



#### Invitation to comment

ASX is seeking submissions on the straw man recovery proposals canvassed in this paper by 7 November 2014.

Submissions should be sent to:

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Attention: Janine Ryan, General Manager,  
Legal

ASX prefers to receive submissions in electronic form.

Submissions not marked as 'confidential' will be made publicly available on ASX's website. If you would like your submission, or any part of it, to be treated as 'confidential', please indicate this clearly in your submission.

ASX is available to meet with interested parties for bilateral discussions on the recovery proposals canvassed in this paper.

#### Contacts

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## CONTENTS

Introduction .....	3
Background and regulatory context .....	6
Recovery tools.....	9
ASX Clear straw man .....	11
ASX Clear (Futures) straw man .....	14
Next steps.....	17
Schedule 1: Frequently used terms .....	18
Schedule 2: Default waterfalls of ASX's CCPs.....	19
Schedule 3: Existing recovery tools of ASX's CCPs .....	21
Schedule 4: International menu of clearing participant default loss allocation tools.....	24
Schedule 5: ASX Clear straw man mechanics .....	26
Schedule 6: ASX Clear (Futures) straw man mechanics.....	29
Schedule 7: Consultation questions.....	32

## 1. Introduction

### 1.1. Purpose of this Consultation Paper

The purpose of this Consultation Paper is to outline 'straw man' proposals to enhance the crisis management capabilities of ASX's CCPs, ASX Clear and ASX Clear (Futures), as required by domestic and international standards, and seek customer feedback on those proposals.

Australian regulatory standards now in force require ASX's CCPs to have powers ('recovery tools') under their operating rules to address fully any credit losses or liquidity shortfalls they may face as a result of clearing participant default, and to replenish their default funds following such events. The Reserve Bank of Australia, which is responsible for setting and monitoring ASX's compliance with the domestic standards, requires these recovery tools to address very extreme scenarios under which the CCP's financial resources are insufficient to cover credit losses or payment obligations following a clearing participant default. The Reserve Bank also expects these recovery tools to be consistent with forthcoming international guidance on recovery of financial market infrastructure. The existing powers of ASX's CCPs are not comprehensive for the purposes of the new standards and the Reserve Bank requires ASX's CCPs to implement new mechanisms consistent with international guidance to fully observe the standards.

### 1.2. Recovery planning objectives

ASX has built a world class financial market infrastructure that is tailored for the Australian financial markets. ASX's central counterparty clearing services for the ASX cash equities and ETO markets, and the ASX 24 futures and A\$ OTC interest rate derivatives markets, are key components of that infrastructure. The objectives of ASX's proposed enhancements to the crisis management capabilities of its CCPs are to achieve compliance with domestic and international standards for recovery of financial market infrastructure, to give ASX's customers the legal certainty they need to continue to use ASX's clearing services with confidence, and for ASX's CCPs to remain internationally competitive.

In developing the straw man recovery proposals presented in this Consultation Paper, ASX has sought to:

- maximise the 'recoverability' of each CCP, by providing appropriate incentives for non-defaulting clearing participants to manage-down the risk they bring to the CCP in a crisis and assist the CCP in restoring a matched book;
- empower the CCP to move quickly to manage a situation where it cannot restore a matched book, or where estimated close-out losses exceed the loss allocating capacity of standard 'recovery tools';
- allow clearing participants to limit their financial exposure to the CCP in a crisis by resigning, but without creating incentives to 'rush for the exit';
- give certainty to clearing participants and their customers on their potential financial exposure to the CCP's recovery tools; and
- minimise any increase in the regulatory capital or other costs of clearing, for clearing participants and their customers.

ASX specifically seeks customer feedback on whether its straw man recovery proposals achieve these objectives.

ASX has reviewed the recovery toolkits of a number of offshore CCPs, including some that have already revised their operating rules to comply with draft international guidance for recovery planning. The results of ASX's review are presented in this Consultation Paper. In developing its straw man proposals, ASX has sought to balance international 'best practice' or trends with consideration of the relatively small and concentrated nature of Australian cash equity and derivative markets and the significant capital the ASX CCPs have in their default funds relative to international peers.

### 1.3. Scope

This Consultation Paper relates only to the introduction or enhancement of recovery tools that are to be integrated into the operating rules of ASX's CCPs. The recovery tools under discussion are those that are required to enable the CCPs to address fully any credit losses or liquidity shortfalls they may face as a result of clearing participant default, and to replenish their default funds following such events.

The following matters are outside the scope of this Consultation Paper:

- **General business losses of ASX's CCPs:** ASX will conduct a separate consultation, at a later date, on the allocation of general business losses of the CCPs, such as investment counterparty default loss;
- **General business losses of ASX's securities settlement facilities:** ASX will consider whether there is a need for enhancements to the operating rules of the securities settlement facilities (ASX Settlement and Austraclear) to address general business losses in light of the forthcoming international guidance on recovery planning. (As separate legal entities, the clearing activities of ASX's CCPs are separate from the activities conducted by the rest of the ASX Group, including the securities settlement facilities);
- **Intra-group CCP recapitalisation processes:** ASX is required by the Reserve Bank of Australia to review and integrate CCP recapitalisation processes with ASX's broader recovery planning arrangements.<sup>1</sup> Those processes may involve arrangements between the CCPs and other members of the ASX Group, but will not be documented in the CCPs' operating rules. As the focus of this Consultation Paper is on recovery tools that will be integrated into the CCPs' operating rules, any such intra-group recapitalisation arrangements are outside the scope of this Consultation Paper. The CCPs will be required to continue to comply with their regulatory obligations for maintenance of default funds following a recovery situation, including having a material amount of 'skin in the game'.

The straw man proposals outlined in this Consultation Paper are not definitive proposals. The straw man proposals are intended to promote discussion with customers and to elicit feedback that reveals potential improvements or unintended consequences. ASX will take customer feedback into account in formulating its final proposals, which may differ from those presented in this Consultation Paper.

ASX will formulate draft operating rule amendments to give legal effect to the CCPs' new recovery toolkits, taking into account input received in response to this Consultation Paper. ASX expects to release the draft operating rule amendments for comment in Q1 2015.

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<sup>1</sup> 2013/14 Assessment of ASX Clearing and Settlement Facilities, Reserve Bank of Australia (September 2014), page 47.

#### 1.4. Who should read this document?

The introduction of comprehensive recovery tools has the potential to affect customers in a variety of ways, including the level of their potential financial exposure to ASX's CCPs, the resilience of the CCPs in a crisis, the regulatory capital cost of clearing, and compliance with bank prudential rules with respect to incurring open-ended liabilities. ASX encourages its clearing participants and their institutional clients (such as ADIs, fund managers, insurers and superannuation trustees) to read and respond to this Consultation Paper.

#### 1.5. Consultation questions and responses

Consultation questions are set out in Schedule 7. ASX specifically seeks customer input on whether the recovery tools included in the straw man recovery proposals, which have been adopted by CCPs in offshore markets, are likely to be effective or may have unintended consequences in Australian markets.

#### 1.6. Consultation period

Responses to this Consultation Paper should be submitted to ASX by 7 November 2014. ASX welcomes opportunities for bilateral discussions with interested parties. ASX contacts are listed on page 2.

#### 1.7. Frequently used terms

Terms that are frequently used in this Consultation Paper are defined in Schedule 1.

## 2. Background and regulatory context

### 2.1. Role of CCPs

CCPs play an important role in reducing systemic risk. They mitigate counterparty credit risk by standing between the counterparties to financial market transactions and performing the obligations that each counterparty has to the other. In normal circumstances, the CCP has a 'matched book' and is not exposed to market risk.

However, if a clearing participant defaults on its obligations to the CCP, the CCP must perform those obligations and may incur losses as a result. To minimise the exposure that a CCP may have if a clearing participant defaults, CCPs implement a range of risk management controls. Clearing participants are required to collateralise their obligations to the CCP, through the lodgement of 'initial margin' to cover potential adverse movements in market prices in the event of the clearing participant's default. CCPs maintain additional pre-funded financial resources ('default funds') to meet potential losses that may be incurred in excess of a defaulting clearing participant's initial margin. The size and composition of the default funds of ASX's CCPs are shown in Schedule 2. The ASX CCPs' funded capital contributions to their respective default funds is significantly greater, in absolute terms and as a proportion of total default funds, than the contributions of all of their international peers reviewed by ASX.

Initial margin and default fund resources are designed to provide a high level of confidence that the CCP will have sufficient available financial resources to absorb losses from clearing participant default in stressed market conditions. However, there may be extreme circumstances in which the losses from clearing participant default exceed the financial resources available to the CCP. In those circumstances, the CCP would become insolvent. Domestic and international standards have been introduced, or are being developed, to avoid that outcome and to address the systemic and moral hazards associated with CCPs becoming 'too big to fail'.

### 2.2. Australian standards for FMI recovery

In December 2012, the Reserve Bank of Australia (RBA) determined new Financial Stability Standards for Central Counterparties (FSS). The FSS are based on the CPMI-IOSCO Principles for Financial Market Infrastructures.

The FSS require domestically licensed CCPs, such as ASX Clear and ASX Clear (Futures), to establish explicit rules and procedures to support the actions they would take in extreme stress scenarios to continue to provide critical services and restore their financial viability (referred to as 'recovery'). Those rules and procedures ('recovery tools') must:

- address fully any credit losses the CCP may face as a result of any individual or combined default among its clearing participants, including how any potentially uncovered credit losses would be allocated (Standard 4.8);
- address any unforeseen and potentially uncovered liquidity shortfalls (Standard 7.9); and
- indicate the CCP's process to replenish any financial resources and liquidity resources that the CCP may employ during a stress event so that it can continue to operate in a safe and sound manner (Standards 4.8 and 7.9).

The RBA requires these recovery tools to address very extreme scenarios under which the CCP's financial resources are insufficient to cover credit losses or payment obligations following a clearing participant default, and to be consistent with international guidance on recovery planning, outlined below.<sup>2</sup>

### 2.3. International standards for FMI recovery

Draft guidance developed by CPMI-IOSCO on the recovery of financial market infrastructure was released in August 2013. The draft guidance discusses potential recovery tools that CCPs may adopt to address uncovered credit losses and liquidity shortfalls, and to replenish default funds following clearing participant default and considerations that should be taken into account when selecting and implementing those tools. A summary of the potential recovery tools identified by CPMI-IOSCO to address uncovered credit losses following clearing participant default, is set out in Schedule 4.

The CPMI-IOSCO draft guidance states that recovery tools should:

- be comprehensive – the set of tools should comprehensively address how the CCP would continue to provide critical services in relevant scenarios;
- be effective – each tool should be timely, reliable and have a strong legal basis;
- be transparent, measurable and controllable;
- create appropriate incentives for risk management; and
- minimise negative impact on direct and indirect participants and the financial system more broadly.

CPMI-IOSCO is expected to publish its final guidance in mid October 2014. ASX has developed the straw man proposals presented in this Consultation Paper having regard to the draft guidance, which remains subject to change. The release of final guidance may require changes to the straw man proposals presented in this Consultation Paper.

### 2.4. Australian FMI resolution regime

The Australian Treasury is developing legislative proposals for an FMI resolution regime consistent with international standards. 'Resolution' refers to a public authority taking control of a distressed CCP to either return it to viability or facilitate its orderly wind-down. The Australian FMI resolution regime is expected to:

- be modelled on the statutory management framework for authorised deposit-taking institutions under the Banking Act 1959 (Cth);
- give the resolution authority power to enforce recovery measures contained in an FMI's operating rules where the FMI is unable to execute those measures itself; and
- provide ancillary powers to pursue other means of maintaining continuity of service (for example, transfer of operations and changes in governance).

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<sup>2</sup> *Recovery and Resolution of Central Counterparties*, RBA Bulletin December Quarter 2013, page 48.

FMI recovery plans must be consistent with the applicable resolution regime. The release of draft legislation for FMI resolution may require changes to the straw man proposals presented in this Consultation Paper.

## 2.5. Bank capital requirements for exposures to CCPs

In April 2014 the Basel Committee on Banking Supervision (BCBS) published a revised and final policy framework for the capital treatment of bank exposures to CCPs. The final standard will apply as of 1 January 2017. Until that time, the interim capital requirements, published in July 2012, remain in effect.

A CCP's selection of recovery tools, and the way the tools are implemented, can have implications for banks' regulatory capital cost of clearing. While clearing participants should rely on their own analysis, ASX does not believe the straw man recovery proposals presented in this Consultation Paper would materially increase the regulatory capital cost of clearing for clearing participants who are subject to bank capital supervision.<sup>3</sup> ASX seeks customer feedback on the validity of this conclusion. The conclusion is based on ASX's review of BCBS's interim and final rules only, and does not take into account differences between jurisdictions in the timing of adoption or implementation of the interim and final rules, or potentially differing interpretations by national banking regulators.

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<sup>3</sup> ASIC and the RBA have confirmed publicly that they apply domestic regulations that are consistent with the CPMI-IOSCO Principles for Financial Market Infrastructures to domestically licensed clearing and settlement facilities, including ASX Clear and ASX Clear (Futures). On the basis of that advice, the Australian Prudential Regulation Authority has confirmed publicly that it considers each of ASX Clear and ASX Clear (Futures) to meet the criteria for a 'Qualifying CCP' (or 'QCCP') as defined under Prudential Standard APS 112 Capital Adequacy: Standardised Approach to Credit Risk (APS112). The QCCP eligibility criteria prescribed by APS112 are consistent with those applicable under the Basel III regulatory framework for banks. The Australian regulators' public statements can be found at <http://www.cfr.gov.au/publications/member-publications/pdf/letter-qccp-status-asic-rba-to-apra.pdf> and <http://www.cfr.gov.au/publications/member-publications/pdf/letter-qccp-status-apra-response.pdf>.



### 3. Recovery tools

#### 3.1. Existing recovery tools of ASX's CCPs

Schedule 3 sets out a high level overview of the clearing participant default-related recovery tools that ASX Clear and ASX Clear (Futures) already have.

In summary:

- ASX Clear has power to call emergency assessments of up to \$300m in aggregate (capped at \$30m per clearing participant) per default, offsetting transaction arrangements to manage liquidity for cash market settlements and a partial termination power (for derivatives only);
- ASX Clear (Futures) has a partial termination power (for exchange traded derivatives only);
- neither CCP has the power to impose variation margin gain haircuts or replenishment obligations on clearing participants.

Amendments to the operating rules of both CCPs will therefore be needed to achieve regulatory compliance with recovery standards and international guidance.

#### 3.2. International menu of clearing participant default loss allocation tools

Schedule 4 sets out an overview of the menu of clearing participant default loss allocation tools discussed in the CPMI-IOSCO draft guidance, together with a non-exhaustive list of pros and cons associated with those tools. More detailed discussion of the recovery tools can be found in the CPMI-IOSCO draft guidance<sup>4</sup> as well as commentaries by the Reserve Bank of Australia<sup>5</sup> and the Bank of England<sup>6</sup>.

#### 3.3. International CCP comparison

ASX has reviewed and summarised the recovery-related operating rules of 8 other CCPs, in Asia, the United States and Europe. Some of the CCPs (mainly those serving futures and OTC derivative markets) have recently revised their operating rules to align with CPMI-IOSCO draft guidance. Others have yet to do so. This is due in part to the fact that the timing of adoption and implementation of recovery standards is not uniform among jurisdictions, and the CPMI-IOSCO guidance has yet to be finalised.

A full copy of the review can be found on ASX's website (<http://www.asx.com.au/services/clearing/ccp-recovery-and-resolution.htm>).

<sup>4</sup> Consultative report – Recovery of financial market infrastructures, CPMI IOSCO August 2013 (<http://www.bis.org/cpmi/publ/d109.pdf>).

<sup>5</sup> Recovery and Resolution of Central Counterparties, RBA Bulletin December Quarter 2013 (<http://www.rba.gov.au/publications/bulletin/2013/dec/5.html>).

<sup>6</sup> Central counterparty loss-allocation rules, Bank of England Financial Stability Paper No. 20 (April 2013) ([http://www.bankofengland.co.uk/research/Documents/fspapers/fs\\_paper20.pdf](http://www.bankofengland.co.uk/research/Documents/fspapers/fs_paper20.pdf)).

While there are differences in the detailed rules for application of recovery tools, the general trend among the CCPs reviewed by ASX is that:

- derivatives CCPs which have revised their operating rules to align with CPMI-IOSCO draft guidance have implemented the following recovery tools (further detail is set out in Schedule 6):
  - **capped emergency assessments**, with different caps for single defaults and multiple defaults occurring within a defined time period;
  - **variation margin gains haircutting (VMGH)**, with pro-rata haircutting of variation margin gains based on an assessment of whether available resources are insufficient to meet outgoing variation margin;
  - **complete termination**, as a last resort to re-establish a matched book (no partial termination, invoicing back or mandatory allocation), with pro-rata haircutting of termination payments to the extent the CCP has insufficient resources available;
  - **mandatory replenishment** of clearing participant default fund contributions after the expiration of a 'cooling off period' during which the clearing participant may resign;
- cash market CCPs which have not revised their operating rules to align with CPMI-IOSCO draft guidance have the following recovery tools:
  - **emergency assessments**, with a cap for single defaults but, in some cases, potentially uncapped exposure for multiple defaults;
  - limited or no powers to **terminate**, compulsorily settle or forcibly allocate open positions;
  - **mandatory replenishment** of clearing participant contributions immediately upon depletion of the default fund without the ability to resign to avoid replenishment,

and LCH EquityClear, the only cash market CCP reviewed which has revised its operating rules to align with CPMI-IOSCO draft guidance, has adopted a similar recovery toolkit to derivatives CCPs (in particular, LCH SwapClear) of **capped emergency assessments, complete termination and mandatory replenishment**. However, instead of variation margin gains haircutting, if there are insufficient resources available on any day to make a payment due on that day, it applies a 'loss distribution charge' payable by all remaining participants, proportionate to their respective prefunded default fund contributions, to cover the shortfall. Further detail is set out in Schedule 5.

## 4. ASX Clear straw man

*The straw man proposal outlined below is not a definitive proposal. The straw man proposal is intended to promote discussion with customers and to elicit feedback that reveals potential improvements or unintended consequences. ASX will take customer feedback into account in formulating its final proposal, which may differ from the straw man presented below.*

### 4.1. Cleared products

ASX Clear is ASX's central counterparty for all ASX-listed shares, structured products and warrants, as well as ASX-listed single stock and equity index options and equity index futures. Trades executed on ASX Trade, or the trading platform of an approved market operator (currently Chi-X Australia), are submitted to ASX Clear for registration.

### 4.2. Straw man recovery proposal

ASX's straw man recovery proposal for ASX Clear involves the introduction of complete termination and mandatory replenishment powers, amendment of the existing emergency assessment power and retention of the existing offsetting transaction arrangements and partial termination power. VMGH is not proposed. Consideration is being given to whether haircutting of other payment obligations is required to manage liquidity shortfalls for derivatives. A summary of some of the key considerations guiding the selection (exclusion) of these tools for ASX Clear is given in the table below.

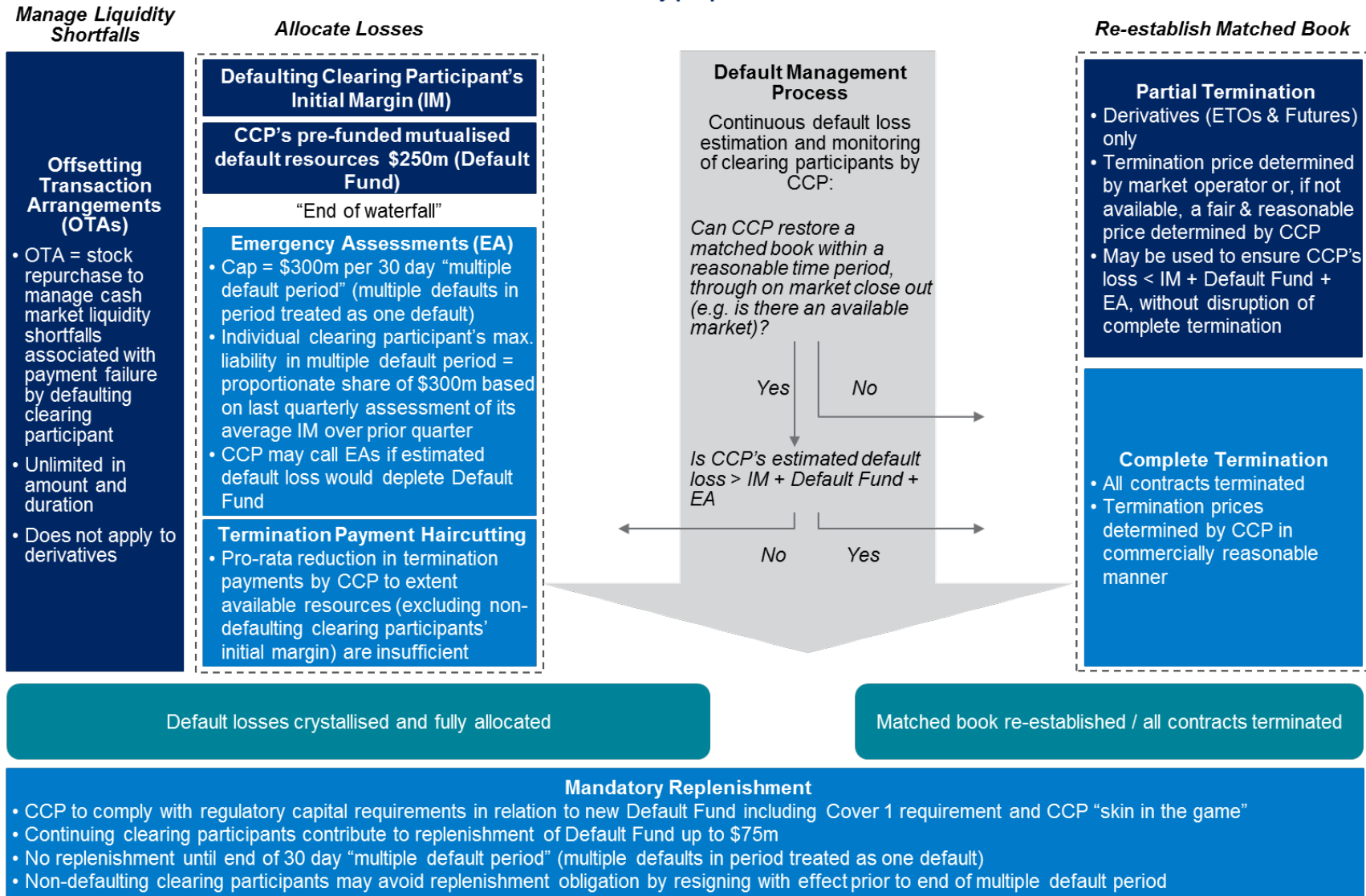
Recovery tool	Considerations
Emergency assessments (existing tool, to be amended)	<p>Calculation/size of individual clearing participant assessment liabilities/caps, and ASX Clear's ability to make second round calls, to be reviewed. Issues for consideration include:</p> <ul style="list-style-type: none"> <li>the risk for ASX Clear that any shortfall in the emergency assessment call resulting from the existing caps for individual clearing participants would fall on smaller clearing participants (via second round calls), who may be less able to pay. Increasing the individual clearing participant assessment caps would ensure a fairer apportionment of emergency assessment calls across clearing participants;</li> <li>an improved method to identify the risk being introduced to the CCP for the purposes of calculating an individual clearing participant's share of the emergency assessment call.</li> </ul>
Offsetting transaction arrangements (existing tool, to be retained)	<p>Assists in managing liquidity shortfalls for cash market settlements while positions of the defaulting clearing participant are closed out through the default management process. Offsetting transaction arrangements do not apply to derivatives.</p> <p>Tools to manage liquidity shortfalls for derivatives transactions (including payment haircutting and deferred settlement) are being considered.</p>

Recovery tool	Considerations
VMGH ( <i>not proposed</i> )	ASX Clear does not conduct variation margining in the same way for all product classes. For some product classes (e.g. single stock and index LEPOs), variation margin collected by ASX Clear is passed through to the clearing participant with the mark to market gain, while for other product classes it is either credited against the initial margin obligation of the clearing participant with the mark to market gain (e.g. some cash market products) or not passed on at all (e.g. some single stock ETOs). ASX's initial view is that VMGH is unlikely to be an appropriate recovery tool for ASX Clear, due to potentially different impacts on customers active in different product classes, as well as undue complexity of implementation.
Partial termination ( <i>existing tool, to be retained</i> )	Empowers ASX Clear to terminate the smallest subset of derivatives positions that would enable it to restore a matched book, which is a less disruptive alternative to complete termination.
Complete termination ( <i>new tool, to be added</i> )	<p>Empowers ASX Clear to move quickly to manage a situation where it cannot restore a matched book within a reasonable time, or where estimated close-out losses exceed the loss allocating capacity of emergency assessments.</p> <p>Avoids insolvency of ASX Clear by reducing termination payments to clearing participants to the extent ASX Clear's resources are insufficient.</p> <p>ASX Clear may request voluntary payments from participants to apply against uncovered losses before proceeding to termination.</p>
Mandatory replenishment ( <i>new tool, to be added</i> )	<p>Defines the baseline replenishment obligation to be shared among those clearing participants who choose to continue to participate in the clearing facility post-recovery. The default fund requirement of ASX Clear after a major default event has triggered recovery powers (i.e. a major market dislocation) could be materially less than the existing requirement. ASX Clear may also use interim measures, such as changes to margin rates or stress test exposure limits, to manage the size of the default fund.</p> <p>ASX Clear must continue to comply with regulatory requirements post-recovery. Those regulatory requirements include that the default fund is sufficient to meet the required standard, a material proportion of the fund consists of ASX Clear's own resources, and a sufficient proportion of those resources are 'first loss' in the waterfall.</p> <p>If the business is no longer viable, ASX Clear may wind down the business in an orderly manner (subject to the right of a resolution authority to take control under any future resolution regime).</p>

The chart below summarises the straw man recovery proposal for ASX Clear, including a high-level 'decision tree' that would guide the application of the proposed recovery tools. A reasonable degree of flexibility in ASX Clear's ability to invoke the recovery tools is considered necessary if ASX Clear is to be empowered to manage the extraordinary circumstances in which its recovery plan would be triggered (i.e. where all standard risk management tools have failed, or are likely to fail, to avoid the complete erosion of the default fund).

Further details of how the proposed recovery tools could be implemented, including triggers for use, basis of calculation and caps on liability ('straw man mechanics'), are set out in Schedule 5.

### ASX Clear: recovery proposal for consultation



Proposed new/amended recovery powers
Existing financial resources/powers
Existing default management process (e.g. MF Global)

## 5. ASX Clear (Futures) straw man

*The straw man proposal outlined below is not a definitive proposal. The straw man proposal is intended to promote discussion with customers and to elicit feedback that reveals potential improvements or unintended consequences. ASX will take customer feedback into account in formulating its final proposal, which may differ from the straw man presented below.*

### 5.1. Cleared products

ASX Clear (Futures) is ASX's central counterparty for all interest rate, equity index and commodity futures and options traded on ASX Trade24 and all eligible OTC interest rate derivatives submitted via an approved trade source system.

### 5.2. Straw man recovery proposal

ASX's straw man recovery proposal for ASX Clear (Futures) involves the introduction of emergency assessments, VMGH, complete termination and mandatory replenishment powers, and amendment of the existing partial termination power. A summary of some of the key considerations guiding the selection of these tools for ASX Clear (Futures) is given in the table below.

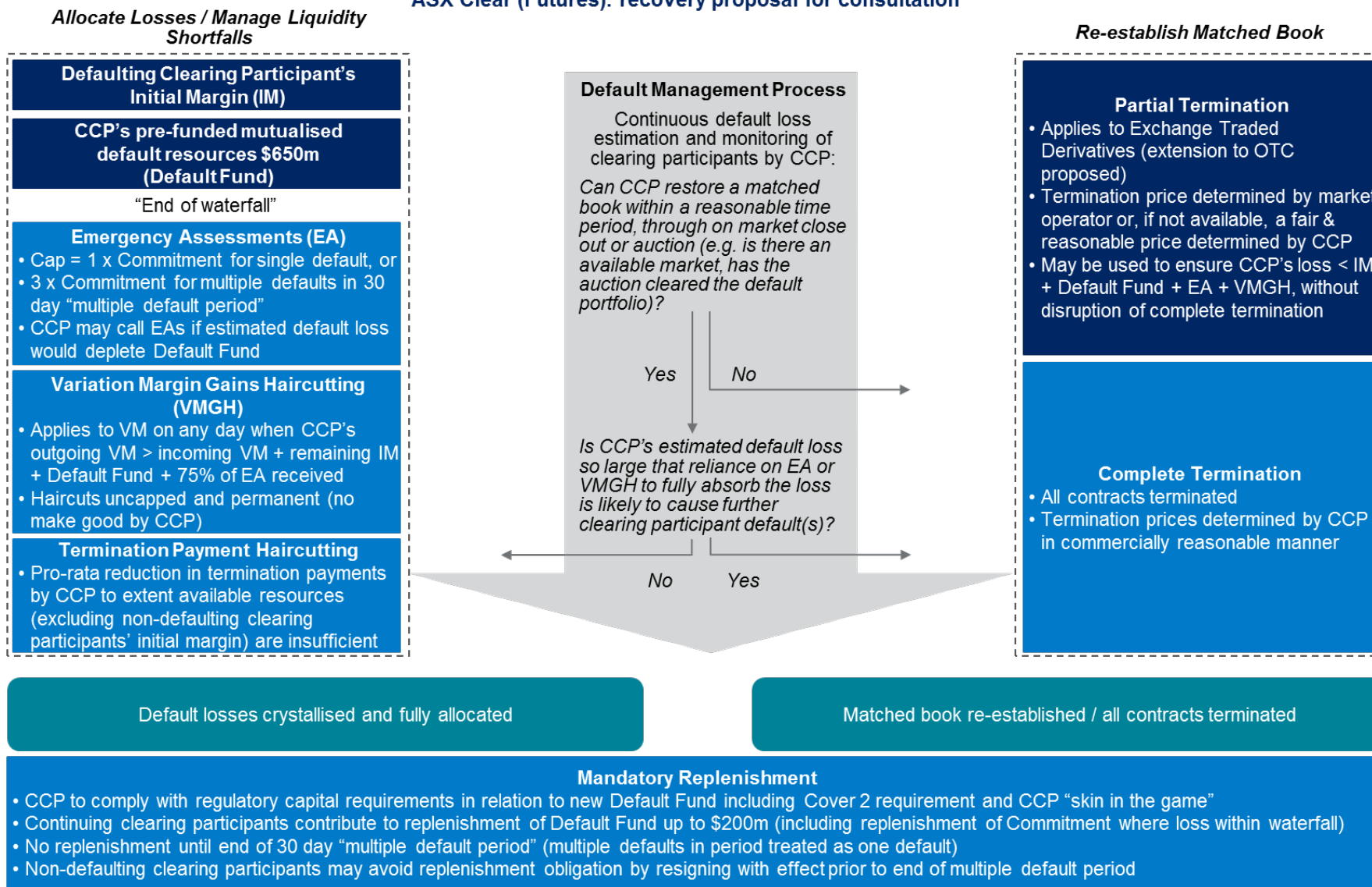
Recovery tool	Considerations
Emergency assessments (new tool, to be added)	Impact of emergency assessments across non-defaulting clearing participants may be more predictably distributed than VMGH. Avoids exclusive reliance on VMGH.
VMGH (new tool, to be added)	<p>Incentivises non-defaulting clearing participants to manage-down the risk they bring to ASX Clear (Futures) in a crisis and assist it to restore a matched book.</p> <p>Position-based tool, so impact on non-defaulting clearing participants is measurable and should be controllable.</p> <p>Could provide valuable support to ASX Clear (Futures) to address unforeseen liquidity shortfalls.</p> <p>More comprehensive if it includes a broader range of payment obligations (e.g. coupon payments and settlement payments).</p> <p>Mitigates performance risk associated with exclusive reliance on emergency assessments.</p> <p>Avoids or delays use of partial termination or complete termination powers.</p>
Partial termination (existing tool, to be amended)	<p>Empowers ASX Clear (Futures) to terminate the smallest subset of positions that would enable it to restore a matched book, which is a less disruptive alternative to complete termination.</p> <p>Extension to OTC derivatives and removal of settlement caps is proposed.</p>
Complete termination (new tool, to be added)	<p>Empowers ASX Clear (Futures) to move quickly to manage a situation where it cannot restore a matched book within a reasonable time, or where estimated close-out losses exceed the loss allocating capacity of emergency assessments and VMGH.</p> <p>Avoids insolvency of ASX Clear (Futures) by reducing termination payments to clearing participants to the extent ASX Clear (Futures)'s resources are insufficient.</p> <p>ASX Clear (Futures) may request voluntary payments from participants to apply against uncovered losses before proceeding to termination.</p>

Recovery tool	Considerations
Mandatory replenishment <i>(new tool, to be added)</i>	<p>Defines the baseline replenishment obligation to be shared among those clearing participants who choose to continue to participate in the clearing facility post-recovery.</p> <p>The default fund requirement of ASX Clear (Futures) after a major default event has triggered recovery powers (i.e. a major market dislocation) could be materially less than the existing requirement. ASX Clear (Futures) may also use interim measures, such as changes to margin rates or stress test exposure limits, to manage the size of the default fund.</p> <p>ASX Clear (Futures) must continue to comply with regulatory requirements post recovery. Those regulatory requirements include that the default fund is sufficient to meet the Cover 2 standard, a material proportion of the fund consists of ASX Clear (Futures)'s own resources, and a sufficient proportion of those resources are 'first loss' in the waterfall.</p> <p>If the business is no longer viable, ASX Clear (Futures) may wind down the business in an orderly manner (subject to the right of a resolution authority to take control under any future resolution regime).</p>

The chart below summarises the straw man recovery proposal for ASX Clear (Futures), including a high-level 'decision tree' that would guide the application of the proposed recovery tools. A reasonable degree of flexibility in ASX Clear (Futures)'s ability to invoke the recovery tools is considered necessary if ASX Clear (Futures) is to be empowered to manage the extraordinary circumstances in which its recovery plan would be triggered (i.e. where all standard risk management tools have failed, or are likely to fail, to avoid the complete erosion of the default fund).

Further details of how the proposed recovery tools could be implemented, including triggers for use, basis of calculation and caps on liability ('straw man mechanics'), are set out in Schedule 6.

### ASX Clear (Futures): recovery proposal for consultation



Proposed new recovery powers
Existing financial resources/powers
Existing default management process (e.g. MF Global)



## 6. Next steps

ASX seeks customers' views on the straw man recovery proposals presented in this Consultation Paper. Respondents are requested to address the questions in Schedule 7. Responses should be submitted to ASX by 7 November 2014. ASX welcomes opportunities for bilateral discussions with interested parties. ASX contacts are listed on page 2.

ASX intends to conduct a second formal round of consultation, in Q1 2015, on draft operating rule amendments to give legal effect to the CCPs' new recovery toolkits, taking into account input received in response to this Consultation Paper. Following customer input and finalisation of the operating rule amendments, ASX will submit the amendments to ASIC and the Reserve Bank for formal regulatory clearance and Ministerial approval. ASX is expected by its domestic regulators to have implemented the necessary enhancements to its operating rules by mid 2015.

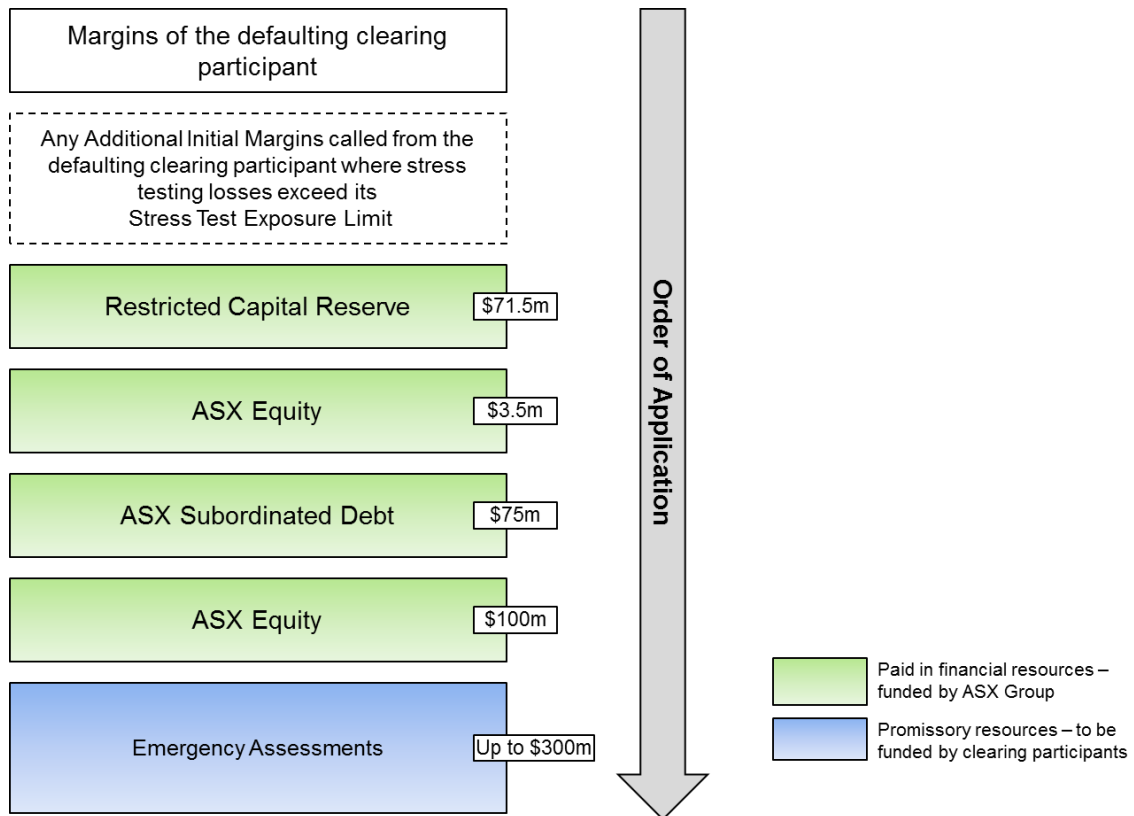
## Schedule 1: Frequently used terms

Terms that are frequently used in this Consultation Paper are defined below.

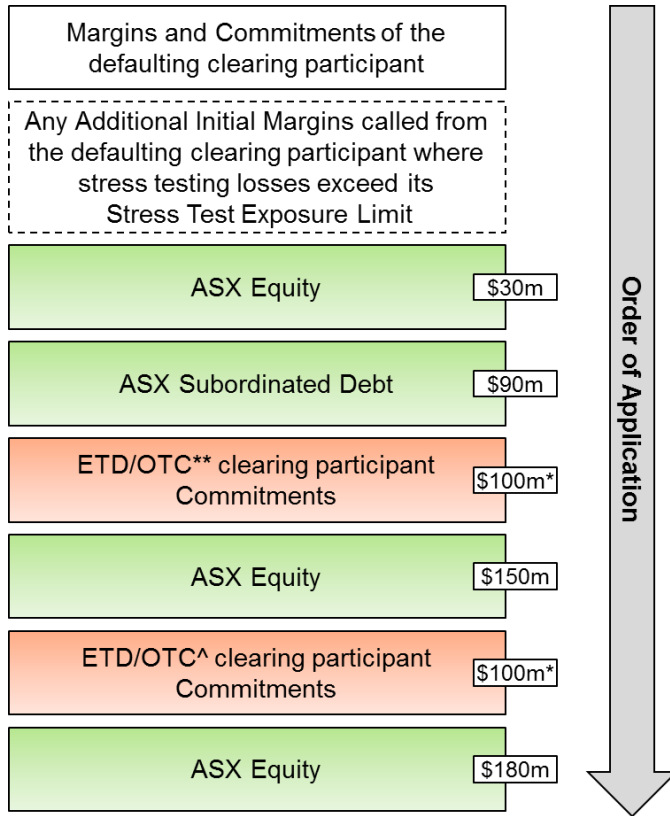
Term	Meaning
ASX Clear	ASX Clear Pty Limited, licensed operator of a clearing facility for ASX-listed cash market products and equity options, and a wholly owned subsidiary of ASX Limited
ASX Clear (Futures)	ASX Clear (Futures) Pty Limited, licensed operator of a clearing facility for ASX 24 futures and eligible OTC interest rate derivatives, and a wholly owned subsidiary of ASX Limited
CCP	A central counterparty
Clearing participant	A direct participant in a CCP. Also known as a 'clearing member'
Commitment	A pre-funded cash contribution by a clearing participant to the default fund of ASX Clear (Futures)
Contribution	A pre-funded cash contribution by a clearing participant to the default fund of ASX Clear
CPMI-IOSCO	A joint working group of the Committee on Payments and Market Infrastructures (CPMI) and the Technical Committee of the International Organization of Securities Commissions (IOSCO)
Default fund	Financial resources maintained by a CCP to cover losses that it may incur in excess of initial margin on the default of a clearing participant. May comprise discrete tranches of financial resources funded by the CCP and/or clearing participants
Default waterfall	An alternate term for default fund (together with initial margin of the defaulting clearing participant), used with particular reference to the prescribed order of application of the discrete tranches of financial resources of the default fund
Emergency assessment	A cash call which the CCP may only use to meet default losses arising from a default declared prior to the call (i.e. not for replenishment of the default fund)
FMI	Financial market infrastructure. A CCP is an example of financial market infrastructure
FSS	Financial Stability Standards
IM	Initial margin
Mandatory replenishment	A cash call which the CCP may only use to meet default losses arising from a future default (i.e. not to meet default losses already incurred)
RBA	Reserve Bank of Australia
Recovery	Actions taken by a distressed CCP to return itself to financial soundness
Recovery tools	Legally enforceable powers of the CCP to effect its recovery, which fall into four main categories: tools to fully allocate losses, tools to address liquidity shortfalls, tools to restore a matched book, and tools to replenish financial resources
Resolution	Actions taken by a regulatory authority to return a distressed CCP to financial soundness or facilitate its orderly wind down
VM	Variation margin
VMGH	Variation margin gains haircutting

## Schedule 2: Default waterfalls of ASX's CCPs

### ASX Clear default waterfall



### ASX Clear (Futures) default waterfall



**Notes:**

- \* Less defaulting clearing participant Commitment
- \*\* ASX Clear (Futures) maintains \$100m in clearing participant Commitments for each of ETD and OTC. The amount of ETD and OTC Commitments applicable in this tranche is based on the proportion of the defaulting clearing participant's average initial margin related to ETD and OTC during the 90 days prior to default.
- ^ Any remaining ETD and OTC Commitments are applicable proportionately in this tranche.

Paid in financial resources – funded by ASX Group  
 Paid in financial resources – funded by clearing participants

## Schedule 3: Existing recovery tools of ASX's CCPs

### Part A: Overview

The following table sets out a high level overview of the clearing participant default-related recovery tools that ASX Clear and ASX Clear (Futures) already have. Further details of these tools are provided in Parts B and C of this Schedule.

Recovery tools	ASX Clear (refer Part B below)	ASX Clear (Futures) (refer Part C below)
<b>Tools to allocate uncovered credit losses</b>		
Cash calls	Yes, emergency assessments capped at \$300m (\$30m per clearing participant) per default	No
VMGH	No	No
Initial margin haircutting	No	No
<b>Tools to restore a matched book</b>		
Contract termination/tear-up	Partial termination of derivatives only (excludes cash equity transactions)	Partial termination of futures and options only (excludes OTC and cross-margined futures). Capped for a clearing participant at 2x Futures Commitment per default
<b>Tools to address uncovered liquidity shortfalls</b>		
Obtain liquidity from third party institutions	No	No
Obtain liquidity from non-defaulting clearing participants	Offsetting transaction arrangements for cash market settlements only	No
<b>Tools to replenish financial resources</b>		
Cash calls	No, a request for Contributions does not create a debt and a clearing participant's failure to pay is not a breach of the operating rules (however it may be suspended)	No, a request for Commitments does not create a debt and a clearing participant's failure to pay is not a breach of the operating rules (however it is required to resign)

## Part B: ASX Clear

Set out below is a summary of the existing clearing participant default-related recovery tools of ASX Clear, as noted in the overview in Part A of this Schedule.

### *Emergency assessments (Rule 8.2)*

- ASX Clear may call for funds from non-defaulting clearing participants by way of emergency assessment to cover a clearing loss;
- The maximum emergency assessment per default across all non-defaulting clearing participants is \$300m (twice the 'Risk Resource Requirement' of \$150m);
- An individual clearing participant's emergency assessment liability is:
  - calculated by reference to the clearing participant's average unsettled positions over the three months prior to the default;
  - capped at 10 per cent of twice the Risk Resource Requirement in force at the time the clearing loss arises (currently \$30m) per default;
- As the above caps apply per default, emergency assessments up to the caps can be called each time there is a clearing participant default, irrespective of the time elapsed between defaults;
- If a clearing participant does not pay, ASX Clear may call an additional emergency assessment for the unpaid amount from other clearing participants (subject to individual caps noted above);
- ASX Clear must give such notice of assessment as is reasonable in the circumstances;
- ASX Clear may call an interim emergency assessment based on an estimate of what it expects the clearing loss will be, and without first having utilised all other default funds, but must subsequently adjust the emergency assessment to reflect the apportionment of the final certified clearing loss;
- Emergency assessments may only be called to cover a clearing loss and cannot be used to replenish the default fund;
- An emergency assessment constitutes a debt due from the clearing participant, regardless of whether the clearing participant subsequently resigns.

### *Partial termination (Rules 15.2.1(g) and 17)*

- ASX Clear may terminate derivatives contracts of a non-defaulting clearing participant if ASX Clear is unable to close out positions of a defaulting clearing participant on market because there is not an available market;
- The power applies to exchange traded futures and options contracts only;
- In exercising its discretion to select a non-defaulting clearing participant whose trade is to be terminated, ASX Clear will have regard as far as practicable to the total number of derivatives contracts in other positions then held by all other clearing participants;
- The termination price will be a market price notified by the market operator, if available, or otherwise a fair and reasonable price determined by ASX Clear.

### *Offsetting transaction arrangements (OTAs) (ASX Settlement Rule 10.11.7A)*

- OTAs apply to cash equity transactions only.
- If there is a settlement payment shortfall as a result of a clearing participant's default, ASX Clear can either:
  - elect at its discretion to inject available financial resources to enable settlement to proceed; or
  - enter into OTAs with non-defaulting clearing participants who were due to deliver stock and receive funds, which effectively reschedules settlement until the following day. The settlements to be managed in this way are identified by a 'back-out algorithm', which automatically 'fails' trades of the defaulting clearing participant to the extent necessary to remove the settlement payment shortfall;
- ASX Clear enters into OTAs with the affected non-defaulting clearing participants as follows:
  - the first leg of the OTA creates obligations which are equal but opposite to the failed trades, which results in settlement of the failed trades on the scheduled settlement day;
  - the second leg creates obligations equal to the failed trades which are scheduled for settlement the next day;
- OTAs are rolled on successive days until ASX Clear is able to meet its payments obligations under the second leg of the OTA through funds received from the sale of shares on market.

### **Part C: ASX Clear (Futures)**

Set out below is a summary of the existing clearing participant default-related recovery tools of ASX Clear (Futures), as noted in the overview in Part A of this Schedule.

### *Partial termination (referred to as "compulsory settlement") (Futures Rules 72.1(h), 82 and 102)*

- Does not apply to OTC contracts or cross-margined futures;
- May only be applied after using all possible endeavours to close out the open positions or otherwise cover the CCP's liability in respect of the open positions and having consulted with the Risk Consultative Committee;
- In respect of each default, the maximum liability of each clearing participant in respect of partial termination is twice its Futures Commitment immediately prior to the default;
- The settlement price will be determined by the relevant exchange pursuant to its operating rules or failing any determination, at a price which in the opinion of ASX Clear (Futures) is fair and reasonable;
- ASX Clear (Futures) may identify non-defaulting clearing participants to participate in partial termination in its absolute discretion having regard as far as practicable to the proportion of open contracts held by clearing participants.

## Schedule 4: International menu of clearing participant default loss allocation tools

Set out below is an overview of the menu of clearing participant default-related loss allocation tools included in the CPMI-IOSCO draft guidance, together with a non-exhaustive list of pros and cons associated with those tools.

Further discussion of these recovery tools can be found in the CPMI-IOSCO draft guidance at <http://www.bis.org/cpmi/publ/d109.pdf>.

### (a) Tools to allocate uncovered credit losses

#### *Cash calls (emergency assessments)*

Emergency assessments are obligations of non-defaulting clearing participants to provide additional cash contributions at the request of the CCP to meet uncovered default losses. These obligations are typically not pre-funded and must be met within a specified period after the assessment (call) is made by the CCP.

Pros	Cons
Mutualises loss across all non-defaulting clearing participants	Clearing participants may be unwilling or unable to pay
Reduces need to use more extreme tools	May have a pro-cyclical effect, removing liquidity from market or causing further default
Transparent for clearing participants (if capped)	Not received until T+1

#### *Variation margin gains haircutting (VMGH)*

Many CCPs mark positions to market on a daily basis and collect variation margin (VM) from those clearing participants who have incurred a mark to market loss, which is passed through to those clearing participants who have accrued mark to market gains. Variation margin gains haircutting (or VMGH) allocates the CCP's loss on a defaulting clearing participant's portfolio by reducing pro-rata the amount of VM payable to clearing participants who have accrued mark to market gains, while continuing to collect in VM in full from those clearing participants who have accrued mark to market losses.

Pros	Cons
May replicate general insolvency outcome	Not suitable for all products (e.g. no daily exchange of variation margin)
Incentivises clearing participants to reduce exposure to CCP, which may assist CCP to restore a matched book	Not all unfunded losses are covered (e.g. a large premium required to effect close out or auction)
Does not create unlimited exposure to CCP, as clearing participant's maximum potential loss is the value of its VM gains since default	May have a disproportionate effect on some non-defaulting clearing participants (e.g. directional portfolios), increasing risk of further default
May assist CCP with liquidity management as well as loss allocation	Continued reliance may create uncertainty and incentive to exit CCP



### *Initial margin haircutting*

Initial margin is provided by clearing participants to cover potential adverse movements in market prices in the event of their own default. Initial margin haircutting allocates the CCP's loss on a defaulting clearing participant's portfolio by reducing pro-rata the initial margin balances of all non-defaulting clearing participants by an equivalent amount. Clearing participants whose initial margin is used would have an obligation to replenish it. Until it is replenished, initial margin haircutting may leave the CCP under collateralised against further defaults.

Pros	Cons
<p>Large pool of assets so has significant loss absorbing capacity</p> <p>More widely distributes the loss</p>	<p>Bank capital rules would require initial margin to be treated as a default fund contribution, which would significantly increase the regulatory capital cost of clearing</p> <p>Precludes bankruptcy remoteness of initial margin</p> <p>May create general disincentives to participation in CCP</p>

### **(b) Tools to restore a matched book**

#### *Termination*

Termination (or 'tear up') refers to the cash settlement and cancellation of contracts between the CCP and non-defaulting clearing participants. Termination may be either complete, where all contracts in the clearing facility are terminated, or partial, where the smallest subset of contracts that will return the CCP to a matched book is selected for termination.

Pros	Cons
<p>Caps the CCP's loss</p> <p>Complete termination replicates general insolvency outcome, but with greater speed and certainty</p> <p>Threat of complete termination may increase chances of recovery by incentivising default management participation by non-defaulting clearing participants (whereas partial termination may not)</p> <p>Partial termination restores matched book without financial system disruption caused by complete termination</p>	<p>Market disruption, particularly if complete termination, through loss of hedges and cost of replacement or risk of remaining unhedged</p> <p>Partial termination may have an impact on regulatory capital</p> <p>Losses/gains may be unpredictable</p>

## Schedule 5: ASX Clear straw man mechanics

*The straw man recovery proposal for ASX Clear, including the straw man mechanics outlined below, is not a definitive proposal. The straw man mechanics are intended to promote discussion with customers and to elicit feedback that reveals potential improvements or unintended consequences. ASX will take customer feedback into account in formulating its final proposals, which may differ from those presented in this Consultation Paper.*

This Schedule contains details of how recovery tools could be implemented under the straw man recovery proposal for ASX Clear, including triggers for use, basis of calculation and caps on liability ('straw man mechanics').

ASX has reviewed the recovery related operating rules of a selection of cash equity CCPs. A full copy of the review can be found on ASX's website (<http://www.asx.com.au/services/clearing/ccp-recovery-and-resolution.htm>). ASX's review was based on publicly available operating rules, and did not take into account policies, procedures or local laws. ASX does not represent that its international comparison is accurate, complete or current. Readers should rely on their own enquiries.

Of those CCPs reviewed, only LCH EquityClear has revised its operating rules to align with the new UK standards and CPMI-IOSCO draft guidance. Presented below is a comparison of the ASX Clear straw man with LCH EquityClear. The LCH EquityClear recovery tools are substantially aligned with those adopted by derivatives CCPs who have revised their rules (as set out in Schedule 6) except that LCH EquityClear does not apply variation margin gains haircutting. Instead, LCH EquityClear applies a 'loss distribution charge' to all remaining participants on any day where LCH has insufficient resources to cover any settlement amount it is required to pay.

### Offsetting transaction arrangements (existing tool, to be retained)

ASX Clear status quo	Straw man mechanics	LCH EquityClear comparison
Stock repurchase arrangements to manage cash market liquidity shortfalls associated with payment failure of defaulting clearing participant (see Schedule 3, Part B)	No change to status quo	Not available, but 'loss distribution charge' to provide liquidity to enable physical settlement of contracts

### Emergency assessments (existing tool, to be amended)

ASX Clear status quo	Straw man mechanics	LCH EquityClear comparison
Emergency assessments capped at \$300m (\$30m per clearing participant) per default Each clearing participant's assessment exposure is therefore capped at a very large amount, i.e. (number of clearing participants – 1) x \$30m	Cap at \$300m in total per 'multiple default period' of 30 days post completion of default management process, subject to extension for subsequent defaults within that period Increase in clearing participants' individual assessment caps to be considered (refer Section 4.2 of Consultation Paper)	Capped at 1x contribution for single default and payable for maximum of 3 defaults in any 6 month period

ASX Clear status quo	Straw man mechanics	LCH EquityClear comparison
Second round call (subject to cap) for any unpaid amount (due to another clearing participant's non-payment or cap breach)	Removal of second round call to be considered, subject to resolution of individual assessment caps	No
Clearing participant's share of emergency assessment based on average unsettled positions over 3 months prior to default	Change to IM based calculation	Calculated based on size of contribution at time of default
CCP may make interim assessments based on estimates of default loss (i.e. anywhere within default fund)	Callable in whole or part when loss reasonably expected to deplete default fund	Callable when loss expected to deplete fund by at least 25%
Payable with such notice as is reasonable	Payable within 24 hours or such later time approved by the CCP and able to be held for multiple default period	Payable next business day after call
Excess repaid at end of default period	No change to status quo	Excess emergency assessments repaid at end of multiple default period (i.e. used to cover loss not for replenishment)
CCP able to set off against amounts owing to CCP	No change to status quo	Yes, able to be set off against amounts owing to clearing participant

#### Partial termination (existing tool, to be retained)

ASX Clear status quo	Straw man mechanics	LCH EquityClear comparison
Termination of derivatives only (excludes cash equity transactions) to close out positions of defaulting clearing participant (see Schedule 3, Part B)	No change to status quo	Invoicing back by compulsory settlement to close out LCH EquityClear contracts of defaulting clearing participant
Triggered if there is no available market	Triggered where CCP considers appropriate to restore a matched book (e.g. is there an available market? can it be done within a reasonable time?)	N/A

### Complete termination (new tool, to be added)

Straw man mechanics	LCH EquityClear comparison
Triggered when restoration of a matched book within a reasonable time is not possible, or where CCP reasonably considers that its default loss may exceed defaulting clearing participant's IM + pre-funded mutualised default resources + emergency assessments	Triggered only as a last resort where the default loss, after implementation of assessments and loss distribution charge, is still expected to exceed available resources
All contracts (including deliverable contracts) to be cash settled	All contracts closed out
Termination prices determined by CCP in commercially reasonable manner with reference to market prices	Termination price is price used to carry out end of day margin run or, if not available, the last price used to calculate VM for the position
Pro-rata reduction of termination payments by CCP to the extent those payments exceed available resources (excluding initial margin of non-defaulting clearing participants)	Pro-rata reduction of termination payments by CCP to the extent those payments exceed available resources (excluding initial margin of non-defaulting clearing participants)
Before resorting to termination, CCP has discretion to allow clearing participants to voluntarily make payments to cover excess losses or terminate positions	Not available

### Mandatory replenishment (new tool, to be added)

Straw man mechanics	LCH EquityClear comparison
Continuing clearing participants to contribute up to \$75m in aggregate to new default fund immediately at end of multiple default period; CCP has power to scale up contributions subsequently to satisfy regulatory requirements	Continuing participants must contribute to new default fund. Default fund is scalable (based on largest Combined Loss Value over preceding 3 months) so new contribution depends on fund size determined by CCP
Calculation of individual clearing participant replenishment obligations based on relative IM of continuing participants pre-default	Not fixed by reference to pre default contribution as default fund is scalable as above
Replenishment obligation arises after 30 day 'multiple default period' (whether or not a quarter end)	Replenishment suspended during multiple default period, subject to replenishment to fund floor after default management process completes
Clearing participants may resign during multiple default period to avoid replenishment obligation (subject to all positions being closed out and other obligations satisfied)	Participants may resign during multiple default period (subject to close out of positions and any other conditions) to avoid replenishment subject to replenishment to fund floor after default management process completes
Replenished default fund only available to cover losses from future defaults not prior losses	Replenished default fund only available to cover losses from future defaults not prior losses
Amounts subsequently recovered from defaulting CP (if any) repaid pro-rata to participants/CCP in reverse order to default waterfall	Amounts subsequently recovered from defaulting CP (if any) repaid pro-rata to participants/CCP in reverse order to default waterfall

## Schedule 6: ASX Clear (Futures) straw man mechanics

*The straw man recovery proposal for ASX Clear (Futures), including the straw man mechanics outlined below, is not a definitive proposal. The straw man mechanics are intended to promote discussion with customers and to elicit feedback that reveals potential improvements or unintended consequences. ASX will take customer feedback into account in formulating its final proposals, which may differ from those presented in this Consultation Paper.*

This Schedule contains details of how recovery tools could be implemented under the straw man recovery proposal for ASX Clear (Futures), including triggers for use, basis of calculation and caps on liability ('straw man mechanics').

Also presented below is the general trend among derivatives CCPs internationally with respect to each recovery tool, based on ASX's review of the operating rules of a selection of such CCPs. A full copy of the review can be found on ASX's website (<http://www.asx.com.au/services/clearing/ccp-recovery-and-resolution.htm>). ASX's review was based on publicly available operating rules, and did not take into account policies, procedures or local laws. ASX does not represent that its international comparison is accurate, complete or current. Readers should rely on their own enquiries.

### Emergency assessments (new tool, to be added)

Straw man mechanics	International comparison
Capped for single default at 1x Commitment at time of default	Yes, at 1 - 3x contribution at time of default
Capped for multiple defaults at 3x Commitment over multiple default period	Yes, at 1 - 5.5x contribution at time of default
Multiple default period of 30 days post completion of default management process, subject to extension for subsequent defaults within that period	Between 0 and 90 days subject to extension for further defaults within that period
Emergency assessment liability per clearing participant to be a proportion of total call based on its Commitment at time of default	Calculated based on size of contribution at time of default
Callable in whole or part when loss reasonably expected to deplete default fund	Ranges from any depletion of default fund to losses exceeding default fund
Payable within 24 hours of call and able to be held for multiple default period	Payable within 24 hours or less
CCP able to set off against amounts owing to clearing participant	Yes, able to be set off against amounts owing to clearing participant
OTC and Futures assessments applied in same order of priority	N/A (as default fund usually segregated by product)
Excess emergency assessments repaid at end of multiple default period (i.e. used to cover loss not for replenishment)	Excess emergency assessments repaid at end of multiple default period (i.e. used to cover loss not for replenishment)

### Variation Margin Gains Haircutting (VMGH) (new tool, to be added)

Straw man mechanics	International comparison
No specific cap, but maximum exposure for a clearing participant limited to value of VM gains since default	No specific cap, but maximum exposure limited for a clearing participant limited to value of VM gains since default
Triggered when CCP reasonably considers default losses may exceed available financial resources excluding 25% of assessments received	Significant portion or all of financial resources must be likely to be used before VMGH applies
Applied on a daily basis when VM outgoings on a day exceed sum of VM incoming plus default resources + 75% of assessments (i.e. non-cumulative)	Generally applied to cumulative gains/losses over default period
Applied to clearing participant's net VM entitlement on the day	Applied on an individual account basis
Ceases to apply when default management process completed successfully or when termination invoked because not possible to re-establish matched book in a reasonable time or default loss expected to exceed available resources (including emergency assessments)	Ceases to apply when default loss still expected to exceed available resources after use of assessments and VMGH
Pro rata repayment if any default resources (including assessments) remain unused or from funds recovered from defaulting participant	Yes
No obligation on CCP to make good other than from default resources (including assessments) that remain unused or from funds recovered from defaulting participant	No obligation on CCP to make good other than from default resources (including assessments) that remain unused

### Partial termination (existing tool, to be amended)

ASX Clear (Futures) status quo	Straw man mechanics	International comparison
Applies to exchange traded derivatives only	Extend to OTC derivatives	No partial termination or compulsory settlement
Maximum settlement liability of each non-defaulting clearing participant per default capped at 2x its Futures Commitment pre-default	No specified cap on settlement liability, but measurable and controllable by clearing participant	N/A
Only available after using all possible endeavours to close out or otherwise cover exposure, and after consulting Risk Advisory Committee	Triggered where CCP considers appropriate to restore a matched book (e.g. is there an available market? can it be done within a reasonable time?)	N/A

### Complete termination (new tool, to be added)

Straw man mechanics	International comparison
Triggered when restoration of a matched book within a reasonable time is not possible, or where CCP reasonably considers the default loss may be so large that application of emergency assessments and VMGH may lead to contagion or be insufficient	Triggered only as a last resort where the default loss, after implementation of VM haircutting and assessments, is still expected to exceed available resources
Termination prices set at discretion of CCP in commercially reasonable manner with reference to market prices	Variable, some discretionary and some based on specified market price methodology e
Pro-rata reduction of termination payments by CCP to the extent those payments exceed available resources (excluding initial margin of non-defaulting clearing participants)	Termination payments by CCP reduced pro-rata if insufficient resources available
Before resorting to termination, CCP has discretion to request clearing participants to voluntarily make payments to cover excess losses or terminate positions	Discretion to request voluntary payments within 24 hours

### Mandatory replenishment (new tool, to be added)

Straw man mechanics	International comparison
Continuing clearing participants to contribute up to \$200m in aggregate to new default fund immediately at end of multiple default period; CCP has power to scale up contributions subsequently to satisfy regulatory requirements	Continuing participants must contribute to new default fund. Default fund is scalable so new contribution depends on fund size determined by CCP
Calculation of individual clearing participant initial contributions to new default fund based on relative Commitments of continuing participants pre-default	Not fixed by reference to pre default contribution as default fund is scalable as above.
Replenishment obligation arises after multiple default period (whether or not a quarter end) (refer emergency assessments, above, for multiple default period)	Replenishment suspended during multiple default period
Clearing participants may resign during multiple default period to avoid replenishment obligation (subject to all positions being closed out and other obligations satisfied)	Participants may resign during multiple default period (subject to close out of positions and any other conditions)
Replenished default fund only available to cover losses from future defaults not prior losses	Replenished default fund only available to cover losses from future defaults not prior losses
Amounts subsequently recovered from defaulting clearing participant (if any) repaid pro-rata to participants/CCP in reverse order to default waterfall	Amounts subsequently recovered from defaulting clearing participant (if any) repaid pro-rata to participants/CCP in reverse order to default waterfall

## Schedule 7: Consultation questions

Please respond to the following questions about ASX's straw man recovery proposals for ASX Clear and ASX Clear (Futures). The straw man recovery proposals are outlined in Sections 4 and 5 of the Consultation Paper and further described in Schedules 5 and 6.

Respondents can obtain a Microsoft Word version of this Schedule on ASX's website (<http://www.asx.com.au/services/clearing/ccp-recovery-and-resolution.htm>).

Consultation questions	ASX Clear	ASX Clear (Futures)
<b>General questions</b>		
G1. Would the straw man recovery proposal provide appropriate incentives for non-defaulting clearing participants to manage-down the risk they bring to the CCP in a crisis and assist the CCP to restore a matched book? If not, why?		
G2. Would the straw man recovery proposal create incentives for non-defaulting clearing participants to 'rush for the exit' in a crisis? If so, why?		
G3. Do you agree with the high level 'decision trees' that would guide the application of the proposed recovery tools, as depicted in the central arrow in the charts in Sections 4 and 5 of the Consultation Paper? If not, why?		
G4. Would the straw man recovery proposal give an acceptable level of certainty to clearing participants (and indirectly their customers) upfront about their potential exposure to the CCP under the CCP's recovery plan? If not, why?		
G5. If your firm is subject to bank capital regulation, would the straw man recovery proposal increase the regulatory capital cost of clearing to your firm? If so, why and by how much (proportionately)?		



Consultation questions	ASX Clear	ASX Clear (Futures)
<p>G6. Would the application of the proposed recovery tools be likely to disproportionately affect any customer groups or sectors (including clearing participants and their clients)? If so, what factors may drive this outcome?</p>		
<p>G7. Would the introduction of the straw man recovery proposal be likely to affect the structure of the market or the behaviour of market participants (including clearing participants and their clients)? For example, would it be likely to drive down direct participation in the CCP?</p>		
<p>G8. Could the proposed recovery tools have unintended consequences in the markets served by the CCP? If so, why? In responding to this question please consider features of those markets that differentiate them from offshore markets in which the same recovery tools have been adopted (e.g. the relatively small and concentrated nature of the Australian market).</p>		
<b>Specific questions – Emergency Assessments</b>		
<p>A1. Do you agree that assessments should be capped? If so, do you agree with the proposed caps for single and multiple defaults? If not, why? In responding to this question please consider whether the capped amount would be sufficient to cover potential uncovered losses, whether the size of assessments could trigger further participant defaults and the implications of the caps for the probability that other recovery tools (such as termination) will need to be used.</p>		

Consultation questions	ASX Clear	ASX Clear (Futures)
<p>A2. Do you agree that the cap for multiple defaults should be applied over a period of 30 days post completion of the default management process? If not, what period would you recommend and why? In responding to this question please note the proposal in relation to suspension of replenishment obligations during the multiple default period.</p>		
<p>A3. Do you agree that the assessment liability of each non-defaulting clearing participant should be calculated proportionately based on its Commitment obligation immediately prior to the first default to occur in the multiple default period? If not, what calculation method would you recommend and why?</p>	N/A	
<p>A4. Do you agree that increasing the individual clearing participant assessment caps would ensure a fairer apportionment of emergency assessment calls across clearing participants? In responding to this question please consider the risk for ASX Clear under existing assessment powers that any shortfall in the emergency assessment call resulting from the cap for individual clearing participants would fall on smaller clearing participants, who may be less able to pay.</p>		N/A
<p>A5. Do you agree that calculating clearing participants' assessment liabilities based on IM is appropriate? If not, what basis of calculation would you recommend and why?</p>		N/A
<p>A6. Should the CCP be entitled to make a further ('second round') call on other clearing participants if a clearing participant fails to pay its assessment? Why or why not?</p>		

Consultation questions	ASX Clear	ASX Clear (Futures)
<p>A7. Do you agree with the proposed trigger for when the CCP should be able to call an assessment? If not, why? In responding to this question please consider the CCP's need to have received assessment moneys before the point at which it requires those funds to meet its close out or other obligations to non-defaulting clearing participants.</p>		
<p>A8. Do you agree with the proposed timeframe for payment of assessments?</p>		
<p>A9. Should the CCP be entitled to call the whole assessment amount and hold it until the end of the default period? If not, why?</p>		
<p>A10. Should any remaining assessments at the end of the multiple default period be applied towards replenishment of the default fund?</p>		
<p>A11. Should the CCP still call assessments where it is evident assessments (and VMGH, for ASX Clear (Futures)) would be insufficient to absorb estimated default losses?</p>		
<p>A12. What are the regulatory capital or other costs of emergency assessments for clearing participants? For clients of clearing participants?</p>		
<p>A13. ASX is aware of comments by some market participants to the effect that emergency assessments should be pre-funded, to avoid the performance risk that CCPs face with cash calls. Do you agree?</p>		
<b>Specific questions – VMGH</b>		
<p>V1. Do you agree that VMGH should not be subject to a specified cap? If not, why, and what should be the basis of the cap?</p>	N/A	

Consultation questions	ASX Clear	ASX Clear (Futures)
V2. Do you agree that VMGH should be applied to variation margin gains on any day when there is a shortfall, rather than applied to cumulative gains from a pre-determined trigger point? If not, why?	N/A	
V3. Do you agree with the proposed determination of a shortfall (i.e. outgoing VM > incoming VM plus remaining default resources plus 75% of emergency assessments)? If not, why?	N/A	
V5. Should payment haircutting extend to any other payment obligations of the CCP (e.g. coupon payments and settlement payments) rather than only variation margin?	N/A	
V6. Do you agree that haircuts should be applied to a clearing participant's net VM entitlement? If not, how should haircuts be applied? In responding to this question please consider that as the basis of applying haircuts increases in granularity (e.g. net VM entitlement referable to each client/house account) there is a corresponding increase in the incentive for clearing participants to assist with default management by closing out positions opposing the default portfolio, however there may be increased liquidity pressure on those clearing participants.	N/A	
V7. If your firm is a clearing participant, would it pass haircuts on to clients? If so, how would your firm allocate a haircut to its net VM entitlement on a day to client/house accounts?	N/A	
V8. Do you agree that VMGH should cease to apply when the default management process ends or has failed or when the default loss is expected to exceed available resources?	N/A	

Consultation questions	ASX Clear	ASX Clear (Futures)
<p>V9. Do you agree with the use of VMGH as a liquidity tool? If not, why and what tools would you propose be used to manage liquidity shortfalls?</p>		
<p>V10. Do you agree that VMGH is not appropriate for ASX Clear? If not, on what basis would you propose that it be implemented? Do you consider that any other form of payment haircutting or loss distribution charge should be applied before moving to termination of contracts?</p>		N/A
<p>V11. What are the regulatory capital or other costs of variation margin haircutting for clearing participants? For clients of clearing participants?</p>		
<b>Specific questions – Termination</b>		
<p>T1. Do you agree with the retention and amendment of powers of partial termination? If not, why? Do you agree that settlement liabilities under these powers should not be subject to a specified cap? If not, why and what should an appropriate cap be? Do you agree that the power should be triggered where restoration of a matched book is not possible within a reasonable time? If not, why?</p>		
<p>T2. Do you agree that complete termination should be available where restoration of a matched book within a reasonable time is not possible, or where the CCP reasonably considers default loss may be so large that application of emergency assessments (and VMGH, for ASX Clear (Futures)) may lead to contagion or would be insufficient? If not, why?</p>		
<p>T3. Do you agree cash market transactions should be cash settled on a mark to market basis to facilitate complete termination? If not, on what basis would you propose that these transactions be terminated?</p>		N/A

Consultation questions	ASX Clear	ASX Clear (Futures)
T4. Do you agree that termination prices should be determined by the CCP in a commercially reasonable manner with reference to market prices? If not, why?		
T5. Should non-defaulting clearing participants have the opportunity to make voluntary payments, or volunteer selected contracts for termination, prior to complete termination? If so, what defined period should be allowed for such actions?		
T6. If your firm is subject to bank capital regulation, do partial termination powers increase the regulatory capital cost of clearing to your firm? If so, in what circumstances would this occur and is there a way that partial termination can be structured to avoid this outcome?		
<b>Specific questions – Mandatory Replenishment</b>		
M1. Is the proposed replenishment baseline of up to \$75m in contributions by continuing clearing participants a reasonable starting point for the re-establishment of the default fund? Why?		N/A
M2. Is the proposed replenishment baseline of up to \$200m in contributions by continuing clearing participants (ETD \$100m, OTC \$100m) a reasonable starting point for the re-establishment of the default fund? Why?	N/A	
M3. Do you have any views on likely size of market and trading behaviour post recovery scenario? What do you consider the likely impact of those considerations on the CCP's post-recovery requirements for pre-funded mutualised default resources?		
M4. Should clearing participant contributions to the default fund be scalable by the CCP? If so, on what basis, and should scalability be subject to caps and floors?		

Consultation questions	ASX Clear	ASX Clear (Futures)
M5. Do you agree that clearing participants should be able to resign to avoid replenishment? What resignation requirements and timeframes should apply to avoid incentivising clearing participants to exit quickly in a crisis?		
M6. ASX is aware of comments by some market participants to the effect that clearing participants' replenishment obligations should be pre-funded and held in 'escrow', to effectively guarantee continued service provision by CCPs. Do you agree? What impact (if any) would this have on the regulatory capital cost of clearing?		