a conservative manner to limit as far as possible procyclical effects, taking into account relevant criteria (including the type of asset and level of credit risk associated with the financial instrument based on the CCP’s internal assessment, which must not rely exclusively on external opinions and which must take into account risk arising from the establishment of the issuer in a particular country; the maturity of the asset; the historical and hypothetical future price volatility of the asset in stressed market conditions; the liquidity of the underlying market, including bid/ask spreads; foreign exchange risk, if any; and wrong way risk). A CCP must review the haircut policies at least annually and whenever a material change occurs that affects the CCP’s risk exposure but should avoid as far as possible disruptive or big step changes that introduce procyclicality. Such procedures must be independently validated at least annually.¹³³

financial instrument that generates the CCP exposure.

The Singaporean regime does not specifically require CCPs to establish and implement transparent policies to assess and monitor the liquidity of assets accepted as collateral or to take remedial action where appropriate.

A Singaporean CCP is not required to monitor on a near to real time basis the credit quality, market liquidity and price volatility of each asset accepted as collateral.

A Singaporean CCP is not specifically required to demonstrate to the Singaporean authorities that haircuts are calculated in a conservative manner to limit as far as possible procyclical effects.

The Singaporean regime does not specifically require a CCP to establish and implement policies to ensure that collateral remains sufficiently diversified to allow its liquidation within a defined holding period.

A Singaporean CCP is also not specifically required to establish concentration limits for collateral.

- **Concentration limits.** A CCP must establish and implement policies to ensure that the collateral remains sufficiently diversified to allow its liquidation within a defined holding period without a significant market impact; such policies must include risk mitigation procedures to be applied when the concentration limits are exceeded.

A CCP must determine concentration limits at the levels of individual issuers, types of issuer, types of assets, each Clearing Member and all Clearing Members, in a conservative manner, taking into account all relevant criteria (including economic sector, geographic region and activity of issuers, levels of credit risk of instruments and issuers and liquidity and price volatility of instruments). Moreover, a CCP must ensure that no more than 10% of its collateral (25% if more than 50% is in the form of bank guarantees) is guaranteed by a single credit institution or entities of the same group. In calculating the limits, a CCP must include the total exposure of the CCP to an issuer (credit lines, deposits, savings accounts, money-market instruments, reverse repurchase facilities, etc.) and must aggregate and treat as a single risk its exposures to all instruments issued by the issuer or by a group entity, explicitly guaranteed by the issuer or a group entity, as well as instruments issued by undertakings whose exclusive purpose is to own means of production that are essential for the issuer's business. A CCP must review its concentration limit policies at least annually and whenever a material change occurs that affects the risk exposure of the CCP. A CCP must inform the Competent Authority and the Clearing Members of the applicable concentration limits. It must inform the Competent Authority immediately if it breaches such limits and must rectify the breach as soon as possible.¹³⁴

Investment policy

A CCP’s investments must be capable of being liquidated rapidly with minimal adverse price effect. Capital not invested in accordance with these rules must not be taken into account for purposes of capital requirement under EMIR, Art. 16 or the default waterfall under EMIR, Art. 45(4).

A CCP may not invest its capital or the sums arising from the requirements laid down in Article 41, 42, 43 or 44 (margin, default fund, dedicated own resources, liquidity risk management) in its own securities or those of its parent undertaking or its subsidiaries.¹³⁵

- **Highly liquid financial instruments.** A CCP must only invest its financial resources in cash or highly liquid financial instruments with minimal market and credit risk. Only debt instruments with low credit and market risk are eligible investments and only where they are issued or guaranteed by a government, central bank, multilateral development bank, the EFSF or the ESM; the debt instruments must be freely transferable, with price data published regularly and with a diverse group of buyers and sellers including in stressed conditions. The average time-to-maturity of the CCP’s portfolio must not exceed two years and the currency of the debt instruments must be one in which the CCP clears transactions or is able to risk manage. Derivative contracts can only be invested in by a CCP as part of the CCP’s default management procedure.¹³⁶
- **Highly secured arrangements for the deposit of financial instruments.** Financial instruments posted with a CCP as margin or default fund contributions must be deposited with operators of securities settlement systems that ensure the full protection of such financial instruments. If unavailable, other highly secure arrangements at a central bank or an authorised financial institution may be used (subject to the

Investment policy

The Clearing Facilities Regulations restrict the types of instruments that an ACH (under regulation 24) or RCH (regulation 44) may invest its customers' moneys in – such instruments are limited to Singapore government securities, foreign government securities (where the moneys are in the currency of that foreign country), negotiable certificates of deposit and money market funds. The MAS' approval is required before the ACH or RCH may invest moneys or assets, and the ACH/RCH must satisfy the MAS that (a) the management of the investments made by the ACH/RCH is consistent with the principles of preserving principal and maintaining sufficient liquidity to meet the obligations of customers of members of the ACH/RCH, and (b) prudential measures have been adopted to manage the risks in respect of the ACH/RCH's investment activities.

Investment policy

The Singaporean regime for CCPs includes investment policy requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.

The Singaporean regime is not as strict as EMIR with regards to those financial instruments that are considered as possible investments.

A Singaporean CCP is also not specifically prohibited from investing its capital in its own securities and no restriction comparable to the one in EMIR exists with respect to investment in derivatives.

The third party entities at which a CCP deposits its own and its clearing member’s assets are not required to prima facie be the operators of securities settlement systems that ensure the full protection of such financial instruments except where

institution having low credit risk and, in the case of third-country institutions, robust accounting practices, internal controls and segregation provisions).¹³⁷

- **Highly secured arrangements for maintaining cash.** Cash may only be deposited by a CCP through the use of central banks' standing deposit facilities or through highly secure arrangements with authorised financial institutions (subject to the institution having low credit risk and, in the case of third-country institutions, robust accounting practices, internal controls and segregation provisions). Where secure arrangements with authorised financial institutions are used then the deposit must be in a currency in which the CCP clears transactions or is able to risk manage and at least 95% of the cash must be collateralised with highly liquid financial instruments meeting most of the requirements under Article 45¹³⁸.

Where a CCP deposits assets with a third party, it must ensure that the assets belonging to the Clearing Members are identifiable separately from the assets belonging to the CCP and from assets belonging to that third party by means of differently titled accounts on the books of the third party or any other equivalent measures that achieve the same level of protection. A CCP must have prompt access to the financial instruments when required.¹³⁹

- **Concentration limits.** A CCP must take into account its overall credit risk exposures to individual obligors in making its investment decisions and must ensure that its overall risk exposure to any individual obligor remains within acceptable concentration limits.¹⁴⁰ A CCP must establish and implement policies and procedures to ensure that the financial instruments in which its resources are invested remain sufficiently diversified. To this effect, a CCP must determine concentration limits at the levels of individual financial instruments,

such systems are not available.

The Singaporean regime does not specifically require CCPs to deposit cash posted at the CCP as margin or default fund contributions with a central bank or through highly secure arrangements. Furthermore, CCPs are not required to collateralise 95% of the cash they maintain other than with a central bank.

When a CCP deposits assets with a third party, the Singaporean regime does not specifically require the CCP to ensure that assets belonging to clearing members are identifiable separately from the assets belonging to the CCP and from assets belonging to a third party.

A Singaporean CCP is not specifically required to take into account its overall credit risk exposures to individual obligors in making its investment decisions or to ensure that its overall risk exposure to any individual obligor remains within acceptable concentration limits.

No restriction comparable to the one in the EU regime has been found with respect to the investment in derivatives.

Although the Singaporean regime has

<p>types of financial instruments, individual issuers, types of issuers, and counterparties with which financial instruments and cash have been deposited on a highly secured basis, taking into account relevant factors such as geographic distribution, interdependencies and multiple relationships that a CCP may have with a CCP, level of credit risk and exposures to the issuer through products cleared by the CCP. In calculating the limits for exposure to an issuer or custodian, a CCP must aggregate and treat as a single risk its exposures to all instruments issued by, or explicitly guaranteed by the issuer and all financial resources deposited with the custodian. A CCP must review its concentration limit policies at least annually and whenever a material change occurs that affects the risk exposure of the CCP. A CCP must inform the Competent Authority and the Clearing Members of the applicable concentration limits. It must inform the Competent Authority immediately if it breaches such limits and must rectify the breach as soon as possible.¹⁴¹</p>		<p>the same objectives to that of EMIR insofar as it is aimed at reducing credit, market and liquidity risks, as well as the safeguarding of funds, the highlighted differences lead to a conclusion that the two regimes are not equivalent in this respect.</p>
<p>Default procedures</p> <p>A CCP must have detailed procedures in place to be followed where a Clearing Member does not comply with the participation requirements of the CCP within the time limit and in accordance with the procedures established by the CCP. The CCP must set out in detail the procedures to be followed in the event the default of a Clearing Member is not declared by the CCP. Those procedures must be reviewed annually.¹⁴²</p> <p>A CCP must take prompt action to contain losses and liquidity pressures arising from defaults, and must ensure that the closing out of any Clearing Member's positions does not disrupt its</p>	<p>Default procedures</p> <p>An ACH must notify MAS when it becomes aware of any financial irregularity or any other matter which in its opinion may affect its ability to discharge its financial obligations or may affect the ability of the member of the ACH to meet its financial obligations to the ACH.[Section 58 of the SFA]</p> <p>An ACH shall make provision in its business rules to the satisfaction of MAS for the handling of defaults, including the financial resources available to support the default of a member and the taking of proceedings or any other action against a member which has failed, or appears to be unable, or is likely to become unable, to meet the member's obligations for all unsettled or open market contracts to which the member is a party.</p>	<p>Default procedures</p> <p><i>The Singaporean regime for CCPs includes default procedures requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the</i></p>



operations or expose non-defaulting Clearing Members to losses that they cannot anticipate or control.¹⁴³

Where a CCP considers that a Clearing Member will not be able to meet its future obligations, it must promptly inform the competent authority before the default procedure is declared or triggered. The competent authority must promptly communicate that information to ESMA, to the relevant members of the ESCB and to the authority responsible for the supervision of the defaulting Clearing Member.¹⁴⁴

A CCP must verify that its default procedures are enforceable, and take all reasonable steps to ensure that it has the legal power to liquidate the proprietary positions of the Defaulting Clearing Member and to transfer or liquidate the positions of the Clients of the Defaulting Clearing Member.¹⁴⁵

Where a CCP keeps records and accounts for a Clearing Member on an:

- **omnibus client segregation** basis, the CCP must contractually commit itself to trigger the procedures for the transfer of the assets and positions held by the Defaulting Clearing Member for its clients to another Clearing Member designated by all those Clients, on their request and without the need for the Defaulting Clearing Member's consent; that other Clearing Member may be obliged to accept those assets and positions only where it has contractually committed itself towards the Clients to do so. It for any reason such transfer does not take place within the timeframe specified in the CCP's operating rules, the CCP may take all steps permitted by its rules to actively manage its risks in relation to those positions, including liquidating the assets and positions held by the Defaulting Clearing Member for the relevant Clients.¹⁴⁶
- **individual client segregation** basis, the CCP must con-

[Regulation 29 of SF(CF)R]

The proceedings of an ACH shall take precedence over the law of insolvency. [Section 81C of the SFA]

scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.

The Singaporean regime has general provisions on the fact that a CCP should have procedures to handle a default however it does not contemplate different mechanisms for the transfer of client positions upon a clearing member default. This is to be combined with the provisions on segregation and portability which are not equivalent either.

A Singaporean CCP is not expressly required to inform the Singaporean authorities when it considers that a clearing member will not be able to meet its future obligations.

A Singaporean CCP is not required to verify that its default procedures are enforceable.

<p>tractually commit itself to trigger the procedures for the transfer of the assets and positions held by the Defaulting Clearing Member for the account of the relevant Client to another Clearing Member designated by the Client, on its request and without the need for the Defaulting Clearing Member's consent; that other Clearing Member may be obliged to accept those assets and positions only where it has contractually committed itself towards the Client to do so. It for any reason such transfer does not take place within the timeframe specified in the CCP's operating rules, the CCP may take all steps permitted by its rules to actively manage its risks in relation to those positions, including liquidating the assets and positions held by the Defaulting Clearing Member for the Client.¹⁴⁷</p> <p>Clients' collateral distinguished by a CCP in accordance with EMIR's requirements for omnibus client segregation and individual client segregation must be used only to cover positions held for their account. Any balance owed by the CCP after the completion of a Defaulting Clearing Member's default management process must be returned to those Clients (if known to the CCP), or to the Clearing Member for the account of its Clients (if not).¹⁴⁸</p>		
<p>Review of models, stress testing and back testing</p> <ul style="list-style-type: none"> • Model validation and testing programmes. A CCP must regularly review the models and parameters it has adopted to calculate margin requirements, default fund contributions, collateral requirements and other risk control mechanisms. Such models must be subject to frequent stress tests to assess resilience in extreme but plausible market conditions and back tests to assess the reliability of the underlying methodology. Material revisions or adjustments to the CCP's 	<p>Review of models, stress testing and back testing</p> <p>An ACH shall seek the approval of MAS prior to making any change to the risk management frameworks, including the types of collateral accepted by the ACH, methodologies for collateral valuation, determination of margins to manage the ACH's risk exposure to its clearing members, the size of the financial resources available to the ACH to support a default of its member. [Regulation 12 of the SF(CF)R]</p>	<p>Review of models, stress testing and back testing</p> <p><i>The Singaporean regime for CCPs include review of models, stress testing and back testing requirements. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these</i></p>

models and parameters, valuation models and validation policies should be subject to risk committee review, independent validation and validation from the CCP's Competent Authority and ESMA. The adopted models and parameters, including any significant change thereto, must be subject to an opinion of the college pursuant to Article 19 of EMIR. ESMA will ensure that information on the results of the stress tests is passed on to the ESAs to enable them to assess the exposure of financial undertakings to the default of CCPs. A CCP shall regularly assess the theoretical and empirical properties of its models.¹⁴⁹

- **Back testing.** A CCP must have in place a programme in relation to back testing of margin coverage on a daily basis based on an ex-post comparison of observed outcomes with expected outcomes derived from margin models. Back testing results must be periodically reported to the risk committee and made available to clearing member and clients.¹⁵⁰
- **Sensitivity testing and analysis.** A CCP must have in place a programme in relation to sensitivity testing and analysis to assess the coverage of the margin model under various market conditions, including realized stressed market conditions and hypothetical unrealized stressed market conditions, and to determine the sensitivity of the system to errors in the calibration of such parameters and assumptions.¹⁵¹ Sensitivity analysis must be performed on a number of actual and representative clearing member portfolios. Back testing results must be periodically reported to the risk committee.
- **Stress testing – total and liquid financial resources.** A CCP must have in place a programme to stress test its total financial resources and liquid financial resources to ensure that they are sufficient¹⁵².
- **Maintaining sufficient coverage.** A CCP must have in

requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs, which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.

A Singaporean CCP is not specifically required to inform regulators of the results of the tests of its models and parameters or to submit material revisions or adjustments to the risk committee, competent authority or to independent review, or to submit the results of back testing to its risk committee or clearing members.

A Singaporean CCP is not specifically required to analyse its financial resources coverage by conducting stress tests at least daily.

A Singaporean CCP is not specifically required to perform coverage monitoring so as to promptly test and if applicable review its models and adjust margin requirements, haircuts and correlation for purposes of portfolio margining in case of changing market conditions.

A Singaporean CCP is not specifically required to perform reverse stress tests designed to identify under which

place a programme to recognise changes in market conditions and, if necessary, to adapt its margin requirements, including the haircuts it imposes¹⁵³.

- **Review of models using test results.** A CCP must have in place a programme to review the coverage provided by its margin models and, if necessary, to recalibrate them¹⁵⁴.
- **Reverse stress tests.** A CCP must have in place a reverse stress testing programme designed to identify under which market conditions the combination of its margin, default fund and other financial resources may provide insufficient coverage of credit exposures and for which its liquid financial resources may be insufficient, including by modelling extreme market conditions beyond what is considered plausible. The results of the stress testing programme should periodically be reported to the risk committee.¹⁵⁵
- **Testing default procedures.** A CCP must regularly test the key aspects of its default procedures, and take all reasonable steps to ensure that Clearing Members (and, where relevant, Clients, service providers and Interoperable CCPs) understand them and have appropriate procedures in place to respond to a default.¹⁵⁶
- **Frequency.** A CCP must conduct a comprehensive validation of its models and their methodologies, its liquidity risk management framework, valuation models, correlation performance in relation to portfolio margining and testing programmes at least annually. A CCP must analyse and monitor its model performance and financial resources coverage in the event of default and its liquidity risk management framework by back-testing margin coverage and conducting stress tests at least daily. A CCP must conduct a detailed thorough analysis of testing results at least monthly (and more frequently if market conditions are stressed or expected to be stressed) to

market conditions the combination of its margin and other financial resources may provide insufficient coverage of credit exposures and for which its liquid financial resources may be insufficient, including by modelling extreme market conditions beyond what is considered plausible.

A Singaporean CCP is not required to test its collateral haircut policies at least monthly.

The Singaporean regime does not specifically require a CCP to validate its liquidity risk management frameworks, valuation models, correlation performance in relation to portfolio margining, or testing results.

The Singaporean regime does not require CCPs to review its models for default fund contributions or to regularly test key aspects of default procedures.

A Singaporean CCP is not specifically required to publicly disclose the general principles underlying its models and their methodologies, its margin-setting methodology, the nature of tests performed, a high level summary of the test results and any corrective actions undertaken or key aspects of its default procedures.

<p>ensure that stress testing scenarios, models, underlying parameters and assumptions are correct. A CCP must conduct sensitivity analysis at least monthly (and more frequently if markets are unusually volatile or less liquid). A CCP must test collateral haircut policies at least monthly. A CCP must conduct reverse stress tests and review its default procedures at least quarterly with simulation exercises at least annually.¹⁵⁷</p> <ul style="list-style-type: none"> • Information to be publicly disclosed. A CCP must publicly disclose the general principles underlying its models and their methodologies, the nature of the tests performed, and a high level summary of the test results and any corrective actions undertaken. A CCP must also make available key aspects of its default procedures, including: (i) the circumstances in which action may be taken and by whom, (ii) the scope of actions which may be taken; (iii) mechanisms to address a CCP’s obligations to non-defaulting Clearing Members; and (iv) mechanisms to help address the Defaulting Clearing Member’s obligations to its Clients.¹⁵⁸ 		
<p>Settlement</p> <ul style="list-style-type: none"> • Cash settlement risk. A CCP must, where practical and available, use central bank money to settle its transactions. Where central bank money is not used, steps must be taken to limit cash settlement risk.¹⁵⁹ • Securities settlement risk. A CCP must clearly state its obligations with regard to deliveries of financial instruments, including whether it has an obligation to make or receive delivery of such instruments. If so, it must (as far as possible) eliminate principal risk through the use of delivery-versus- 	<p>Settlement</p> <p>An ACH shall make provision in its business rules to the satisfaction of the MAS for the terms and conditions under which transactions will be cleared or settled on any clearing facility that it operates. [Regulation 29 of the SF(CF)R].</p> <p>Proceedings of ACH shall take precedence over law of insolvency. The following shall not be invalid to any extent at law by reason only of inconsistency with any written law or rule of law relating to the distribution of the assets of a person on insolvency, bankruptcy or winding up, or on the appointment of a receiver, a receiver and manager or a person in an equivalent capacity over</p>	<p>Settlement</p> <p><i>The Singaporean regime for CCPs includes settlement requirements however. Based on a review of the legally binding requirements which are applicable, at a jurisdictional level, to CCPs in Singapore, these requirements are not equivalent to those of EMIR. However, the internal policies, procedures, rules, models and methodologies of individual CCPs,</i></p>

<p>payment mechanisms to the extent possible.¹⁶⁰</p> <ul style="list-style-type: none"> • Settlement finality rules also apply in accordance with the Settlement Finality Directive¹⁶¹. 	<p>any of the assets of a person:</p> <ul style="list-style-type: none"> ○ A market contract; ○ A disposition of property pursuant to a market contract; ○ The provision of market collateral; ○ A contract effected by an ACH for the purpose of realising property provided as market collateral, or any disposition of property pursuant to such a contract; ○ A disposition of property in accordance with the business rules of an ACH relating to the application of property provided as market collateral; ○ A disposition of property as a result of which the property becomes subject to a market charge, or any transaction pursuant to which that disposition is made; ○ A disposition of property for the purpose of enforcing a market charge; ○ A market charge; ○ Any default proceedings. <p>A relevant office holder, or a court applying the law relating to insolvency in Singapore, shall not exercise his power to prevent or interfere with the settlement of a market contract in accordance with the business rules of an ACH or any default proceedings. [Section 81C of the SFA]</p>	<p><i>which are out of the scope of this assessment, may contain legally binding provisions equivalent to those of EMIR.</i></p> <p>The Singaporean regime does not refer to central bank money or cash settlement risk limitation, to delivery versus payment or settlement finality.</p> <p>A Singaporean CCP is not specifically required to use central bank money where practical and available to settle its transactions.</p> <p>A Singaporean CCP is not specifically required to clearly state its obligations with regard to deliveries of financial instruments or to eliminate principal risk through the use of delivery-versus-payment mechanisms to the extent possible when it has an obligation to make or receive delivery of financial instruments.</p>
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- ¹ EMIR, Art. 26(1) and Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3 and 4.
- ² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3(1) and (2).
- ³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3(1) and (2).
- ⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3(7).
- ⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3(5).
- ⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 3(3).
- ⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Recital 12 and Art. 3(4).
- ⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(1).
- ⁹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(2).
- ¹⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(4).
- ¹¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(5).
- ¹² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(6).
- ¹³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(7).
- ¹⁴ EMIR, Art. 26(2) and Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 5(1).
- ¹⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 5.
- ¹⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 7(1).
- ¹⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 7(2).
- ¹⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 7(3).
- ¹⁹ EMIR, Art. 26(4).
- ²⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 7(6).
- ²¹ EMIR, Art. 26(5).
- ²² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 8(1) to (3).
- ²³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 8(4).
- ²⁴ EMIR, Art. 26(6).
- ²⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 8.
- ²⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 8.
- ²⁷ EMIR, Art. 26(7); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 10.
- ²⁸ EMIR, Art. 26(8).
- ²⁹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 11(1) to (4).
- ³⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 11(5).
- ³¹ EMIR, Art. 27(1).
- ³² EMIR, Art. 27(2).
- ³³ EMIR, Art. 2(28).
- ³⁴ EMIR, Art. 27(2).
- ³⁵ EMIR, Art. 27(3).
- ³⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 4(3).
- ³⁷ EMIR, Art. 28(1).
- ³⁸ EMIR, Art. 28(2).
- ³⁹ EMIR, Art. 28(3).
- ⁴⁰ EMIR, Art. 29(1).
- ⁴¹ EMIR, Art. 29(2).
- ⁴² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 12.
- ⁴³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Recital 16.
- ⁴⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 13.
- ⁴⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 14.
- ⁴⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 15.
- ⁴⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 16.
- ⁴⁸ Any direct or indirect holding in a CCP representing at least 10% of its voting rights or capital, as set out in Articles 9 and 10 of Directive 2004/109/EC; EMIR, Art. 2(20).
- ⁴⁹ EMIR, Art. 30(1).
- ⁵⁰ EMIR, Art. 30(2).
- ⁵¹ EMIR, Art. 30(4).
- ⁵² EMIR, Art. 30(3).
- ⁵³ EMIR, Art. 30(5).
- ⁵⁴ EMIR, Art. 31(1).
- ⁵⁵ EMIR, Art. 31(1).
- ⁵⁶ Any direct or indirect holding in a CCP representing at least 10% of its voting rights or capital, as set out in Articles 9 and 10 of Directive 2004/109/EC; EMIR, Art. 2(20).
- ⁵⁷ EMIR, Art. 31(2).
- ⁵⁸ EMIR, Art. 31(3).
- ⁵⁹ EMIR, Art. 31(5) and (6).

⁶⁰ EMIR, Art. 32(1).

⁶¹ EMIR, Art. 32(2).

⁶² EMIR, Art. 32(3).

⁶³ EMIR, Art. 32(4).

⁶⁴ EMIR, Art. 32(6), (7).

⁶⁵ Where the CCP is a parent or subsidiary undertaking, these written arrangements should also take into account any circumstances of which the CCP is or should be aware which may give rise to conflicts of interest arising as a result of the structure and business activities of other undertakings with which it has a parent or subsidiary undertaking relationship; EMIR Art. 33(3).

⁶⁶ EMIR, Art. 33(1).

⁶⁷ EMIR, Art. 33(2).

⁶⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Recital 13.

⁶⁹ EMIR, Art. 26(3).

⁷⁰ EMIR, Art. 34 (1) and (2).

⁷¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 17.

⁷² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 18.

⁷³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 19.

⁷⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 20.

⁷⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 21.

⁷⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 22.

⁷⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 23.

⁷⁸ EMIR, Art. 35(1).

⁷⁹ EMIR, Art. 35(2).

⁸⁰ EMIR, Art. 36(1).

⁸¹ EMIR, Art. 36(1) and (2).

⁸² EMIR, Art. 37(1).

⁸³ EMIR, Art. 37(3).

⁸⁴ EMIR, Art. 37(4) and (5).

⁸⁵ EMIR, Art. 37(6).

⁸⁶ EMIR, Art. 37(2).

⁸⁷ EMIR, Art. 38(1).

⁸⁸ EMIR, Art. 38(3) to (5).

⁸⁹ EMIR, Art. 38(1).

⁹⁰ EMIR, Art. 38(2).

⁹¹ EMIR, Art. 38(1) and (3).

⁹² EMIR, Art. 39(1) to (3).

⁹³ EMIR, Art. 39(4) to (6).

⁹⁴ EMIR, Art. 39(7).

⁹⁵ EMIR, Art. 39(8).

⁹⁶ EMIR, Art. 39(9).

⁹⁷ EMIR, Art. 39(10).

⁹⁸ EMIR, Art. 40(1).

⁹⁹ EMIR, Art. 41(1).

¹⁰⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Recital 21.

¹⁰¹ EMIR, Art. 41(1).

¹⁰² EMIR, Art. 41(2).

¹⁰³ EMIR, Art. 41(3) and (4).

¹⁰⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 24(1).

¹⁰⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 24(1).

¹⁰⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 24(2).

¹⁰⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 24(4).

¹⁰⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 25.

¹⁰⁹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 26(1).

¹¹⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 26(4).

¹¹¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 27.

¹¹² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 28.

¹¹³ EMIR, Art. 42(1) and (2).

¹¹⁴ EMIR, Art. 42(3).

¹¹⁵ EMIR, Art. 42(4).

¹¹⁶ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 29.

¹¹⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 30.

¹¹⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 31.

¹¹⁹ EMIR, Art. 43.

¹²⁰ EMIR, Art. 43(3).

¹²¹ EMIR, Art. 44(1).

¹²² EMIR, Art. 44 (1).

¹²³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 32.

¹²⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 33.

¹²⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 34.



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- ¹²⁶ EMIR, Art. 45(1) to (4).
- ¹²⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 35.
- ¹²⁸ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 36.
- ¹²⁹ EMIR, Art. 46(1).
- ¹³⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 37 and 42.
- ¹³¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 38.
- ¹³² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 39 to 41.
- ¹³³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 43.
- ¹³⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 44.
- ¹³⁵ EMIR, Art. 47(6)
- ¹³⁶ EMIR, Art. 47(1); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 45.
- ¹³⁷ EMIR, Art. 47(3); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 46.
- ¹³⁸ EMIR, Art. 47(4); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 47.
- ¹³⁹ EMIR, Art. 47(5).
- ¹⁴⁰ EMIR, Art. 48(7). Under Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 48, a CCP must determine concentration limits at the levels of individual financial instruments, types of financial instruments, individual issuers, types of issuers, and counterparties with which financial instruments and cash have been deposited on a highly secured basis.
- ¹⁴¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 48.
- ¹⁴² EMIR, Art. 48(1).
- ¹⁴³ EMIR, Art. 48(2).
- ¹⁴⁴ EMIR, Art. 48(3).
- ¹⁴⁵ EMIR, Art. 48(4).
- ¹⁴⁶ EMIR, Art. 48(5).
- ¹⁴⁷ EMIR, Art. 48(6).
- ¹⁴⁸ EMIR, Art. 48(7).
- ¹⁴⁹ EMIR, Art. 49(1); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 50 and 51.
- ¹⁵⁰ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 52.
- ¹⁵¹ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 53.
- ¹⁵² Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 56 and 57.
- ¹⁵³ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 58.
- ¹⁵⁴ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 59.
- ¹⁵⁵ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 60.
- ¹⁵⁶ EMIR, Art. 49(2); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 61.
- ¹⁵⁷ Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 62.
- ¹⁵⁸ EMIR, Art. 49(3); Commission Delegated Regulation (EU) No 153/2013 on requirements for CCPs, Art. 64.
- ¹⁵⁹ EMIR, Art. 50(1).
- ¹⁶⁰ EMIR, Art. 50(2) and (3).
- ¹⁶¹ Directive 98/26/EC on settlement finality in payment and securities settlement systems and Directive 2009/44/EC amending the Settlement Finality Directive and the Financial Collateral Arrangements Directive.