



Monetary Authority of Singapore

Consultation Paper
P019 – December 2023

Consultation Paper on Proposed Amendments to the Capital Framework for Approved Exchanges and Approved Clearing Houses



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1. Preface

- 1.1. Approved Exchanges (“**AEs**”) and Approved Clearing Houses (“**ACHs**”) are required to comply with a set of conditions aimed at ensuring safe and orderly function of the institutions, in particular to (a) ensure an entity’s commitment and ability to conduct its business as a going concern; (b) provide for a financial buffer against unexpected losses; and (c) allow for an orderly recovery or wind-down of the entity in distress.

- 1.2. The Monetary Authority of Singapore (“**MAS**”) sets out in this consultation paper the proposed amendments to the current capital framework for AEs and ACHs. Going forward, MAS intends to impose the proposed capital framework via a Notice issued under the Securities and Futures Act 2001 (“**SFA**”) for greater clarity and transparency. MAS also intends to set out reporting requirements related to the proposed capital framework in the Securities and Futures (Organised Markets) Regulations 2018 and Securities and Futures (Clearing Facilities) Regulations 2013 (“**Regulations**”).

- 1.3. Please note that all submissions received will be published and attributed to the respective respondent unless they expressly request MAS not to do so. As such, if respondents would like:
 - (a) their whole submission or part of it (but not their identity), or
 - (b) their identity along with their whole submission,to be kept confidential, please expressly state so in the submission to MAS. MAS will only publish non-anonymous submissions. In addition, MAS reserves the right not to publish any submission received where MAS considers it not in the public interest to do so, such as where the submission appears to be libelous or offensive.

- 1.4. Please submit written comments by 15 January 2024 via the link provided – <https://go.gov.sg/ae-ach-capital-requirements>.



2. Introduction

- 2.1. The primary regulated function of an AE is to operate an organised market in a fair, orderly and transparent manner. This includes promoting price discovery of financial instruments through the matching of buyers' and sellers' interests in the instrument. Upon the matching of two parties to a contract, an ACH then performs functions critical to the discharge of obligations between transacting parties, including: (a) substitution of credit between transacting parties where the ACH, as a central counterparty, guarantees performance of the contracts by the transacting parties; and (b) settlement of transactions where the ACH transfers funds or securities between the transacting parties. AEs and ACHs are considered systemically important financial market infrastructures.^{1, 2}
- 2.2. MAS notes that the business of an AE and ACH is typically exposed to three types of risks: Operational, investment and general counterparty risk, from which the total risk requirement ("TRR") is calculated. As the failure of AEs and ACHs would pose risks to the broader financial stability due to their systemic importance, it is crucial that these entities have sufficient eligible capital to absorb losses, should these risks materialise, and allow them to continue operations as a going concern or allow for an orderly wind-down of the entity in distress.
- 2.3. The current capital framework for AEs and ACHs was introduced in 2008. It is thus timely that MAS reviews to ensure that the capital framework remains fit for purpose and up-to-date for AEs' and ACHs' business activities and to adopt international practices, which may have evolved over time. As part of this review, MAS intends to issue a Notice for the revised capital framework and set out the related reporting requirements under Regulations.

Terminology

- 2.4. In this consultation –
 - (a) "current capital framework" refers to the requirements set out in approval conditions, that AEs and ACHs are currently required to comply in order to maintain a pool of eligible capital; and
 - (b) "proposed capital framework" refers to both the proposed solvency requirement and the liquidity requirement to be set out in a new Notice, that is intended to supersede the current capital framework.

¹ *Guidelines on the Regulation of Markets.*

² *Guidelines on the Regulation of Clearing Facilities.*



3. Current Capital Framework

- 3.1. The current capital framework addresses solvency by requiring AEs and ACHs to maintain eligible capital in excess of potential losses as measured by their TRR. This ensures that AEs and ACHs have adequate resources to conduct their business as a going concern and have a financial buffer against unexpected losses. Eligible capital is calculated by aggregating capital components³ and deducting other balance sheet components that may not be readily available to absorb losses. These deductions can be categorised into four broad categories – (a) intangibles and encumbered assets; (b) unsecured loan receivables; (c) intra-group investments; and (d) non-current and illiquid assets.
- 3.2. With the deduction of non-current and illiquid assets being part of the calculation of eligible capital, the current capital framework does not clearly distinguish between liquidity and solvency aspects, which are two different concepts to address two risk types. The effect is that eligible capital available is required to both: (a) sustain ongoing operations (i.e. solvency); and (b) be liquid enough for immediate use as working capital (i.e. liquidity). Thus, the current calculation of eligible capital may not cater for a clear identification and addressing of liquidity risks.
- 3.3. There is also scope to further refine the existing capital components of eligible capital to better represent resources that can be used to absorb potential losses. This includes tightening of components in the calculation of eligible capital, and deducting additional items that are not available for use to absorb losses as they have been committed or are unlikely to be recoverable. The following paragraphs highlight the key proposed changes to the current capital framework.

4. Introduction of a Liquidity Requirement

- 4.1. AEs and ACHs should maintain a sufficient pool of liquid assets to provide for ongoing orderly operations of the entities to meet obligations on time, or to implement an orderly recovery or wind-down, as the case may be.
- 4.2. MAS is proposing to introduce a liquidity requirement that is separate from the solvency requirement, to address the different purposes of each requirement. The proposed liquidity requirement would require an AE or ACH to hold cash or near cash assets sufficient to cover at least six months of its operating expenses, or an amount as assessed by the AE or ACH that is needed to achieve recovery or an orderly wind-down, whichever is higher. The minimum of six months of operating expenses takes reference from Principle 15 of the Principles of Financial Market Infrastructures⁴ that suggests that a

³ Capital components currently comprise base capital, preference shares, reserves, interim unappropriated profits, impairment allowances and qualifying subordinated loans.

⁴ <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD377-PFMI.pdf>



financial market infrastructure (“FMI”) should hold sufficient capital to fund a viable recovery or orderly wind-down plan, which, at a minimum, should be equal to at least six months of current operating expenses. Further, such cash or near cash assets should not include those that have been committed by an ACH as its skin-in-the-game (“SITG”) contributions to absorb losses from a default of a participant or from losses incurred from its custody and investment activities.

- 4.3. For the purposes of the liquidity requirement, MAS proposes that the calculation of operating expenses should:
- (a) exclude depreciation and amortisation (“D&A”) expenses as such expenses generally do not result in a cash outflow; and
 - (b) include any lease payments to ensure that liquid resources continue to be set aside for meeting lease obligations even though lease payments are not capitalised and depreciated under Singapore Financial Reporting Standards (“FRS”) 116.⁵

Question 1. MAS seeks feedback on the proposed introduction of a separate liquidity requirement.

5. Amendments to Eligible Capital under the Current Capital Framework for Solvency Requirement

- 5.1. For the solvency requirement, MAS intends to streamline the capital components and the deducted balance sheet components to strengthen the quality and availability of capital that contributes towards the eligible capital of an AE or ACH. MAS is proposing the following amendments to the calculation of eligible capital:
- (a) To exclude the following from capital components –
 - (i) redeemable or cumulative preference share capital in excess of 100% of the AE or ACH’s base capital; this is reduced from the limit of 200% of its base capital in the current capital

⁵ Under FRS 116 on leases, effective from financial period beginning 1 January 2019, all leases are required to be recorded on the balance sheet as lease assets and liabilities, with exemptions for short term leases or leases with an underlying asset that is of low value. Such assets are to be depreciated over its lease term. Any cash outflow amounts from regular lease payments, regardless of the depreciation amount from lease assets, must be included in “annual operating expenses” under the Notice.



framework due to the impermanence or lack of issuer's discretion in dividend payments for such shares;

(ii) collective impairment allowance, due to the uncertainty of its recovery; and

(iii) qualifying subordinated loans, as such instruments are not components of equity;

(b) To incorporate the following deductions from the capital components –

(i) pre-paid expenses, as these are assets committed for use and would be unable to absorb losses;

(ii) unsecured loans and advances extended by the AE or ACH, as these have a lower certainty of recoverability; and

(iii) in the case of an ACH, cash committed as SITG to absorb losses arising from custody and investment losses, as these would not be used to absorb losses other than the specific purpose for which the SITG commitment was made.^{6,7}

5.2. MAS further proposes to remove the current requirement to deduct non-current and illiquid assets⁸ from the capital components, as MAS is proposing to manage the provision of liquid assets separately from the solvency requirement under the proposed capital framework through the liquidity requirement.

Question 2. MAS seeks feedback on the proposed changes to the capital components in determining eligible capital.

6. Amendments to the Calculation of the Total Risk Requirement

6.1. The TRR is calculated to account for three types of risks faced by an AE and ACH in its business activities – the operational risk, investment risk, and general counterparty risk.

⁶ The clearing fund is a pool of resource contributed by the ACH and its members that is intended to absorb and mutualise losses that exceed the collateral posted by the defaulting member in the event of a default.

⁷ The current capital framework requires SITG covering default losses to be deducted from the capital component. For clarity, this deduction will be retained in the proposed capital framework.

⁸ Illiquid assets are assets that are not convertible into cash within 30 days.



Calculation of the Operational Risk Component

- 6.2. The operational risk component of a TRR serves as a proxy to compute the capital buffer that can be used to cover interim expenses arising from operational disruptions such as in information systems, internal processes, human resources or disruptions from external events that may result in the reduction, deterioration, or breakdown of services provided by the AE or ACH. The current capital framework provides for AEs and ACHs to set aside six months of operating expenses, excluding D&A, in calculating its operating risk component.
- 6.3. In the proposed capital framework, MAS is proposing that D&A charges be included in operating expenses when determining the operational risk component for the purpose of the solvency requirement. MAS views the proposed solvency requirement as a reflection of financial viability, and given this, there should be adequate capital to replenish depreciating assets. As such, MAS proposes to require operational risk component of the TRR to be calculated as at least six months of operating (including D&A).

Calculation of the Investment Risk Component

- 6.4. The investment risk component of the TRR serves as a proxy to compute the capital buffer that can be used to cover potential losses when the AE or ACH invests its own assets. The current investment risk component is calculated as 8% of the capital investments to acquire the first 20% of the shares in every associated corporation held by the AE or ACH. 100% of the capital investments in the remaining shares in every associated corporation held by the AE or ACH in excess of 20% and 100% of the capital investments in every subsidiary of the AE or ACH is deducted from financial resources.
- 6.5. MAS is proposing that all capital investments in subsidiaries and associated corporations, including the deductions from financial resources be covered under the investment risk component, and that the investment risk component be calculated as the sum of the following two charges –
- (a) 100% of capital investments the AE or ACH has in its associated corporations and subsidiaries; and
 - (b) 10% of the value of all investments made by the AE or ACH, other than the investments mentioned in sub-paragraph (a).
- 6.6. MAS considers that capital that has been invested into associated corporations and subsidiaries should be precluded from being counted into the regulatory capital of the AE or ACH. MAS is also of the view that a 10% risk charge would facilitate simplicity of implementation, considering that AEs and ACHs do not typically engage in a wide array of such investments.



Calculation of the General Counterparty Risk Component

6.7. General counterparty risk charges currently apply only to ACHs for counterparty exposures that the ACH takes on when performing a central counterparty role for non-members that are not covered by a clearing fund. The general counterparty risk component for ACHs is calculated at 8% of the value of all credit-weighted exposures to non-member counterparties.

6.8. MAS views that the general counterparty risk component should be broader to cover other counterparty exposures faced by AEs and ACHs. MAS is therefore proposing to amend the calculation of the general counterparty risk component to 8% of the value of all credit-weighted exposures to all counterparties. Credit exposure would be weighted by and proportionate with the credit quality rating as determined by the credit rating agencies based on the table below.

Credit Quality Grade	1	2	3	4	5	6	Unrated
Risk Weight	0%	20%	50%	100%	100%	150%	50%
Fitch Ratings	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D	-
Moody's Investors Services	Aaa Aa1 Aa2 Aa3	A1 A2 A3	Baa1 Baa2 Baa3	Ba1 Ba2 Ba3	B1 B2 B3	Caa1 Caa2 Caa3 Ca C	-
Standard & Poor's Ratings Services	AAA AA+ AA AA-	A+ A A-	BBB+ BBB BBB-	BB+ BB BB-	B+ B B-	CCC+ CCC CCC- CC C D	-

Question 3. MAS seeks feedback on the proposed changes to the operational risk component, investment risk component, and general counterparty risk component of the TRR.



7. Proposed Submission and Notification Requirements in the Securities and Futures (Organised Markets) Regulations 2018 and Securities and Futures (Clearing Facilities) Regulations 2013

- 7.1. Currently, the requirements to submit and notify MAS on matters relating to an AE or ACH's capital are set out in approval conditions. MAS is proposing to set out these requirements into the Securities and Futures (Organised Markets) Regulations 2018 and Securities and Futures (Clearing Facilities) Regulations 2013, for AEs and ACHs respectively.
- 7.2. These requirements would include:
- (a) quarterly submissions to MAS reporting on the AE or ACH's compliance with its liquidity and solvency requirements, to be done within 30 days after the end of each quarter of a financial year (60 days in the case of the last quarter);
 - (b) yearly submissions to MAS on the AE or ACH's capital plan, to be done within 30 days after the start of each financial year; and
 - (c) notifications to MAS within 21 days before the AE or ACH enters into any loan arrangements including issuing any debt instruments.⁹

Question 4. MAS seeks feedback on the proposed submission and notification requirements.

⁹ This excludes any credit facility entered into by the AE or ACH for day-to-day liquidity purposes.



8. Draft Notice and Draft Amended Regulations

- 8.1. MAS intends to issue a Notice for the proposed capital framework and set out the related reporting requirements under Regulations. The draft Notice and amendments to Regulations are appended to this consultation paper in Annexes A and B respectively.

Question 5. MAS seeks feedback on the draft Notice (see Annex A) and draft amended Regulations (see Annex B).



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