

International comparison – loss allocation and replenishment rules on participant default for derivatives CCPs (October 2014)

	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
General							
Products cleared	OTC	OTC	ETD and OTC	ETD and OTC	ETD, OTC commodities and OTC financial	FX, ETD, CDS (OTC)	OTC, OTC Commodities and ETD
Single or separate default fund	Separate	Separate	Separate	Separate	Single	Separate	Standard – OTC Commodities and ETD Separate for OTC
Assessment/cash call rights							
Available?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap (single default)	1x contribution	2x contribution	275% x contribution	OTC: 1x contribution ETD: uncapped	Up to 3x contribution (currently 1.5x for ETF and 1x for OTC)	2x contribution (FX, ETD), 1x contribution (CDS-OTC)	Std: 275% x contribution OTC: CP's pro-rata share of 3 rd and 4 th largest losses subject to minimum of 50% of total OTC default fund
Cap (multiple defaults)	3x in 6 months	2x contribution during cooling off period	550% x contribution during cooling off period	OTC: 1x contribution during cooling off period ETD: uncapped	Uncapped unless CP resigns	3x in cooling off period	Std: 550%x contribution during cooling off period OTC:As for single default
Multiple default/cooling off period	30 calendar days after DMP Completion Date	20 business days from default	ETD: 5 business days from default OTC:25 business days from default	30 calendar days	90 days from default where default fund depleted	30 business days after a default which results in assessment call or 2 or more defaults within 30 business days resulting in replenishment in excess of contribution	Std: 5 business days after declaration of default OTC: 25 business days after declaration of default

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	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
Trigger for call	LCH determines that default fund has been or will be reduced by 25%	OTC Clear determines that default fund has been or will be reduced by 25%	Default losses remain after application of prior-applicable financial resources (subject to advance assessment for OTC where defaulting CP collateral less than 50% of margin requirement)	OTC: If default loss is not fully recovered from earlier tranches of waterfall ETD: uncompensated loss after application of earlier tranches of waterfall	Loss incurred from or in connection with an event of default	Loss has arisen or considered likely to arise where such loss is not met pursuant to the default fund	During a cooling off period (ie after default declared)
When payable?	Business day following receipt of notice	2 business days following notice of receipt	By close on day of call	Not known	Prefunded 50% (ETF), 100% (OTC). Balance payable close of business on day following call	At such time as ICE notifies	Within 1 hr of notification
Variation margin haircutting							
Applicable?	Yes	Yes	No	OTC: Yes ETD: No	No	Yes, except for CDS	Yes
Capped	Yes, higher of 100mGBP or contribution	No	N/A	OTC: No ETD: N/A	N/A	No	No

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	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
Trigger for use	LCH determines that default loss will exceed default resources including assessments	OTC Clear determines that default loss will exceed default resources including assessments	N/A	Losses remain uncovered after application of other default fund layers	N/A	ICE determines that <ul style="list-style-type: none"> VM amounts payable by CCP plus transfer costs on any day exceed VM amounts received on that day plus available default resources (including assessments) OR default resources (including assessments) insufficient to meet losses 	If CME determines that less than 25% of the Assessments, whether or not collected, remains available or is likely to remain available once the CCP has met its obligations on default
How effected	Pro-rata reduction of cumulative gains from day of default based on shortfall on any day	Pro-rata reduction of cumulative gains from day of default based on shortfall on any day	N/A	VM settled as usual but required to pay amount as Special Clearing Charge	N/A	Pro-rata reduction of cumulative gains from day of default based on shortfall on any day	Pro-rata reduction based on shortfall on any day subject to recalculation based on cumulative gains since default at end of cooling off period
CCP make good	Repayable pro-rata from excess default resources or funds recovered from defaulting CP	Repayable pro-rata from excess default resources or funds recovered from defaulting CP	N/A	No	N/A	Repayable pro-rata from excess default resources or funds recovered from defaulting CP	Repayable pro-rata from excess default resources or funds recovered from defaulting CP
Other loss allocation mechanism							
IM haircutting	No	No	No	No	No	No	No
Voluntary CP payments	CCP must request voluntary payments before termination with payment within 24 hours	CCP discretion to request with payment within 1 Business Day	No	No	No	No	CCP discretion to request optional payments at time specified by CCP

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	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
Termination/compulsory settlement/mandatory allocation							
Type	Complete termination	Complete termination	Complete termination	OTC: Complete termination ETD: No	ETF: Invoicing back (partial) OTC: No	Complete termination	Complete termination
Capped/uncapped	Uncapped	Uncapped	Uncapped	OTC: Uncapped ETD: N/A	ETF: No OTC: N/A	Uncapped	Uncapped
Trigger for use	LCH determines it does not have sufficient resources to meet obligations and liabilities	OTC Clear determines that it does not have sufficient resources (from default resources, VMGH and voluntary payments) to meet obligations and liabilities	Insolvency or losses will exceed available financial resources	OTC: loss exceeds resources and consultation on how to settle losses failed JSCC undertakes to settle as agreed provided settlement will enable it to recover losses in full ETD: N/A	In CCP's good faith opinion, impossible or impracticable to close out or transfer	ICE determines: <ul style="list-style-type: none"> VM plus transfer costs payable on any day may not be satisfied by available default fund resources and VM haircutting OR in its view it may become unable to pay its debts as due or total assets exceed total liabilities OR there has been an underpriced auction AND all the defaulter's contracts have been terminated or there has been a default auction or attempted default auction	CCP determines after consulting Risk Committee that resources (available or likely to become available) have been exhausted or are or would be very likely to be insufficient to satisfy all obligations of CCP or a Shortfall

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	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
Termination price	Mid price using methodology for end of day margin run or if no such price last price used to calculate VM	Difference between VM last satisfied in respect of contract and close-out VM relating to contract (using methodology for end of day settlement process)	ETD: market price at close-out or if no market, CME discretion in good faith and commercially reasonable manner to produce reasonably accurate substitutes for market value OTC: Not known	OTC: NPV of contract at date of termination ETD: N/A	Price determined by Clearing House	Market prices at close out or failing that commercially reasonable price determined by ICEwith a view to obtaining a fair valuation	Price used to determine VM during settlement cycle provided, when CCP deems necessary to protect CCP and members, CCP may set price in its discretion
Haircutting of termination payments	Yes, pro rata to shortfall in resources. Expressly excludes IM collateral.	Yes, pro rata to shortfall in resources	ETD: No OTC: Yes, on pro-rata basis	OTC: No ETD: N/A	No	Yes, termination payments (including IM) reduced pro-rata to shortfall in resources	Yes, pro rata to shortfall in resources
Replenishment							
Default fund fixed or scalable	Scalable	Scalable	Scalable	Scalable	Scalable	Scalable	Scalable
Mandatory participant contributions	Yes, but replenishment suspended until DMP completes After DMP completes, replenish in amount required to reinstate to Fund Floor of GBP1billion within 2 business days After cooling off period (ie 30 days after DMP completes), full replenishment to new fund size	Yes, but suspended until after end of the cooling off period	Yes. When contribution applied, must replenish prior to close next day	OTC: next business day following end of multiple default period ETD: Next day following shortfall	Yes, when contribution applied to default loss, must make good by next business day	Yes, must replenish contributions used on demand except replenishment suspended during cooling off period. (Cooling off period does not commence until assessment called or 2 defaults resulting in replenishment in excess of 1x contribution)	Yes, but replenishment suspended during cooling off period

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	LCH SwapClear	Hong Kong OTC	CME (US)	JSCC	SGX	ICE Clear Europe	CME Europe
Size/basis of calculation of participant replenishment	Variable based on size of new default fund subject to minimum contribution	Variable based on size of new default fund subject to minimum contribution	Replenish amount of contribution used (subject to subsequent rescaling of fund/recalculation of contribution)	Variable based on size of new default fund subject to minimum contribution	Replenish amount of contribution used (subject to subsequent rescaling of fund/recalculation of contribution)	Replenish amount of contribution used (subject to subsequent rescaling of fund/recalculation of contribution)	Variable based on size of new default fund, subject to a minimum contribution
Cap on replenishment for multiple defaults	Up to 3 defaults in any 6 months	One default for each cooling off period due to suspension of replenishment but not otherwise capped	Capped at 1x contribution per default grouping	OTC: capped at 1x contribution ETD: Uncapped	Not capped unless resign	Assessments/replenishment in aggregate capped at 3x contribution for multiple defaults during cooling off (but cooling off period does not commence until assessment called or 2 defaults resulting in replenishment in excess of 1x contribution)	One default for each cooling off period due to suspension of replenishment but not otherwise capped
Impact of resignation on replenishment	Not liable for replenishment if resign and close out whilst replenishment obligation suspended. Note shorter period of suspension for replenishment to Fund Floor	Not liable for replenishment if resignation effective before end of cooling off period	Liable for assessments and replenishment till resignation effective	OTC: If resign and close-out during default period, no replenishment obligation ETD: Assume need to replenish until resignation effective	Liable for defaults declared before resignation effective. Capped at 2x CP's contribution and further assessment of time of resignation	If resign within first 10 business days of cooling off period and close out by deadline, not responsible for losses from defaults after the deadline	Not liable for replenishment if resign and close out during cooling off period

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	LCH EquityClear	Hong Kong	EuroCCP	SGX
Assessment/cash call rights				
Available?	Yes	Yes	Yes	Yes
Cap (single default)	1x contribution	3x contribution (if resign within 3 business days of notice of application of default fund)	1x contribution	May call for payment of Contingent Contribution (based on % of CP's turnover) plus additional amounts as the CCP may determine
Cap (multiple defaults)	3x in 6 months	3x contribution (if resign within 3 business days of notice of application of default fund)	Appears uncapped	Appears uncapped, subject to resignation
Multiple default/cooling off period	30 calendar days after DMP Completion Date	N/A	N/A	1 year
Trigger for call	LCH determines that default fund has been or will be reduced by 25%	No trigger identified	If loss caused by breach not covered by contributions of all CPs	Where such action is in the interests of maintaining a safe and efficient clearing facility
When payable?	Business day following receipt of notice	As specified in notice	Business following receipt of notice	Not known
Variation margin haircutting				
Applicable?	No	No	No	No
Other loss allocation mechanism				
Other payment haircutting or loss distribution charge	If LCH determines that default loss will exceed default resources including assessments, on any day where there is an uncovered loss, each non-defaulting CP must pay a loss distribution charge equal to its pro-rata share, based on contributions, of the uncovered loss. The loss distribution charge can also include liquidity amounts required to enable physical settlement of contracts (subject to repayment from settlement proceeds)	No	No	No

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	LCH EquityClear	Hong Kong	EuroCCP	SGX
IM haircutting	No	No	No	No
Voluntary CP payments	No	No	No	No
Termination/compulsory settlement/mandatory allocation				
Type	Complete termination	No	No	No
Capped/uncapped	Uncapped	N/A	N/A	N/A
Trigger for use	LCH determines it does not have sufficient resources to meet obligations and liabilities	N/A	N/A	N/A
Termination price	Mid price using methodology for end of day margin run or if no such price last price used to calculate VM	N/A	N/A	N/A
Haircutting of termination payments	Yes, pro rata to shortfall in resources. Expressly excludes IM collateral.	N/A	N/A	N/A
Replenishment				
Default fund fixed or scalable	Scalable	Scalable	Not known	Scalable
Mandatory participant contributions	Yes, but replenishment suspended until DMP completes After DMP completes, replenish to fund floor (subject to minimum contribution) within 24 hours After cooling off period (ie 30 days after DMP completes), full replenishment to new fund size	Yes, must replenish within 3 business days of notice of application of guarantee fund	Yes, must top up deficiency in contribution within 1 business day of notice	Yes, must top up on demand if contributions used
Size/basis of calculation of participant replenishment	Variable based on size of new default fund subject to minimum contribution	Replenish amount of contribution used (subject to subsequent rescaling of fund/recalculation of contribution)	Replenish amount of contribution used	Replenish amount of contribution used (subject to subsequent rescaling of fund/recalculation of contribution)]
Cap on replenishment for multiple defaults	Up to 3 defaults in any 6 months	Appears uncapped, subject to resignation	Appears uncapped	Appears uncapped, subject to resignation

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	LCH EquityClear	Hong Kong	EuroCCP	SGX
Impact of resignation on replenishment	Not liable for replenishment if resign and close out whilst replenishment obligation suspended. Note shorter period of suspension for replenishment to fund floor	Assessments and replenishment capped at 3x contribution if resign within 3 business days of notice of application of default fund	No suspension of replenishment following default so standard resignation procedures apply	From date of receipt of resignation notice, liability for events occurring before termination of its status shall not exceed 3x contribution at date of notice

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