



ASX RECOVERY HANDBOOK

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ASX Recovery Handbook

1 SCOPE AND INTERPRETATION

1.1 Recovery Rules, ASX Clear and ASX Clear (Futures)

This ASX Recovery Handbook is the recovery handbook of ASX Clear Limited and ASX Clear (Futures) Pty Limited. This handbook sets out terms, procedures, timings and specifications relating to provisions of the Recovery Rules. This handbook is referred to as the **Recovery Handbook**, ASX Clear Pty Limited is referred to as **ASX Clear** and ASX Clear (Futures) Pty Limited is referred to as **ASX Clear (Futures)**.

1.2 Recovery Rules

This handbook refers to the Recovery Rules of ASX Clear and ASX Clear (Futures) (which are referred to as the **Recovery Rules**), the Operating Rules of ASX Clear (which are referred to as the **ASX Clear Rules**) and the Operating Rules of ASX Clear (Futures) (which are referred to as the **ASX Clear (Futures) Rules**).

However, the Recovery Handbook does not form part of the Recovery Rules, ASX Clear Rules or the ASX Clear (Futures) Rules. The Recovery Rules prevail in the event of any inconsistency between those Recovery Rules and this Recovery Handbook.

1.3 Meanings of terms

Unless they are defined in this Recovery Handbook, capitalised terms used in this Recovery Handbook have the meaning which they have in the Recovery Rules or, if they are not defined in the Recovery Rules, in the ASX Clear Rules or ASX Clear (Futures) Rules (as applicable).

1.4 Interpretation

Unless the contrary intention appears, in this Recovery Handbook:

- (a) a reference to a particular “Paragraph” is a reference to that paragraph in this Recovery Handbook. Where practical, Paragraph numbering (and labelling) matches the relevant Recovery Rule;
- (b) a reference to any thing (including an amount) is a reference to the whole and each part of it;
- (c) a reference to a document (including the Recovery Rules, the ASX Clear Rules, the ASX Clear (Futures) Rules and this Recovery Handbook) includes any variation or replacement of it;
- (d) the word “law” includes common law, principles of equity, and laws made by parliament (and laws made by parliament include State, Territory and Commonwealth laws and regulations and other instruments under them, and consolidations, amendments, re-enactments or replacements of any of them);
- (e) a reference to Australian dollars, dollars, AUD, \$ or A\$ is a reference to the lawful currency of Australia;
- (f) a reference to a time of day is a reference to Sydney time;
- (g) the word “person” includes an individual, a firm, a body corporate, an unincorporated association and an authority;

- (h) a reference to a particular person includes the person’s executors, administrators, successors, substitutes (including persons taking by novation) and assigns;
- (i) the words “including”, “for example” or “such as” when introducing an example, do not limit the meaning of the words to which the example relates to that example or examples of a similar kind;
- (j) a reference to the Corporations Act is a reference to the *Corporations Act 2001* (Cth);
- (k) an expression in this Recovery Handbook which deals with a matter dealt with in a provision of the Corporations Act has the same meaning that it has in that provision of the Corporations Act; and
- (l) in the interpretation of this Recovery Handbook, a construction that would promote the purpose or object underlying this Recovery Handbook (whether that purpose or object is expressly stated in this Recovery Handbook or not) is to be preferred to a construction which would not promote that purpose or object.

1.5 Number

In this Recovery Handbook, the singular includes the plural and the plural includes the singular.

1.6 Headings

Headings (including those in brackets at the beginning of paragraphs) in this Recovery Handbook are for convenience only and do not affect the interpretation of this Recovery Handbook.

2 DEFAULT MANAGEMENT

No matters specified in this Recovery Handbook in respect of Rule 2 (Default Management).

3 RECOVERY POWERS

No matters specified in this Recovery Handbook in respect of Rule 3 (Recovery Powers).

4 RESIGNATION

No matters specified in this Recovery Handbook in respect of Rule 4 (Resignation).

5 REIMBURSEMENT

No matters specified in this Recovery Handbook in respect of Rule 5 (Reimbursement).

6 ALLOCATION OF INVESTMENT LOSSES

6.4 Allocation to Participant Investment Loss

For the purpose of a Participant reinstating the amount of a reduction which has occurred in accordance with Rule 6 (Allocation of investment Losses), a Participant must pay the amount to be reinstated via a Cash Payment transaction in Austraclear which must be at the “Settled” state at the same time as applies in respect of payments of margin payable on that day or as otherwise required by the ASX CCP.

7 CONSULTATION

7.2 Risk Committee

The ASX CCP agrees to consult with its Risk Committee to the extent reasonably practicable in accordance with Rule 7.1(a)(i) (Risk Committee) with respect to the use of the rights and policies set out in Schedule 2 (ASX Payments Reduction) when the aggregate amount of reductions to ASX Payments which have been effected exceeds an amount equal to the amount of the Default Fund which existed as at the time immediately prior to the commencement of the Default Period.

8 RELATIONSHIP WITH THE ASX CCP

No matters specified in this Recovery Handbook in respect of Rule 8 (Relationship with the ASX CCP).

9 EMERGENCIES AND FORCE MAJEURE

No matters specified in this Recovery Handbook in respect of Rule 9 (Emergencies and force majeure).

10 VOLUNTARY WIND-DOWN

No matters specified in this Recovery Handbook in respect of Rule 10 (Voluntary Wind-Down).

11 VOLUNTARY PAYMENTS

11.1 Voluntary Payment Notice

If a Participant intends to make a Voluntary Payment, it must do so via a Cash Payment transaction in Austraclear and such transaction must be at the “Settled” state, by the time advised in the Voluntary Payment Notice or such other transaction type advised by the ASX CCP and such transaction must be received by the ASX CCP by the time advised in the Voluntary Payment Notice.

12 MISCELLANEOUS

12.1 Payments by Participants

All payments made by a Participant under the Recovery Rules or this Recovery Handbook must be made via a Cash Payment transaction in Austraclear and such transaction must be at the “Settled” state by the time required under the Recovery Rules or this Recovery Handbook, or otherwise advised by the ASX CCP, in respect

of that payment or such other transaction type advised by the ASX CCP and such transaction must be received by the ASX CCP by the time required under the Recovery Rules or this Recovery Handbook, or otherwise advised by the ASX CCP, in respect of that payment.

12.2 Consequences of Participant not complying

If a Participant does not pay an amount due to be paid by it in the time and manner required under the Recovery Rules, then the Participant must pay interest to the ASX CCP on the unpaid amount for the period from the date the amount fell due for payment to the date on which the amount is paid in full at the interest rate prescribed by the ASX CCP from time to time. The amount of interest (such amount being referred to as the **Interest Amount**) is calculated and payable for each currency on each day with respect to the aggregate due, but unpaid, amount for each currency (such amount being referred to as the **Aggregate Unpaid Amount**) in accordance with the following formula:

$$\text{Interest Amount} = \text{Aggregate Unpaid Amount} \times \text{Rate} \times D/365$$

where:

Rate means the interest rate which shall be payable by Participants with respect to any Aggregate Unpaid Amounts after the due time for payment as determined by the ASX CCP acting in good faith, in a commercially reasonable manner and in compliance with all applicable laws.

D means the actual number of days from (but excluding) the date on which the relevant Aggregate Unpaid Amount is due and payable to (and including) the day of calculation.

The ASX CCP will notify a Participant via email or in such other manner as the ASX CCP considers appropriate from time to time of:

- (a) any Interest Amount charged to that Participant under this Paragraph 12.2,
- (b) the basis of that calculation; and
- (c) the time by which the Interest Amount must be paid in the manner set out in Paragraph 12.1.

Schedule 1 – Recovery Assessment

2 Recovery Assessment due from each Participant

If the ASX CCP determines that a Total Recovery Assessment is to be paid, the ASX CCP will calculate and notify each Participant (other than a Participant who is a Defaulted Participant at that time of this determination) via email or in such other manner as the ASX CCP considers appropriate from time to time of the Participant's Recovery Assessment. This notice will set out:

- (a) the amount of the Total Recovery Assessment;
- (b) the Participant's Proportion, which takes into account the Default of any Defaulted Participant;
- (b) if the ASX CCP is ASX Clear, the Participant's most recently calculated ASX Clear Maximum Assessment;
- (c) if the ASX CCP is ASX Clear (Futures), the Participant's most recently calculated ASX Clear (Futures) Maximum Assessment; and
- (d) the Participant's Recovery Assessment.

Each Participant is required to pay its Recovery Assessment via a Cash Payment transaction in Austraclear on the Business Day after the notice is given and such transaction must be at the "Settled" state by:

- (i) if the ASX CCP is ASX Clear, 10:30am; and
 - (ii) if the ASX CCP is ASX Clear (Futures), 11:00am,
- or such later time as the ASX CCP determines.

3 Payment of Recovery Assessment

This Paragraph 3 (Payment of Recovery Assessment) applies if the ASX CCP is ASX Clear.

The ASX CCP will calculate the Participant's ASX Clear Maximum Assessment and advise each Participant of the Participant's ASX Clear Maximum Assessment at the time of calculation within 14 days after the Recovery Rules take effect.

The ASX CCP will also calculate the Participant's ASX Clear Maximum Assessment on a quarterly basis and advise each Participant of the Participant's ASX Clear Maximum Assessment for each quarter in accordance with this Paragraph 3 (Payment of Recovery Assessment). These quarters will start on 1 March, 1 June, 1 September and 1 December and will end 30 May, 31 August, 30 November and 28/29 February respectively.

The ASX CCP will advise each Participant of the Participant's ASX Clear Maximum Assessment by the close of business on the 17th day of the month before the quarter in respect of which the ASX Clear Maximum Assessment is being calculated. If the 17th day of the final month is not a Business Day then the next succeeding Business Day will apply. The ASX Clear Maximum Assessment calculated in respect of the quarter will take effect from midnight on the first day of the quarter in respect of which the ASX Clear Maximum Assessment was calculated.

For the purposes of Quarterly Initial Margin, the average daily Initial Margin is to be calculated by taking the sum of each Participant's Initial Margin on every Business Day in the relevant calculation period in respect of a quarter, as determined by the ASX CCP, and dividing it by the number of Business Days in that calculation period.

Unless the ASX CCP notifies the Participants otherwise, this calculation period will be the three month period before (and including) the 10th day of the final month before the relevant quarter.

Schedule 2 – ASX Payments Reduction

6 Timing

The ASX CCP will calculate reductions to be made under Schedule 2 (ASX Payments Reduction) of the Rules, and effect those reductions, at the times payments to be made by the ASX CCP are due to settle under the relevant ASX CCP Rules or at such other times as the ASX CCP considers appropriate, including at different times in respect of different settlement cycles.

Schedule 3 – Partial Termination

No matters specified in this Recovery Handbook in respect of Schedule 3 (Partial Termination).

Schedule 4 – Complete Termination

No matters specified in this Recovery Handbook in respect of Schedule 4 (Complete Termination).

Schedule 5 – Replenishment

9 Scaling to meet regulatory requirements

This Paragraph 9 (Scaling to meet regulatory requirements) applies if the ASX CCP is ASX Clear in respect of the quarterly calculations of Participant Commitment.

The ASX CCP may calculate each Participant's Participant Commitment on a quarterly basis and advise each Participant of its Participant Commitment for each quarter in accordance with this Paragraph 9 (Scaling to meet regulatory requirements). These quarters will start on 1 March, 1 June, 1 September and 1 December and will end 30 May, 31 August, 30 November and 28/29 February respectively.

The ASX CCP will consider each Participant's Proportion when calculating the Participant's Participant Commitment. For the purposes of calculating Quarterly Initial Margin for use in the calculation of a Participant's Proportion, the average daily Initial Margin is to be calculated by taking the sum of each Participant's Initial Margin on every Business Day in the relevant calculation period in respect of a quarter, as determined by the ASX CCP, and dividing it by the number of Business Days in that calculation period. Unless the ASX CCP notifies the Participants otherwise, this calculation period will be the three month period before (and including) the 10th day of the final month before the relevant quarter.

The ASX CCP will advise each Participant of the Participant's Proportion and Participant Commitment by the close of business on the 17th day of the month before the quarter in respect of which the Participant Commitment are being calculated. If the 17th day of the final month is not a Business Day then the next succeeding Business Day will apply. The Participant Commitment calculated in respect of the quarter will take effect from midnight on the first day of the quarter in respect of which the Participant Commitment was calculated.

Schedule 6 –ASX Payments Reduction Worked Example

Below is a worked example of how ASX Payments Reduction may operate for a particular day following the ASX CCP's exercise of its rights and powers under Schedule 2 (ASX Payments Reduction).

This example assumes that all cleared positions are spread across four Participants and the following margin requirements are due.¹ CP4 is the Defaulted Participant.

	CP1	CP2	CP3	CP4	Total
Account	VM	VM	VM	VM	Net VM
House	-15	-25	10	22	-8
Client	91	-50	-40	7	8
Total	76	-75	-30	29	0

CP pays / CCP Receives

CP Receives / CCP Pays

The \$29 VM loss that will not be received from CP4 (in default) will be spread on a pro rata basis across Clearing Participants who have net VM gains across all accounts, being CP2 (net gain of \$75m) and CP3 (net gain of \$30m). CP1 has a net VM loss of \$76m and therefore is not subject to payment haircutting.

The \$29 VM shortfall is spread across CP2 and CP3 as follows:

$$\begin{aligned} \text{CP2 haircut} &= 75 / (75+30) \times 29 \\ &= 21 \text{ (rounded up)} \end{aligned}$$

$$\begin{aligned} \text{CP3 haircut} &= 30 / (75+30) \times 29 \\ &= 8 \text{ (rounded down)} \end{aligned}$$

Accordingly, CP2's adjusted net VM gain is \$75 - \$21 = \$54, CP3's is \$30 - \$8 = \$22, a total adjusted VM of \$76 which equals the total of VM losses due to be paid by non-defaulting Clearing Participants, in this example, CP1.

CP2's VM gain is split across both its House and Client Accounts and so the \$21 haircut will be proportionally allocated to both accounts as follows:

$$\begin{aligned} \text{House haircut} &= 25 / 75 \times 21 \\ &= 7 \end{aligned}$$

$$\begin{aligned} \text{Client haircut} &= 50 / 75 \times 21 \\ &= 14 \end{aligned}$$

CP3's haircut of \$8 is adjusted fully against the Client Account as it is the only one with a VM gain.

¹ These payment flows do not take into account initial margin payment flows.

Therefore the total margins adjusted for payment haircutting become:²

	CP1	CP2	CP3	CP4	Total
Account	VM	VM	VM	VM	Net VM
House	-15	-18	10		-23
Client	91	-36	-32		23
Total	76	-54	-22		0

CP pays / CCP Receives

CP Receives / CCP Pays

CP1's Client payment of \$91 and CP3's House payment of \$10 must be paid by the CPs prior to CP1's House gain of \$15, CP2's House gain of \$18 and Client gain of \$36 and CP3's Client gain of \$32 being released by ASX Clear (Futures).

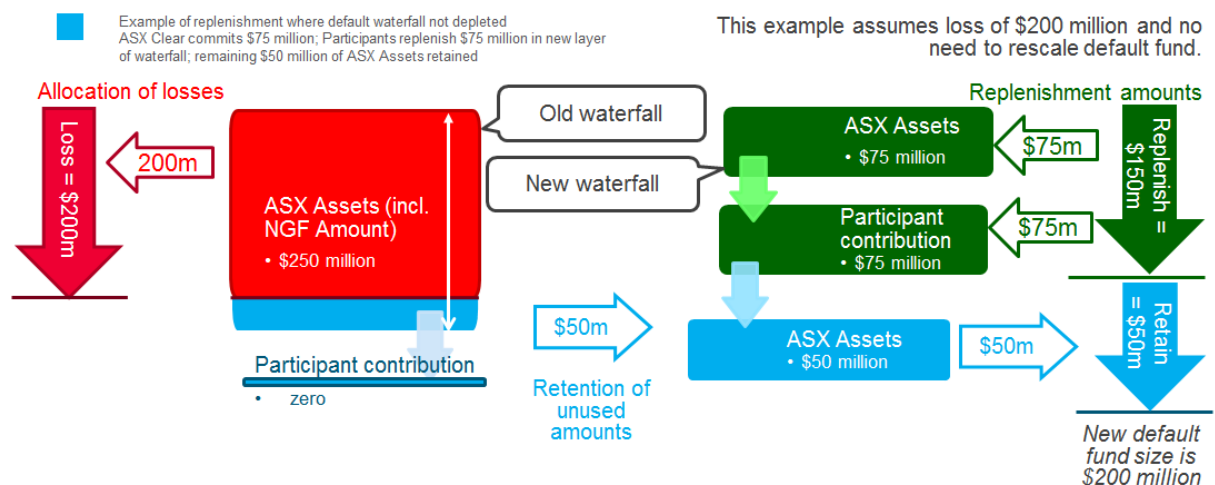
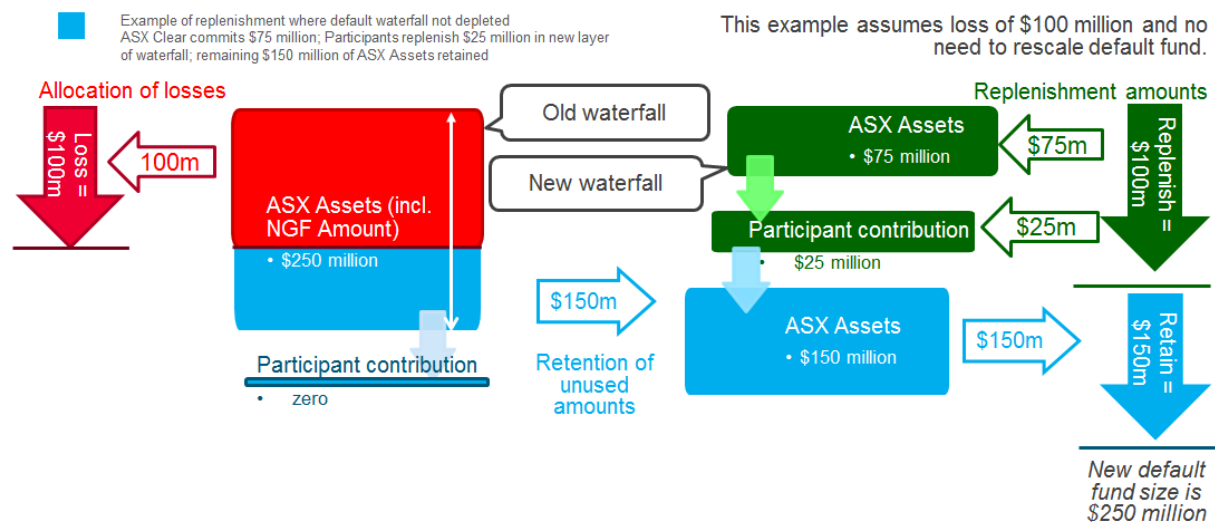
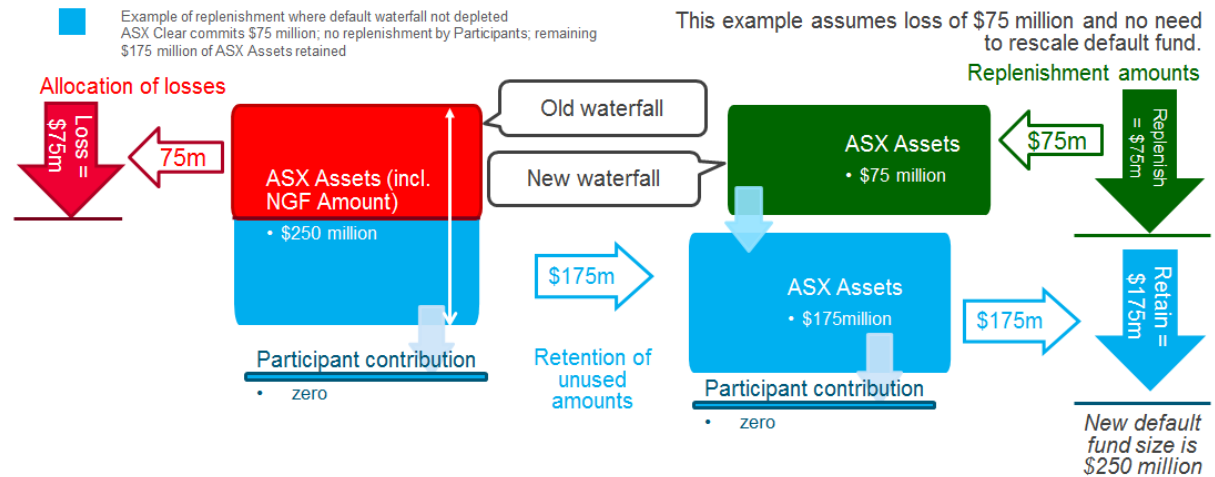
CP	Account	CP Pay	CP Receive
CP1	Client	\$91	
CP3	House	\$10	
CP1	House		\$15
CP2	House		\$18
CP2	Client		\$36
CP3	Client		\$32
Total		\$101	\$101

² These payment flows do not take into account initial margin payment flows.

Schedule 7 – Replenishment Examples

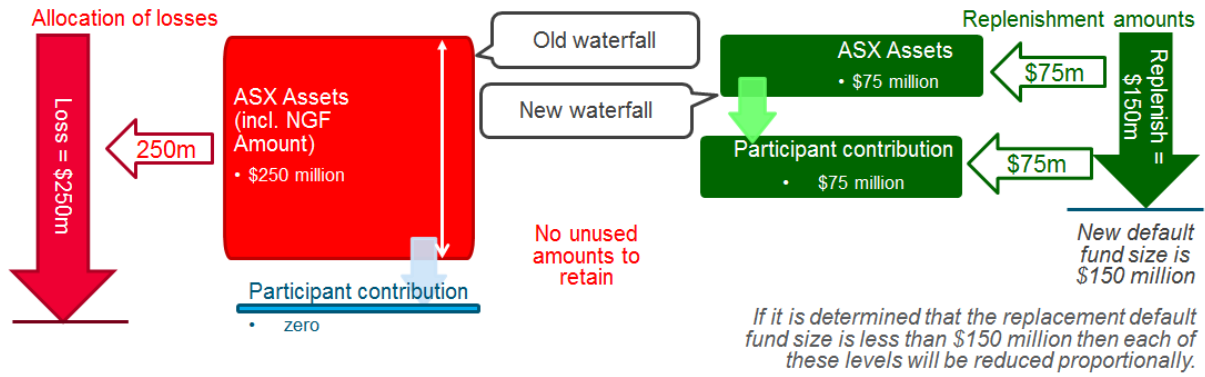
Below are diagrams showing how replenishment may operate following the ASX CCP's exercise of its rights and powers under Schedule 5 (Replenishment).

Examples for ASX Clear



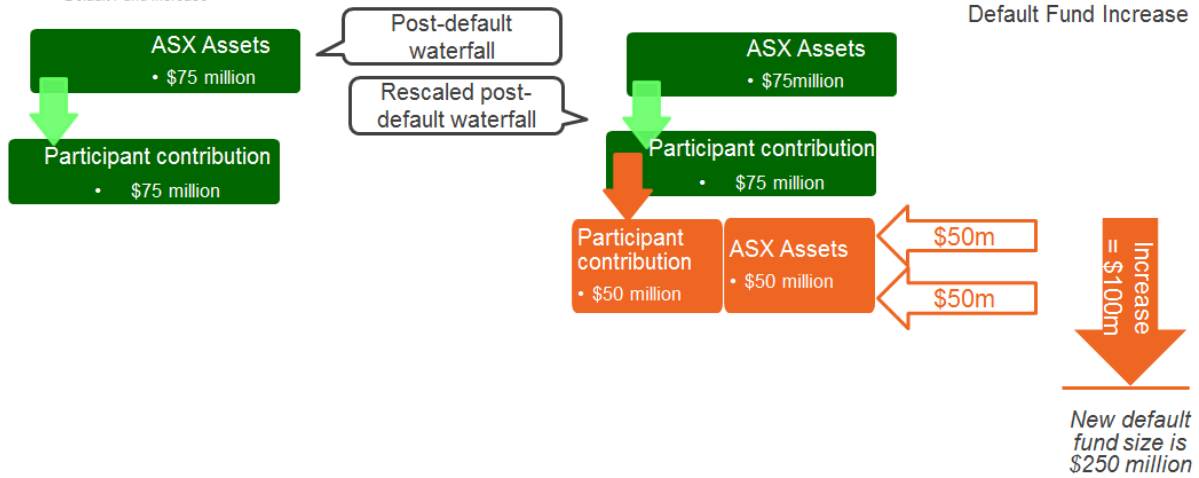
Example of replenishment where default waterfall depleted ASX Clear and Participants replenish 50:50 to a new Default Fund up to \$150m (\$75 million each in this example); no ASX Assets remain

This example assumes loss of \$250 million and no need to resize or rescale default fund.

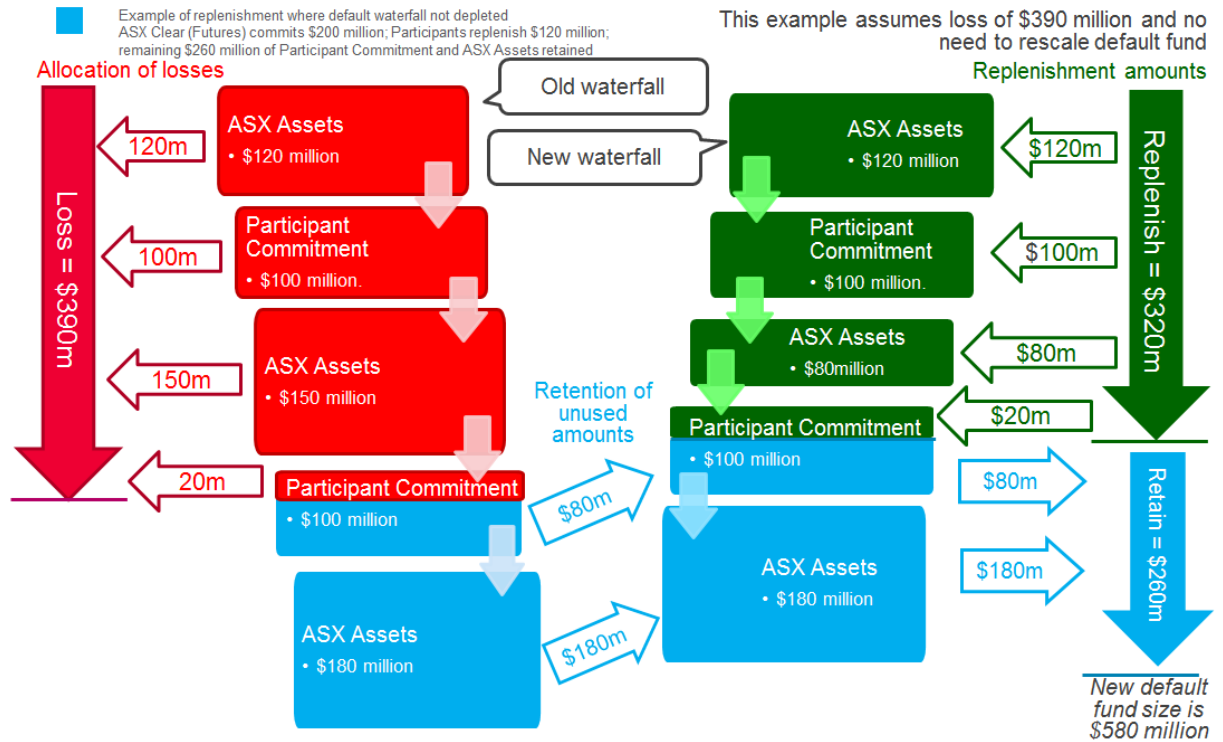
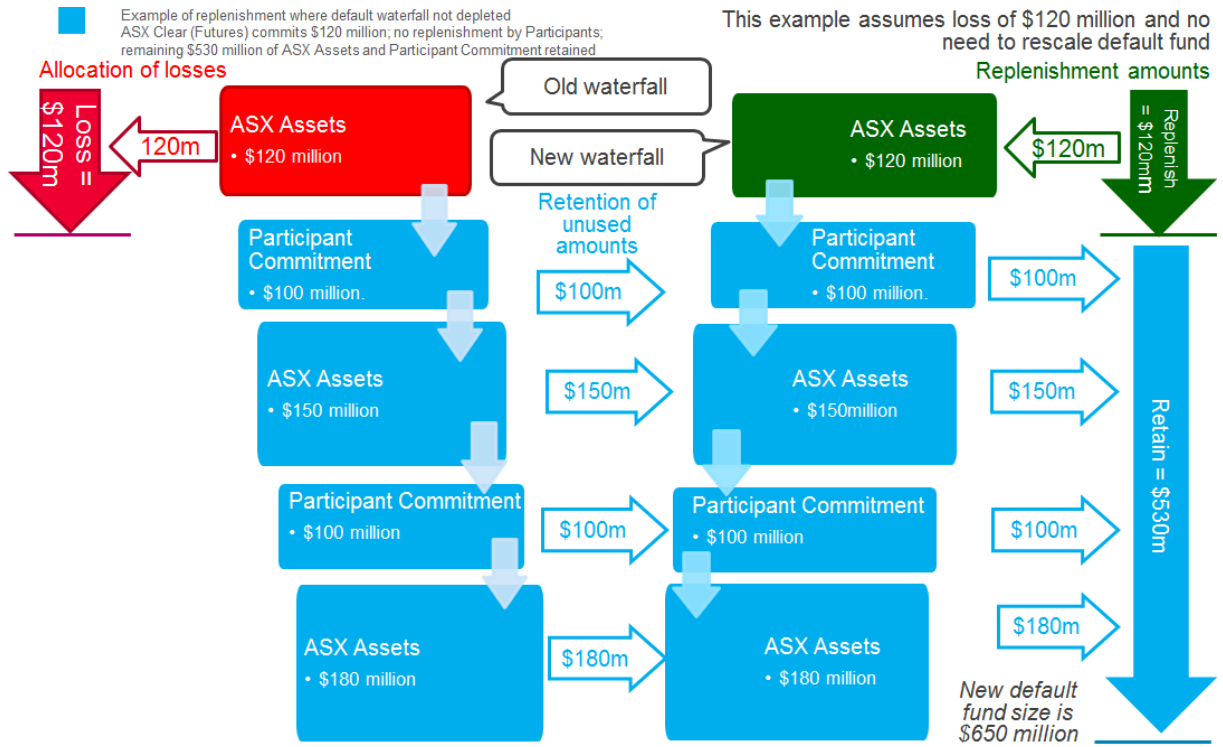


Example of additional contributions where default waterfall depleted, replenished and then rescaled. After initial replenishment, ASX Clear and Participants replenish 50:50 of Default Fund Increase

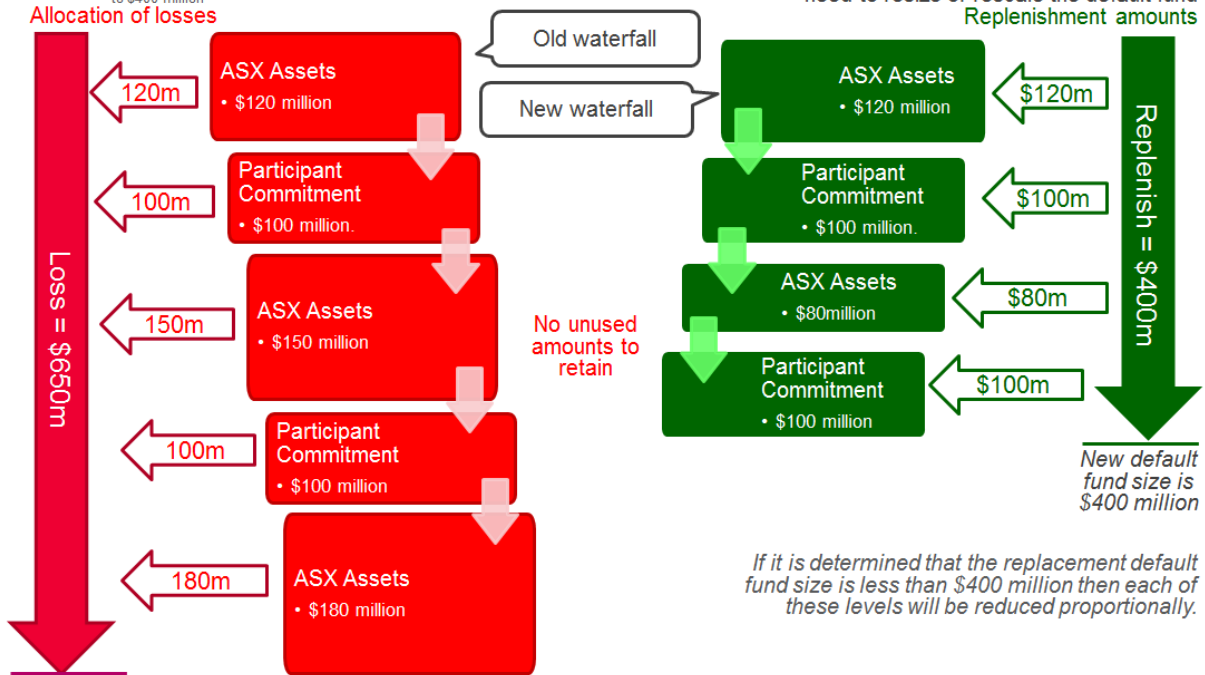
This example assumes loss of \$250 million, replenishment to a \$150 million default fund and rescaling the default fund to \$250 million Default Fund Increase



Examples for ASX Clear (Futures)



Example of replenishment where default waterfall depleted ASX Clear (Futures) and Participants replenish 50:50 to a new Default Fund up to \$400 million



Example of additional contributions where default waterfall depleted, replenished and then rescaled. After initial replenishment, ASX Clear (Futures) and Participants replenish 50:50 of Default Fund Increase

