

	Derivatives Clearing Models		LCH		
	CME	SwapClear Member	SwapClear Member	SwapClear Clearing Client	
	Membership	FCM Client Clearing	SwapClear Member	SwapClear Clearing Client	
Description	CME permits clearing members to clear proprietary transactions, and if the clearing member is deemed to be a principal for its proprietary transactions, CME Rulebook, Rule 8F05 . The clearing member is deemed to be a principal for its proprietary transactions. Please See Column F for information on client transactions.	CME permits FCM clearing members to clear client transactions. The clearing member is deemed to be a guarantor and agent to the transactions cleared for its clients. CME Rulebook, Rule 8F05 .	LCH permits SwapClear Member to clear proprietary trades and client transactions of SwapClear Clearing Clients. LCH Procedures, Section 2C, SwapClear, Clearing Service, Sections 1.1 and 1.2, and 1.3.2 . The cleared transaction is between the SwapClear Member and LCH as principal. Please See Column F for information on client transactions.	LCH permits SwapClear Clearing Clients to clear transactions through a SwapClear Member. LCH Procedures, Section 2C, SwapClear, Clearing Service, Sections 1.1 and 1.3.2 . The cleared transaction is between the SwapClear Member and LCH as principal, with the SwapClear Member and SwapClear Clearing Client entering into a back-to-back transaction.	LCH permits FCM Clients to clear transactions through an FCM Clearing Member. FCM Procedures, Section 2.1.1 . The FCM Clearing Member acts as agent for its FCM Clients and is responsible for all obligations in connection with the transactions of its FCM Clients. FCM Regulations, Regulation 2.1 .
Direct/Indirect (i.e., whether pre-avoidance counterparties are in-privity with the CCP)	Direct	Indirect	Direct	Indirect	
Mechanics of submitting transactions	The clearing member submits data to CME for novation. CME Rulebook, Rule 8F4 .	The clearing member submits data to CME for novation. CME Rulebook, Rule 8F4 .	SwapClear Members submit transactions to LCH for "registration" via an "Approved Trade Source System". General Regulations, Section 23(a), LCH Procedures, Section 2C, SwapClear, Clearing Service, Section 1.1.1 .	SwapClear Clearing Clients submit transactions to LCH for "registration" via an "Approved Trade Source System". General Regulations, Section 23(a), LCH Procedures, Section 2C, SwapClear, Clearing Service, Section 1.1.1 .	For venue-mandated transactions, FCM Clients execute the trades on the platform which will be transmitted to LCH for "registration" via an "FCM Approved Trade Source System". For off-venue transactions, FCM Clients execute the trades bilaterally and submit such trades to LCH through an via an "FCM Approved Trade Source System". Upon FCM Clearing Member's confirmation following notification from LCH of such submission, the trade will be registered. FCM Procedures, Section 2.1.3 .
Mechanics of posting/receiving daily margin/payments	CME and the clearing member exchange settlement variation payments (equivalent to VM and settlement payments), and CME collects performance bond (i.e., initial margin) from the clearing member, in each case in respect of transactions in the clearing member's proprietary account on a net basis. CME Rulebook, Rules 814, 820 .	CME and the clearing member exchange settlement variation payments (equivalent to both VM and settlement payments) on a net basis across all positions in the same account, which may include transactions of the same type (i.e., futures, foreign futures, or cleared swaps) of multiple customers. CME collects performance bond (i.e., initial margin) from the clearing member on a net basis across the positions of the same customer whose positions are carried in the same account, but not across customers or across accounts. CME Rulebook, Rules 814, 820 .	Margin for a SwapClear Member's proprietary trades is calculated on a net basis across all proprietary accounts. General Regulations, Regulation 30(b), LCH Procedures, Section 2C, SwapClear, Clearing Service, Section 4.7 .	LCH collects initial margin and variation margin from the SwapClear Member on a net basis for positions held in a "Cross Omnibus Segregated Account" or an "Individual Segregated Account", in each case across the positions of the same customer whose positions are carried in the same account, but not across customers. LCH Procedures, Section 2C, SwapClear, Clearing Service, Section 1.2, and 1.3.2 . LCH collects initial margin and variation margin from the SwapClear Member on a net basis for positions held in a "Combined Cross Omnibus Segregated Account" across the positions in that account. LCH Procedures, Section 2C, SwapClear, Clearing Service, Section 1.2, and 1.3.2 .	LCH collects variation margin (called "variation settlement") and initial margin from the FCM Clearing Member on a net basis across positions of the same customer whose positions are carried in the same account, but not across customers. FCM Regulations, Regulation 2.1 .
Legal counterparty	Clearing Member	Clearing Member as agent for the FCM client	Clearing Member	Clearing Member	
Entire to whom CCP has recourse	Clearing Member	Clearing Member	Clearing Member	Clearing Member	
Liability/Obligations of Intermediary (if applicable)	N/A	The clearing member is guarantor and responsible for its clients' transactions	N/A	SwapClear Member is responsible for all obligations owed to LCH with respect to the transactions of its SwapClear clients. General Regulations, Regulation 30(a), Regulation 4(a) .	FCM Clearing Member is responsible for all obligations owed to LCH with respect to the transactions of its FCM Clients. FCM Regulations, Regulation 30(a) .
Available for done away transactions (i.e., whether a customer can clear trades executed with a person other than its clearing member?)	Yes	Yes	N/A	Yes	
Obligations to default fund/clearing fund – who bears these, how are they calculated, how are they segregated and what is its risk?	The clearing member bears responsibility for posting Guaranty Fund in respect of all its obligations to CME, which are calculated separately for interest rate swaps and other transactions. Guaranty Fund contributions are not segregated and available for loss mutualization. CME Rulebook, Rule 816 .	The clearing member bears responsibility for posting Guaranty Fund in respect of client transactions, which are calculated separately for interest rate swaps and other transactions. Guaranty Fund contributions are not segregated and available for loss mutualization. CME Rulebook, Rule 816 .	SwapClear Member bears Default Fund obligation. Default Rules, Schedule 6, Part A, Section 2.1 . The default fund calculation applies to be on the basis of all contracts cleared by the SwapClear Member.	SwapClear Member bears Default Fund obligation. Default Rules, Schedule 6, Part A, Section 2.1 . The default fund calculation applies to be on the basis of all contracts cleared by the SwapClear Member.	FCM Clearing Member bears Default Fund obligation. Default Rules, Schedule 6, Part A, Section 2.1 . The default fund calculation applies to be on the basis of all contracts cleared by the FCM Clearing Member.
Where is collateral held by the CCP?	CME states that collateral is maintained at the Federal Reserve Bank of Chicago, the Bank of Canada, commercial banks, and other collateral custodians primarily domiciled in the U.S., and that CME requires that commercial banks and collateral custodians provide segregation letters verifying that they adhere to the CFTC's segregation requirements for clearing members. PMM, p. 105-106 . CME appears to have rehypothecation rights with respect to collateral posted by clearing members. CME Rulebook, Rule 815 .	CME states that collateral is maintained at the Federal Reserve Bank of Chicago, the Bank of Canada, commercial banks, and other collateral custodians primarily domiciled in the U.S., and that CME requires that commercial banks and collateral custodians provide segregation letters verifying that they adhere to the CFTC's segregation requirements for clearing members. PMM, p. 105-106 . CME appears to have rehypothecation rights with respect to collateral posted by clearing members. CME Rulebook, Rule 815 .	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks. LCH appears to have rehypothecation rights with respect to collateral posted by clearing members.	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks. LCH appears to have rehypothecation rights with respect to collateral posted by clearing members.	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks. LCH appears to have rehypothecation rights with respect to collateral posted by clearing members.
How is initial margin (or similar) segregated?	A clearing member's proprietary performance bond is held in a separate account from customer performance bond. PMM, p. 86-97; CME Rulebook, Rule 930 .	A customer's positions and performance bond are legally segregated from the clearing member's proprietary positions and performance bond. A customer's performance bond for futures is exposed to loss arising from the default of other customers of the clearing member, but its performance bond for cleared swaps is subject to SLOC and is not generally exposed to such fellow customer risk. PMM, p. 86-97; CME Rulebook, Rule 930 . A clearing member's proprietary performance bond is held in a separate account from customer performance bond. PMM, p. 86-97; CME Rulebook, Rule 930 .	A SwapClear Member's proprietary positions and margin are held in a separate account from the SwapClear Member's client positions and related margin. LCH Procedures, Section 2C, SwapClear, Clearing Service, Sections 1.2 and 1.3.2 .	A SwapClear Clearing Client's positions and initial margin are legally segregated from the SwapClear Member's proprietary positions and initial margin. A SwapClear Clearing Client elects to have a Combined Cross Omnibus Segregated Account, it is exposed to loss arising from the default of other clients of the SwapClear Member. If it elects to have a Gross Omnibus Clearing Account, it should not generally be exposed to such fellow customer risk, and if it elects to have an Individual Segregated Account, it should not be exposed to any fellow customer risk. Default Rules, Sections 8(a) and 8(b); LCH Procedures, Section 2C, SwapClear Service, Sections 1.3.2 and 1.3.2 .	An FCM Client's positions and margin are legally segregated from the FCM Clearing Member's proprietary positions and margin. An FCM Client's initial margin is subject to SLOC and is not generally exposed to fellow customer risk. Default Rules, Sections 8(a) and 8(b); FCM Procedures, Section 2.1.5(a) .
Default management obligations (i.e., loss allocation/liquidity obligations) – who has these, what are they?	Clearing members have loss mutualization obligations. CME requires clearing members to replenish Guaranty Fund if used in default management process. Clearing Members may also be subject to portfolio gains haircutting and tear-up of positions. CME Rulebook, Rules 802, 8, and 808(B) 7, 802, 8, and 808(B) 8, 1 .	Only Clearing members have loss mutualization obligations. Customer transactions may be subject to portfolio gains haircutting and tear-up. CME Rulebook, Rules 802, 8 and 808(B) 7, 802, 8, and 808(B) 8, 1 .	SwapClear Member has loss mutualization obligations, which covers both assessments and replenishment of the default fund. In addition, LCH may apply variation margin haircuts, and require tear-up. Default Rules, Schedule 6, Part A, Section 2.1 .	SwapClear Member has loss mutualization obligations, which covers both assessments and replenishment of the default fund. In addition, LCH may apply variation margin haircuts, and require tear-up. Default Rules, Schedule 6, Part A, Section 2.1 .	FCM Clearing Member has loss mutualization obligations, which covers both assessment and replenishment of the default fund. In addition, LCH may require action participation, apply variation margin haircuts, and require tear-up. Default Rules, Schedule 6, Part A, Section 2.1 .
Treatment of clients upon intermediary default (if applicable)	N/A	Upon a clearing member's default, CME may immediately transfer customer positions and associated performance bond value to another clearing member, or close-out the customer positions. CME Rulebook, Rules 802, 8 and 808(B) 7 . In the event of a clearing member's failure, a customer should generally have a customer claim for its margin and positions under the CFTC's Part 150 Rules and Subchapter IV of Chapter 7 of the US Bankruptcy Code.	N/A	LCH will seek to auction the portfolio, or a portion of the portfolio, of the SwapClear Member to another SwapClear Member including client transactions. At any time, a SwapClear Clearing Client may select a "Backup Clearing Member" to which its contracts may be ported. Procedures, Section 2C, SwapClear Service, Sections 1.2 and 1.3.2 . The treatment of a SwapClear Clearing Client's positions and related margin in the event of a failure of the SwapClear Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the SwapClear Member, its entity type and the clearing documentation.	LCH will seek to auction the portfolio, or a portion of the portfolio, of the FCM Clearing Member to another FCM Clearing Member, including client transactions. FCM Procedures, Section 2.1.17 . In the event of an FCM Clearing Member's failure, an FCM Client should generally have a customer claim for its margin and positions under the CFTC's Part 150 Rules and Subchapter IV of Chapter 7 of the US Bankruptcy Code.
Obligations of intermediary if client defaults (if applicable)	N/A	The clearing member is guarantor for all obligations to CME in respect of trades submitted on behalf of clients. There is no CME rule permitting a clearing member to terminate novated trades that were submitted on behalf of a client upon the client's default.	N/A	If the SwapClear Member determines that an early termination date has occurred with respect to a client transaction, it may instruct LCH to transfer the related contract to its proprietary account. Procedures, Section 2C, SwapClear Service, Section 1.1.3.1 .	If the FCM Clearing Member determines that a default has occurred with respect to a client transaction, it may instruct LCH to transfer the relevant contract to its proprietary account. FCM Procedures, Section 2.1.13 .
Whether there is industry or ad hoc opinion available to address netting against U.S. Customers for U.S. Regulatory Capital purposes	Yes	Yes	Yes	Yes	

This information contained in this chart is high level summary based on publicly available information and documents of relevant clearing members. Does not address any regulatory requirements (except to the extent reflected in the rules, and except new 15c, and does not constitute an legal advice. Firms should consult counsel in the relevant jurisdictions with respect to their rights and obligations in connection with their clearing models, including with respect to their rights in the event of an insolvency of an intermediary clearing member.