ISDA Safe, Efficient Markets

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FICC Clearing Models

	Sponsored Member Service			Agent Clearing Service			
	Sponsored DVP Service	Sponsored GC Service (Non-CIL)	Collateral in Lieu (CIL) Service	Agent Clearing Service	ACS Triparty	Full Service Netting Members	Centrally Cleared Institutional Triparty (CCIT) Service
Description	FICC permits certain Netting Members (Sponsoring Members) to sponsor customers into a limited-purpose membership (Sponsored Members), where the Sponsoring Member acts as processing agent and guarantor in respect of the Sponsored Member's transactions. Transactions settle through FICC (i.e., the Sponsoring Member delivers and receives the cash and securities to and from FICC, respectively, on behalf of the Sponsored Member; Sponsored Members' payment and delivery obligations are netted across all positions in the same customer account through FICC's netting system). FICC offers Sponsoring Members the option to treat a Sponsored Member's account as a segregated account.	FICC permits certain Netting Members (Sponsoring Members) to sponsor customers into a limited-purpose membership (Sponsored Members), where the Sponsoring Member acts as processing agent and guarantor. "Sponsored GC Trades" settle using the same triparty accounts at BNYM as the GC Funds Borrower and GC Funds Lender typically use to settle uncleared triparty repos (i.e., delivery and payment obligations are satisfied on a gross basis between the two pre-novation counterparties). FICC offers Sponsoring Members the option to treat a Sponsored Member's account as a segregated account.	FICC permits certain Netting Members (Sponsoring Members) to sponsor customers into a limited-purpose membership (Sponsored Members), where the Sponsoring Member acts as processing agent. FICC permits Sponsored Members (in such a capacity, a "CIL Funds Lender") to enter into "Sponsored GC CIL Trades" with any Netting Member or any Netting Member's Indirect Participant, which trades are subject to the rules of Sponsored GC Service with certain adjustments: •FICC generally does not require the Sponsoring Member to post initial margin for, or guarantee, a CIL Funds Lender's obligations. •FICC requires the CIL Funds Lender to pledge to FICC the purchased securities received in the start leg of the repo. Sponsored GC CIL Trades need to have a haircut of no less than 2%. •FICC allows a Sponsoring Member to submit for clearing under the CIL Service transactions executed with multiple CIL Funds Lenders through a joint trading account even if the investment manager has not yet allocated the trades. •FICC does not require the CIL Funds Lender (or its Sponsoring Member) to exchange Funds-Only Settlement Amounts with FICC in relation to the CIL Funds Lender's positions (though the pre-novation counterparty collateral provider is still subject to Funds-Only Settlement Amount obligations). FICC does not permit Sponsoring Members to treat an account in which Sponsored GC CIL Trades are recorded as a segregated account.	FICC permits certain Netting Members (Agent Clearing Members) to submit to FICC for clearing trades entered into between the Agent Clearing Member's customer (Executing Firm Customer) and a Netting Member, which may be the Agent Clearing Member or a different Netting Member, a Sponsored Member or another Executing Firm Customer on whose behalf it or another Agent Clearing Member is acting. FICC offers Agent Clearing Members the option to treat an Executing Firm Customer's account as a segregated account.	FICC permits certain Netting Members (Agent Clearing Members) to submit to FICC for clearing trades entered into between the Agent Clearing Member's customer (Executing Firm Customer) and a Netting Member, which may be the Agent Clearing Member or a different Netting Member, a Sponsored Member or another Executing Firm Customer on whose behalf it or another Agent Clearing Member is acting. "ACS Triparty Trades" settle using the same triparty accounts at BNYM as the ACS Triparty Funds Borrower and ACS Triparty Funds Lender typically use to settle uncleared triparty repos (i.e., delivery and payment obligations are satisfied on a gross basis between the two pre-novation counterparties). FICC offers Agent Clearing Members the option to treat an Executing Firm Customer's account as a segregated account.	FICC requires Netting Members to submit all Treasury repos between Netting Members to FICC for clearing.	FICC permits certain institutional investors to become limited-purpose members (CCIT Members) to submit to FICC for clearing tri-party repo transactions between a CCIT Member, as repo buyer, and a Netting Member.
Direct/Indirect (i.e., whether pre-novation counterparties are in privity with the CCP)	Direct	Direct	Direct	Indirect (for Executing Firm Customers)	Indirect (for Executing Firm Customers)	Direct	Direct
Membership eligibility	A Netting Member that is a Tier One Netting Member, other than an Inter-Dealer Broker Netting Member, or a Non-IDB Repo Broker with respect to activity in its Segregated Repo Account, shall be eligible to apply to become a Sponsoring Member. See FICC Rulebook, Section 2(b)(ii) of Rule 2 and Section 2(a) of Rule 3A. All Netting Members are classified as Tier One Netting Members, except for CCIT Members and Registered Investment Company Netting Members, which are designated as Tier Two Members, or as otherwise determined by FICC. See FICC Rulebook, Sections 2(a) and 2(c) of Rule 2 and Section 3(a)(viii) of Rule 2A. Any Person may be a Sponsored Member. See FICC Rulebook, Section 3(a) of Rule 2 and Section 3(a) of Rule 3A.	A Netting Member that is a Tier One Netting Member, other than an Inter-Dealer Broker Netting Member, or a Non-IDB Repo Broker with respect to activity in its Segregated Repo Account, shall be eligible to apply to become a Sponsoring Member. See FICC Rulebook, Section 2(b)(ii) of Rule 2 and Section 2(a) of Rule 3A. All Netting Members are classified as Tier One Netting Members, except for CCIT Members and Registered Investment Company Netting Members, which are designated as Tier Two Members, or as otherwise determined by FICC. See FICC Rulebook, Sections 2(a) and 2(c) of Rule 2 and Section 3(a)(viii) of Rule 2A. Any Person may be a Sponsored Member. See FICC Rulebook, Section 3(a) of Rule 2 and Section 3(a) of Rule 3A.	A Netting Member that is a Tier One Netting Member, other than an Inter-Dealer Broker Netting Member, or a Non-IDB Repo Broker with respect to activity in its Segregated Repo Account, shall be eligible to apply to become a Sponsoring Member. See FICC Rulebook, Section 2(b)(ii) of Rule 2 and Section 2(a) of Rule 3A. All Netting Members are classified as Tier One Netting Members, except for CCIT Members and Registered Investment Company Netting Members, which are designated as Tier Two Members, or as otherwise determined by FICC See FICC Rulebook, Sections 2(a) and 2(c) of Rule 2 and Section 3(a)(viii) of Rule 2A. Any Person may be a Sponsored Member. See FICC Rulebook, Section 3(a) of Rule 2 and Section 3(a) of Rule 3A. Any Sponsored Member is eligible to be a CIL Funds Lender by being a GC Funds Lender in respect of a Sponsored GC CIL Trade.	A Netting Member, other than an Inter-Dealer Broker Netting Member, may be approved by FICC to be an Agent Clearing Member. See FICC Rulebook, Section 2(b)(i) of Rule 2 and Section 2(a) of Rule 8. Any Person may be an Executing Firm Customer. See FICC Rulebook, Section 3(b) of Rule 2 and Section 3(a) of Rule 8.	A Netting Member, other than an Inter-Dealer Broker Netting Member, may be approved by FICC to be an Agent Clearing Member. See FICC Rulebook, Section 2(b)(i) of Rule 2 and Section 2(a) of Rule 8. Any Person may be an Executing Firm Customer. See FICC Rulebook, Section 3(b) of Rule 2 and Section 2(a) of Rule 8. Any Executing Firm Customer or Agent Clearing Member is eligible to be an ACS Triparty Funds Lender (with entitlement to receive the purchased securities in exchange for cash at the end leg of an ACS Triparty Trade) or ACS Triparty Funds Borrower (with obligation to deliver the purchased securities in exchange for cash at the end leg of an ACS Triparty Trade).	Netting Membership is limited to banks, broker-dealers, FCMs, IDBs, insurance companies, registered clearing agencies, GSEs, RICs, and foreign equivalents to the enumerated items as well as any Person permitted by FICC. See FICC Rulebook, Section 3 of Rule 2A.	FICC may approve an application of any Person, other than a RIC, to become a CCIT Member upon a determination that the applicant meets a series of requirements regarding its financial responsibility, operational capacity, ability to pay required fees, compliance with legal and regulatory standards, and absence of statutory disqualifications or material adverse findings. See FICC Rulebook, Section 2(a) of Rule 3B.
Mechanics of submitting transactions	Sponsoring Member submits data to FICC for novation. For non-forward starting done-with trades, FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a repo transaction. For all other trades, FICC also novates the on-leg (i.e., the obligation of the repo buyer to transfer cash to the repo seller against securities).	Sponsoring Member submits data to FICC for novation. FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a repo transaction.	Sponsoring Member submits data to FICC for novation. FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a Sponsored GC CIL Trade.	The Agent Clearing Member submits data to FICC on behalf of the Executing Firm Customer for novation. For non-forward starting done-with trades, FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a repo transaction. For all other trades, FICC also novates the on-leg (i.e., the obligation of the repo buyer to transfer cash to the repo seller against securities).	The Agent Clearing Member submits data to FICC on behalf of the Executing Firm Customer for novation. FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of an ACS Triparty Trade.	Each Netting Member submits data to FICC for novation. FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a repo transaction.	CCIT Member (or a Joint Account Submitter acting for multiple CCIT Members in a Joint Account) submits the trade to FICC for novation. For Joint Accounts, the Joint Account Submitter must submit the trade settlement allocation. FICC only novates the off-leg (i.e., the obligation of the repo buyer to transfer securities and the obligation of the repo seller to transfer cash on the repurchase date) of a repo transaction.
Mechanics of posting/receiving daily margin/payments	FICC collects and posts variation margin (Funds Only Settlement) and settlement amounts only from and to, respectively, the Sponsoring Member, which amounts are calculated on a net basis across all Sponsored Members of the same Sponsoring Member. See FICC Rulebook, Sections 8(a) and 9(a) of Rule 3A. These amounts flow through an account of the Sponsoring Member at BNYM. FICC collects and posts initial margin (Clearing Fund or Segregated Customer Margin) only from and to, respectively, the Sponsoring Member, which amount is calculated on a net basis across the same Sponsored Member's positions, but mostly not netted across different Sponsored Members. See FICC Rulebook, Section 10 of Rule 3A. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund or Segregated Customer Margin serves both purposes.	The mark-to-market and settlement amounts are settled between the GC Funds Borrower and GC Funds Lender through BNYM's triparty platform. FICC directs the GC Funds Borrower and GC Funds Lender to make such payments and delivery to each other, following which the obligations between each pre-novation counterparty and FICC are deemed to be satisfied. Funds-Only Settlement Amounts (which are limited to certain interest-related amounts for Sponsored GC Trades) are settled through the Sponsoring Member at the level of Sponsoring Member Omnibus Account. FICC collects and posts initial margin (Clearing Fund or Segregated Customer Margin) only from and to, respectively, the Sponsoring Member, which amount is calculated on a net basis across the same Sponsored Member's positions, but mostly not netted across different Sponsored Members. See FICC Rulebook, Section 10 of Rule 3A. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund or Segregated Customer Margin serves both purposes.	In general, because FICC requires CIL Funds Lenders to pledge to FICC the purchased securities received in the start leg of the repo, FICC does not require Sponsoring Member to post initial margin for CIL Funds Lender's obligations, subject to a limited exception described below. FICC also does not require the CIL Funds Lender (or its Sponsoring Member) to exchange Funds-Only Settlement Amounts with FICC in relation to the CIL Funds Lender's positions (though the pre-novation counterparty collateral provider is still subject to Funds-Only Settlement Amount obligations). FICC collects and posts initial margin (Clearing Fund) from and to, respectively, the Sponsoring Member only if (1) the CIL Funds Lender is allowed to enter into transactions with the Sponsoring Member or a Segregated Indirect Participant of the Sponsoring Member and (2) the Sponsoring Member or its affiliate has a Segregated Indirect Participants Account. The initial margin amount is calculated as if the Sponsored GC CIL Trades were subject to the required Clearing Fund deposit calculation, minus the required haircuts on the Sponsored GC CIL Trades See FICC Rulebook, Section 2(c) of Margin Component Schedule. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes.	FICC collects and posts variation margin (Funds Only Settlement), initial margin (Clearing Fund), and settlement amounts from and to, respectively, the Agent Clearing Member, on a net basis across all trades carried in the same account. An Agent Clearing Member cannot carry Executing Firm Customer trades and proprietary trades in the same account. As a result, margin and settlement amounts can be calculated on a net basis across Executing Firm Customer trades, but netting is not permitted between proprietary and Executing Firm Customer trades. See FICC Rulebook, Section 7(b) of Rule 8. If Executing Firm Customer elects to post margin on a segregated basis, FICC collects and posts initial margin (Segregated Customer Margin) only from and to, respectively, the Agent Clearing Member which amount is calculated on a net basis across the same Executing Firm Customer's positions, but not netted across different Executing Firm Customers. See FICC Rulebook, Section 1a of Rule 4. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund or Segregated Customer Margin serves both purposes.	The mark-to-market and settlement amounts are settled between ACS Triparty Funds Borrower and ACS Triparty Funds Lender through BNYM's triparty platform. FICC directs ACS Triparty Funds Borrower and ACS Triparty Funds Lender to make such payments and delivery to each other, following which the obligations between each pre-novation counterparty and FICC are deemed to be satisfied. Funds-Only Settlement Amounts (which are limited to certain interest-related amounts for ACS Triparty Trades) are settled through the Agent Clearing Member at the level of Agent Clearing Member Omnibus Account (or, where elected Segregated Indirect Participants Account). See FICC Rulebook, Section 8 of Rule 8. FICC collects and posts initial margin (Clearing Fund) from and to, respectively, the Agent Clearing Member, on a net basis across all trades carried in the same account (ACS Triparty Trades are recorded in an Agent Clearing Member Omnibus Account alongside other Agent Clearing Transactions). An Agent Clearing Member cannot carry Executing Firm Customer trades and proprietary trades in the same account. As a result, margin is calculated on a net basis across Executing Firm Customer trades, but netting is not permitted between proprietary and Executing Firm Customer trades. If Executing Firm Customer elects to post margin on a segregated basis, FICC collects and posts initial margin (Segregated Customer Margin) only from and to, respectively, the Agent Clearing Member, which amount is calculated on a net basis across the same Executing Firm Customer's positions, but not netted across different Executing Firm Customers. *Note that in FICC does not have separate initial margin and default funds; instead, Clearing Fund or Segregated Customer Margin serves both purposes.	FICC collects, returns, and posts variation margin (Funds Only Settlement), initial margin (Clearing Fund*), and settlement amounts, as applicable, from and to the Netting Member. Such amounts are calculated on a net basis across all positions carried in the same FICC account of the Netting Member, which may include both proprietary and, if the Netting Member is acting as a Submitting Member, its Executing Firm customers' trades. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes.	FICC collects and posts variation margin (Funds Only Settlement) and settlement amounts directly from and to the CCIT Members on a net basis as if they were full Netting Members. CCIT Members are not subject to initial margin (Clearing Fund*) requirements. Instead, CCIT Members are required to pledge the purchased securities they receive on the on-leg (i.e., the initial transfer of securities by the repo seller to the repo buyer against cash on the purchase date) of a trade to FICC to secure their obligations to FICC. See FICC Rulebook, Sections 11 and 13 of Rule 3B. *Note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes
Legal counterparty	Sponsored Member (Sponsoring Member acts as processing agent and guarantor)	Sponsored Member (Sponsoring Member acts as processing agent and guarantor)	CIL Funds Lender (Sponsoring Member acts as processing agent)	Agent Clearing Member	Agent Clearing Member	Netting Member	CCIT Member
Entity to whom CCP has recourse	Both Sponsored Member as counterparty to the cleared transaction and its Sponsoring Member (as guarantor)	Both Sponsored Member as counterparty to the cleared transaction and its Sponsoring Member (as guarantor)	CIL Funds Lender as counterparty to the cleared transaction, though FICC can rely on the Sponsoring Member's Clearing Fund in addition to FICC's lien on the purchased securities. FICC also has recourse to the Sponsoring Member in the event the Sponsoring Member elects to terminate the CIL Fund Lender's transactions pursuant to Section 16 of FICC Rule 3A.	Agent Clearing Member. See FICC Rulebook, Section 7(h) of Rule 8.	Agent Clearing Member. See FICC Rulebook, Section 7(h) of Rule 8.	Netting Member	CCIT Member
Liability/obligations of intermediary (if applicable)	Sponsoring Member guarantees Sponsored Members' performance to FICC.	Sponsoring Member guarantees Sponsored Members' performance to FICC.	Sponsoring Member generally does not guarantee CIL Funds Lenders' performance to FICC, unless it elects to liquidate the trade pursuant to Section 16 of FICC Rule 3A.	Agent Clearing Member is responsible for all obligations to FICC in respect of trades submitted on behalf of Executing Firm Customers.	Agent Clearing Member is responsible for all obligations to FICC in respect of trades submitted on behalf of Executing Firm Customers.	N/A	N/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	Yes	Yes	Yes	N/A	N/A
Obligations to default fund/clearing fund – who bears these, how are they calculated, how are they segregated and what is at risk?	If Sponsored Member elects to post margin on a non-segregated basis, Sponsoring Member bears Clearing Fund obligation in respect of Sponsored Member Trades, which is mostly calculated on a gross (i.e., Sponsored Member by Sponsored Member) basis, not segregated from FICC's proprietary assets, and available for loss mutualization. See FICC Rulebook, Section 12 of Rule 3A; Rule 4. If Sponsored Member elects to post margin on a segregated basis, Sponsoring Member is generally required to collect Segregated Customer Margin from the Sponsored Member and on-post that Margin to FICC. The Segregated Customer Margin requirement is calculated on a gross (i.e., Sponsored Member by Sponsored Member) basis, and held segregated from FICC's proprietary assets and not available to satisfy the obligations of any person other than the Sponsored Member for whom the margin is held. See FICC Rulebook, Rule 4.	If Sponsored Member elects to post margin on a non-segregated basis, Sponsoring Member bears Clearing Fund obligation in respect of Sponsored Member Trades, which is mostly calculated on a gross (i.e., Sponsored Member by Sponsored Member) basis, not segregated from FICC's proprietary assets, and available for loss mutualization. See FICC Rulebook, Section 12 of Rule 3A; Rule 4. If Sponsored Member elects to post margin on a segregated basis, Sponsoring Member is generally required to collect Segregated Customer Margin from the Sponsored Member and on-post that Margin to FICC. The Segregated Customer Margin requirement is calculated on a gross (i.e., Sponsored Member by Sponsored Member) basis, held segregated from FICC's proprietary assets and not available to satisfy the obligations of any person other than the Sponsored Member for whom the margin is held. See FICC Rulebook, Rule 4.	In general, because FICC requires CIL Funds Lenders to pledge to FICC the purchased securities received in the start leg of the repo, FICC does not require Sponsoring Member to post initial margin (Clearing Fund) for CIL Funds Lender's obligations, subject to a limited exception described below. If CIL Funds Lender is allowed to enter into positions with the Sponsoring Member or a Segregated Indirect Participant of the Sponsoring Member and the Sponsoring Member or its affiliate has a Segregated Indirect Participants Account, Sponsoring Member bears Clearing Fund obligation in respect of the Sponsored GC CIL Trades, which is mostly calculated on a gross (i.e., CIL Funds Lender by CIL Funds Lender) basis, not segregated from FICC's proprietary assets, and available for loss mutualization. The Clearing Fund obligation is calculated as if the Sponsored GC CIL Trades were subject to the required Clearing Fund deposit calculation, minus the required haircuts on the Sponsored GC CIL Trades See FICC Rulebook, Section 2(c) of Margin Component Schedule.	If Executing Firm Customer elects to post margin on non-segregated basis, Agent Clearing Member bears Clearing Fund obligation in respect of trades submitted on behalf of Executing Firm Customers, which is calculated on a net basis across Executing Firm Customer positions. However, Executing Firm Customer positions are not netted against the Agent Clearing Member's proprietary positions for purposes of such calculation. Clearing Fund is not segregated from FICC's proprietary assets, and is available for loss mutualization. See FICC Rulebook, Rule 4. If Executing Firm Customer elects to post margin on segregated basis, Agent Clearing Member is generally required to collect Segregated Customer Margin from the Executing Firm Customer and on-post that margin to FICC. The Segregated Customer Margin requirement is calculated on a gross (i.e., Executing Firm Customer by Executing Firm Customer) basis, segregated from FICC's proprietary assets and not available to satisfy the obligations of any person other than the Executing Firm Customer for whom the margin is held. See FICC Rulebook, Rule 4.	If Executing Firm Customer elects to post margin on non-segregated basis, Agent Clearing Member bears Clearing Fund obligation in respect of trades submitted on behalf of Executing Firm Customers, which is calculated on a net basis across Executing Firm Customer positions. However, Executing Firm Customer positions are not netted against the Agent Clearing Member's proprietary positions for purposes of such calculation. Clearing Fund is not segregated from FICC's proprietary assets, and is available for loss mutualization. See FICC Rulebook, Rule 4. If Executing Firm Customer elects to post margin on segregated basis, Agent Clearing Member is generally required to collect Segregated Customer Margin from the Executing Firm Customer and on-post that Margin to FICC. The Segregated Customer Margin requirement is calculated on a gross (i.e., Executing Firm Customer by Executing Firm Customer) basis, segregated from FICC's proprietary assets and not available to satisfy the obligations of any person other than the Executing Firm Customer for whom the margin is held See FICC Rulebook, Rule 4.	Each Netting Member bears Clearing Fund obligation, which is calculated on a net basis (i.e., across the Netting Member's proprietary positions and, if the Netting Member is also a Submitting Firm, any related Executing Firm positions), not segregated from FICC's proprietary assets, and available for loss mutualization. See FICC Rulebook, Rule 4.	CCIT Members are not subject to Clearing Fund requirements. Instead, CCIT Members are required to pledge the purchased securities they receive on the on-leg (i.e., the initial transfer of securities by the repo seller to the repo buyer against cash on the purchase date) of a trade to FICC to secure their obligations to FICC. See FICC Rulebook, Section 11 of Rule 3B.
Where is collateral held by the CCP?	FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC is required to hold all Segregated Customer Margin at the Federal Reserve Bank of New York or a FDIC-insured bank. FICC has limited rehypothecation rights with respect to Clearing Fund and no rehypothecation rights with respect to Segregated Customer Margin. See FICC Rulebook, Section 5 of Rule 4	FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC is required to hold all Segregated Customer Margin at the Federal Reserve Bank of New York or a FDIC-insured bank. FICC has limited rehypothecation rights with respect to Clearing Fund and no rehypothecation rights with respect to Segregated Customer Margin. See FICC Rulebook, Section 5 of Rule 4	The purchased securities over which FICC has a lien are held at BNYM. FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC has limited rehypothecation rights with respect to Clearing Fund. See FICC Rulebook, Section 5 of Rule 4	FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC is required to hold all Segregated Customer Margin at the Federal Reserve Bank of New York or a FDIC-insured bank. FICC has limited rehypothecation rights with respect to Clearing Fund and no rehypothecation rights with respect to Segregated Customer Margin. See FICC Rulebook, Section 5 of Rule 4.	FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC is required to hold all Segregated Customer Margin at the Federal Reserve Bank of New York or a FDIC-insured bank. FICC has limited rehypothecation rights with respect to Clearing Fund and no rehypothecation rights with respect to Segregated Customer Margin. See FICC Rulebook, Section 5 of Rule 4.	FICC has stated that it holds Clearing Fund at a Federal Reserve Bank or a FDIC-insured bank. FICC has limited rehypothecation rights. See FICC Rulebook, Section 5 of Rule 4.	The purchased securities pledged by the CCIT Members are held in a tri-party account at BNYM.
How is initial margin (or similar) segregated?	There is no segregation requirement for Clearing Fund from any other assets (note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes). FICC holds Segregated Customer Margin in a separate account from any margin with respect to the Sponsoring Member's proprietary positions (note that FICC does not have separate initial margin and default funds; instead, Segregated Customer Margin serves both purposes). The segregation is equivalent to LSOC. Segregated Customer Margin can be used exclusively to settle and margin the obligations of the Sponsored Member for whom the assets are held. See FICC Rulebook, Section 1a of Rule 4	There is no segregation requirement for Clearing Fund from any other assets (note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes). FICC holds Segregated Customer Margin in a separate account from any margin with respect to the Sponsoring Member's proprietary positions (note that FICC does not have separate initial margin and default funds; instead, Segregated Customer Margin serves both purposes). The segregation is equivalent to LSOC. Segregated Customer Margin can be used exclusively to settle and margin the obligations of the Sponsored Member for whom the assets are held. See FICC Rulebook, Section 1a of Rule 4	There is no segregation requirement for Clearing Fund from any other assets (note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes).	There is no segregation requirement for Clearing Fund from any other assets (note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes). FICC holds Segregated Customer Margin in a separate account from any margin with respect to the Agent Clearing Member's proprietary positions (note that FICC does not have separate initial margin and default funds; instead, Segregated Customer Margin serves both purposes). The segregation is equivalent to LSOC. Segregated Customer Margin can be used exclusively to settle and margin the obligations of the Executing Firm Customer for whom the assets are held. See FICC Rulebook, Section 1a of Rule 4.	There is no segregation requirement for Clearing Fund from any other assets (note that FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes). FICC holds Segregated Customer Margin in a separate account from any margin with respect to the Agent Clearing Member's proprietary positions (note that FICC does not have separate initial margin and default funds; instead, Segregated Customer Margin serves both purposes). The segregation is equivalent to LSOC. Segregated Customer Margin can be used exclusively to settle and margin the obligations of the Executing Firm Customer for whom the assets are held. See FICC Rulebook, Section 1a of Rule 4.	There is no segregation requirement for Clearing Fund from any other assets (note that in non-segregated models FICC does not have separate initial margin and default funds; instead, Clearing Fund serves both purposes).	N/A
Default management obligations (i.e., loss allocation/liquidity obligations) – who has these, what are they?	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Only Sponsoring Members have loss mutualization and CCLF obligations. See FICC Rulebook, Section 12 of Rule 3A; Rule 22A.	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Only Sponsoring Members have loss mutualization and CCLF obligations. See FICC Rulebook, Section 12 of Rule 3A; Rule 22A.	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Only Sponsoring Members have loss mutualization and CCLF obligations.	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Only Agent Clearing Members have loss mutualization and CCLF obligations, and such obligations are only with respect to Clearing Fund (not Segregated Customer Margin)	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Only Agent Clearing Members have loss mutualization and CCLF obligations, and such obligations are only with respect to Clearing Fund (not Segregated Customer Margin).	FICC has a capped contingency liquidity facility (CCLF) that requires members to enter into liquidity repos with FICC in certain instances. FICC does not have variation margin gains haircutting or tear-ups. Each Netting Member has loss mutualization and CCLF obligations.	FICC does not have variation margin gains haircutting or tear-ups. CCIT Members have limited loss mutualization and liquidity (akin to CCLF) obligations relating only to the trades they entered into See FICC Rulebook, Sections 7 and 14 of Rule 3B.
Treatment of clients upon intermediary default (if applicable)	FICC has discretion to close out, continue to settle, or transfer all or some of the Sponsored Member Transactions upon the Sponsoring Member's default. See FICC Rulebook, Section 14(d) of Rule 3A. The treatment of a Sponsored Member's positions and related margin in the event of a failure of the Sponsoring Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Sponsoring Member, its entity type and the clearing documentation. If the Sponsoring Member is organized in the United States, the Sponsored Member's claims for the return of its margin and any amounts paid on its positions may, depending on (among other things) the documentation of the relationship between the Sponsoring Member and the Sponsored Member, be treated as customer claims under the Securities Investor Protection Act (SIPA) or the claims of an entitlement holder under Article 8 of the Uniform Commercial Code.	FICC has discretion to close out, continue to settle, or transfer all or some of the Sponsored Member Transactions upon the Sponsoring Member's default. See FICC Rulebook, Section 14(d) of Rule 3A. The treatment of a Sponsored Member's positions and related margin in the event of a failure of the Sponsoring Member would depend on, among other things, the bankruptcy and insolvency law applicable to the Sponsoring Member, its entity type and the clearing documentation. If the Sponsoring Member is organized in the United States, the Sponsored Member's claims for the return of its margin and any amounts paid on its positions may, depending on (among other things) the documentation of the relationship between the Sponsoring Member and the Sponsored Member, be treated as customer claims under the Securities Investor Protection Act (SIPA) or the claims of an entitlement holder under Article 8 of the Uniform Commercial Code.	In the event of Sponsoring Member default, if the pre-novation counterparty of the CIL Funds Lender is not the defaulting Sponsoring Member or an Indirect Participant of that Sponsoring Member or its affiliate, FICC would be able to settle the trade with the pre-novation counterparty by exercising its lien over the purchased securities and instructing BNYM (or allowing the CIL Funds Lender) to remove the securities from the account of such CIL Funds Lender against the repurchase price. If the pre-novation counterparty of the CIL Funds Lender is the defaulting Sponsoring Member or an Indirect Participant of that Sponsoring Member or its affiliate, FICC may seek to settle or port to another Sponsoring Member such Sponsored GC CIL Trades. To the extent it were unable to do so, FICC would terminate the transaction, in which case the CIL Funds Lender would be able to withdraw and liquidate the purchased securities. The CIL Funds Lender would then have a claim against (or be liable to) FICC for any positive (or negative) difference between the repurchase price and the value of the purchased securities as calculated by FICC. The Sponsoring Member would not be liable to FICC if the CIL Funds Lender failed to pay any such negative difference, but its Clearing Fund could be used to cover such amount See FICC Rulebook, Section 14(e) of Rule 3A.	FICC does not have a legal relationship with Executing Firm Customers. FICC has discretion to close out, continue to settle, or transfer all or some of the Agent Clearing Transactions upon the Agent Clearing Member's default. See FICC Rulebook, Section 9(c) of Rule 8. The treatment of an Executing Firm Customer's positions and related margin in the event of a failure of the Agent Clearing Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Agent Clearing Member, its entity type and the clearing documentation. If the Agent Clearing Member is organized in the United States, the Executing Firm Customer's claims for the return of its margin and any amounts paid on its positions may, depending on (among other things) the documentation of the relationship between the Agent Clearing Member and the Executing Firm Customer, be treated as customer claims under the Securities Investor Protection Act (SIPA) or the claims of an entitlement holder under Article 8 of the Uniform Commercial Code.	FICC does not have a legal relationship with Executing Firm Customers. FICC has discretion to close out, continue to settle, or transfer all or some of the Agent Clearing Transactions upon the Agent Clearing Member's default. See FICC Rulebook, Section 9(c) of Rule 8. The treatment of an Executing Firm Customer's positions and related margin in the event of a failure of the Agent Clearing Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Agent Clearing Member, its entity type and the clearing documentation. If the Agent Clearing Member is organized in the United States, the Executing Firm Customer's claims for the return of its margin and any amounts paid on its positions may, depending on (among other things) the documentation of the relationship between the Agent Clearing Member and the Executing Firm Customer, be treated as customer claims under the Securities Investor Protection Act (SIPA) or the claims of an entitlement holder under Article 8 of the Uniform Commercial Code.	N/A	N/A
Obligations of intermediary if client defaults (if applicable)	Sponsoring Member is guarantor of Sponsored Member's performance to FICC. If so permitted under agreement between Sponsoring Member and the defaulted Sponsored Member, the Sponsoring Member can close-out all of the Sponsored Member's trades and the Sponsoring Member's corresponding house trades. See FICC Rulebook, Section 16 of Rule 3A.	Sponsoring Member is guarantor of Sponsored Member's performance to FICC. If so permitted under agreement between Sponsoring Member and the defaulted Sponsored Member, the Sponsoring Member can close-out all of the Sponsored Member's trades and the Sponsoring Member's corresponding house trades. See FICC Rulebook, Section 16 of Rule 3A.	In the event of CIL Funds Lender default, Sponsoring Member generally does not guarantee CIL Funds Lenders' performance to FICC, unless it elects to liquidate the trade. Otherwise, FICC can settle the trade with the pre-novation counterparty by exercising its lien over the purchased securities and instructing BNYM to remove the securities from the account of such CIL Funds Lender against the repurchase price See FICC Rulebook, Sections 1, 13(e), 16 or Rule 3A.	Agent Clearing Member is responsible for all obligations to FICC in respect of trades submitted on behalf of Executing Firm Customers. See FICC Rulebook, Section 7(h) of Rule 8. If so permitted under agreement between Agent Clearing Member and the defaulted Executing Firm Customer, the Agent Clearing Member can close-out all of the Executing Firm Customer's trades and the Agent Clearing Member's corresponding house trades. See FICC Rulebook, Section 10 of Rule 8.	Agent Clearing Member is responsible for all obligations to FICC in respect of trades submitted on behalf of Executing Firm Customers. See FICC Rulebook, Section 7(h) of Rule 8. If so permitted under agreement between Agent Clearing Member and the defaulted Executing Firm Customer, the Agent Clearing Member can close-out all of the Executing Firm Customer's trades and the Agent Clearing Member's corresponding house trades. See FICC Rulebook, Section 10 of Rule 8.	N/A	N/A
Whether there is industry or ad hoc opinion available to address netting against U.S. Customers for U.S. Regulatory Capital purposes	Yes for Sponsoring Members (this opinion coverage is in addition to the opinion covering their proprietary activities as Netting Members; see Column G) No for Sponsored Members	Yes (for done-with trades only)	No (but Sponsored GC CIL Trades generally are not expected to generate exposure for which netting is necessary/beneficial)	Yes	No	Yes	Yes

CME Models and ICC Model

	CME Models			ICC Model	
	Member	Supported User	Independent User	Treasury Participant	Non-Participant Party
Description	CMESC permits a Member to submit to CMESC for clearing trades between it and any other Participant, and to authorize Users to submit trades for clearing. CMESC Rule 305(c), CMESC Procedure 15-3(a). The Member's cleared proprietary transaction is between the Member and CMESC as principals. Please see Columns J and K for information on client (i.e., User) trades.	CMESC permits a Supported Users of an authorizing Member to submit to CMESC for clearing trades between it and any other Participant. CMESC Procedure 15-3(a). The Supported User's cleared transactions are between the Supported User and CMESC as principals.	CMESC permits an Independent User of an authorizing Member to submit to CMESC for clearing trades between it and any other Participant. CMESC Procedure 15-3(a). The Independent User's cleared transactions are between the Independent User and CMESC as principals.	ICC allows a Treasury Participant to submit for clearing trades for itself with any Treasury Participant or Non-Participant Party and designate the trades as house positions. ICC Rule 301. Please see Column M for information on client (i.e., Non-Participant Party) trades.	ICC allows a Treasury Participant to submit for clearing trades for a Non-Participant Party with any Treasury Participant or Non-Participant Party and designate the trades as client-related positions. ICC Rule 301.
Direct/Indirect (i.e., whether pre-novation counterparties are in privity with the CCP)	Direct	Direct	Direct	Direct	Indirect (for Non-Participant Parties)
Membership eligibility	Entities eligible to become either Members or Users: broker-dealers, banks (including foreign banks), FCMs, unregistered investment pools (which must be represented by an investment adviser registered under the Advisers Act), and proprietary trading firms. CMESC Rule 302(a).	Entities eligible to become either Members or Users: broker-dealers, banks (including foreign banks), FCMs, unregistered investment pools (which must be represented by an investment adviser registered under the Advisers Act), and proprietary firms. Entities eligible to become Users only: trust companies, clearing agencies, registered investment companies, and insurance companies. CMESC Rules 302(a) and (b). *CMESC has publicly stated that the list of eligible Users is not intended to be exhaustive.	Entities eligible to become either Members or Users: broker-dealers, banks (including foreign banks), FCMs, unregistered investment pools (which must be represented by an investment adviser registered under the Advisers Act), and proprietary firms. Entities eligible to become Users only: trust companies, clearing agencies, registered investment companies, and insurance companies. CMESC Rules 302(a) and (b). *CMESC has publicly stated that the list of eligible Users is not intended to be exhaustive.	Entities eligible to become Treasury Participants include: registered broker-dealers, registered investment companies, banks, insurance companies, and other types of persons the SEC may designate as appropriate if they meet the membership standard. The list is not exhaustive. ICC Rule 201(b)(c). Treasury Participant membership is independent of membership in ICC's CDS platform. ICC Rule 201(a).	To clear trades for customers, a Treasury Participant must be a broker-dealer, bank, government securities broker or dealer, or exempted from such registration and must obtain the agreement of each Non-Participant Party for the benefit of ICC to the provisions of the ICC rules applicable to Non-Participant Parties. ICC Rule 406. Any person that is not ICC or a Treasury Participant may be a Non-Participant Party, including an affiliate of a Treasury Participant or a client-carrying broker that is itself acting for one or more Non-Participant Parties. ICC Rule 102 (definition of "Non-Participant Party"). Non-Participant Party membership is independent of membership in ICC's CDS platform.
Mechanics of submitting transactions	CMESC permits Members to submit transactions directly to CMESC or through an Eligible Platform. A Clear to Deliver Transaction (i.e., a deliver-out repo) or a cash transaction would be submitted as: (1) a matched trade from an Eligible Platform; (2) a single-sided trade to be matched by CMESC; or (3) a transaction by one Participant for another Participant to claim or decline on CMESC's interface. CMESC Procedure 15-3(a)(i). Clear to Hold Transactions (triparty repos) would be submitted to the tri-party settlement bank, and the resulting matched transaction would be transmitted to CMESC. CMESC Procedure 15-3(a)(ii)	CMESC permits Users to submit transactions directly to CMESC or through an Eligible Platform. A Clear to Deliver Transaction (i.e., a deliver-out repo) or a cash transaction would be submitted as: (1) a matched trade from an Eligible Platform; (2) a single-sided trade to be matched by CMESC; or (3) a transaction by one Participant for another Participant to claim or decline on CMESC's interface. CMESC Procedure 15-3(a)(i). Clear to Hold Transactions (triparty repos) would be submitted to the tri-party settlement bank, and the resulting matched transaction would be transmitted to CMESC. CMESC Procedure 15-3(a)(ii). For a User's transaction to be accepted for clearing, its Member must confirm the transaction to CMESC via (i) pre-supplied credit limits hosted at CMESC, (ii) a pre-approval indicator from the Eligible Platform, or (iii) express acceptance via message to CMESC's system. CMESC Procedure 15-4(d).	CMESC permits Users to submit transactions directly to CMESC or through an Eligible Platform. A Clear to Deliver Transaction (i.e., a deliver-out repo) or a cash transaction would be submitted as: (1) a matched trade from an Eligible Platform; (2) a single-sided trade to be matched by CMESC; or (3) a transaction by one Participant for another Participant to claim or decline on CMESC's interface. CMESC Procedure 15-3(a)(i). Clear to Hold Transactions (triparty repos) would be submitted to the tri-party settlement bank, and the resulting matched transaction would be transmitted to CMESC. CMESC Procedure 15-3(a)(ii). For a User's transaction to be accepted for clearing, its Member must confirm the transaction to CMESC via (i) pre-supplied credit limits hosted at CMESC, (ii) a pre-approval indicator from the Eligible Platform, or (iii) express acceptance via message to CMESC's system. CMESC Procedure 15-4(d).	Transactions may be submitted by a Treasury Participant directly or via an "Authorized Trade Execution / Processing Platform." ICC will treat any submission by a platform as having been affirmed by the relevant parties (i.e., the Treasury Participant is not able and does not need to affirm to ICC directly). ICC Rules 301(b) and (c). ICC reserves for itself the ability to decide whether or not to novate the on-leg of a type of treasury repo transactions. ICC Rule 308-02(b).	Transactions may be submitted by a Treasury Participant directly or via an "Authorized Trade Execution / Processing Platform." ICC will treat any submission by a platform as having been affirmed by the relevant parties (i.e., the Treasury Participant is not able and does not need to affirm to ICC directly). ICC Rules 301(b) and (c). A Treasury Participant may submit both sides of the same trade (e.g., done-with trades, or done-away trades on behalf of two different Non-Participant Parties). ICC Rule 301(b). ICC reserves for itself the ability to decide whether or not to novate the on-leg of a type of treasury repo transactions. ICC Rule 308-02(b).
Mechanics of posting/receiving daily margin/payments	Members exchange initial margin, variation margin (Outstanding Exposure Settlement, or "OES"), and settlement payments and deliveries with CMESC directly. CMESC Rules 501, 506(a) and 1504(a).	The authorizing Member of its Supported Users is responsible for exchanging initial margin and variation margin (Outstanding Exposure Settlement, or "OES") with CMESC in respect of its Supported Users' transactions. CMESC Rules 501 and 506(a). Supported Users exchange settlement payments and deliveries with CMESC directly. CMESC Rule 1504(b).	Independent Users exchange initial margin, variation margin (Outstanding Exposure Settlement, or "OES"), and settlement payments and deliveries with CMESC directly. CMESC Rules 501, 506(a) and 1504(b).	In respect of a Treasury Participant's house positions, ICC calculates initial margin and variation payment on a net basis and the Treasury Participant exchanges initial margin and variation payment with ICC. ICC Rule 401(a). Transfers of variation payment are treated as settlement, and such settlement resets the fair value of the outstanding exposures for the relevant positions to zero ICC Rules 401(k) and (l).	ICC calculates initial margin and variation payment separately, on either a gross (i.e., customer-by-customer) basis or a net basis (i.e., across multiple Non-Participant Parties' positions in the same account) depending on the margin option used (as described below), and the Treasury Participant exchanges initial margin and variation payment with ICC on behalf of the Non-Participant Parties, except that following a Treasury Participant default, ICC may permit variation payment to be settled directly by a gross-margined Non-Participant Party. ICC Rules 401(b) and 20-605A. There are four margining options for a Non-Participant Party. (1) "Net Margin": customer positions are margined on a net basis with other customers, initial margin and variation payment are netted, and the Treasury Participant funds the margin requirement. ICC Rule 401(b)(iii). (2) "Gross Margin Fully Funded by Treasury Participant": customer positions are margined on a gross basis and the Treasury Participant fully funds the margin requirement. ICC Rule 408. (3) "Gross Margin Fully Funded by Customer": customer positions are margined on a gross basis and the Non-Participant Party fully funds the margin requirement (subject to permitted pre-funding by the Treasury Participant under SEC Rule 15c3-3) ICC Rule 407. (4) "Hybrid": customer positions are margined on a gross basis, the Treasury Participant funds part of the margin requirement, and the Non-Participant Party funds the remainder margin requirement (subject to permitted pre-funding by the Treasury Participant under SEC Rule 15c3-3). ICC Rule 409.
Legal counterparty	Member	Supported User	Independent User	Treasury Participant	Non-Participant Party
Entity to whom CCP has recourse	Member	A Supported User is responsible for exchanging final settlement amounts arising under its positions with CMESC, while its authorizing Member is responsible for exchanging initial margin and OES with CMESC in respect of such Supported User's transactions. CMESC Rules 501 and 506(a). If a Supported User's settlement obligations are not fully covered by margin posted by the Member on its behalf and other assets of the Supported User available to CMESC, such shortfall must be covered by the authorizing Member. CMESC Rules 406(b)(ii) and (iii).	An Independent User is responsible for exchanging initial margin, OES, and final settlement amounts arising from its positions with CMESC directly. CMESC Rules 501, 506(a) and 1504(b). If an Independent User's settlement obligations are not fully covered by margin posted by it and other assets of the Independent User available to CMESC, such shortfall must be covered by the authorizing Member. CMESC Rule 406(b)(ii) and (iii).	A Treasury Participant is fully and directly liable as principal to ICC in respect of its house positions. ICC Rule 301(b).	Where a Treasury Participant clears a trade for a Non-Participant Party, the Treasury Participant becomes fully and directly liable, as principal and not as guarantor or surety, for all obligations to ICC in respect of such trade. Except as expressly provided, ICC shall have no obligation to deal directly with or seek performance from any Non-Participant Party. ICC Rule 316(a).
Liability/obligations of intermediary (if applicable)	N/A	A Supported User is responsible for exchanging final settlement amounts arising under its positions with CMESC, while its authorizing Member is responsible for exchanging initial margin and OES with CMESC in respect of such Supported User's transactions. CMESC Rules 501 and 506(a). If CMESC determines that a Supported User defaults and its settlement obligations are not fully covered by margin posted by the Member on its behalf and other assets of the Supported User available to CMESC, such shortfall must be covered by the authorizing Member. If the Member fails to do so in time, CMESC may declare the Member in default. CMESC Rules 406(b)(ii) and (iii).	If CMESC determines that an Independent User defaults and its settlement obligations are not fully covered by margin posted by it and other assets of the Independent User available to CMESC, such shortfall must be covered by the authorizing Member. If the Member fails to do so in time, CMESC may declare the Member in default. CMESC Rule 406(b)(ii) and (iii).	N/A	Where a Treasury Participant clears a trade for a Non-Participant Party, the Treasury Participant becomes fully and directly liable, as principal and not as guarantor or surety, for all obligations to ICC in respect of such trade. ICC Rule 316(a).
Available for done away transactions (i.e., whether a customer can clear trades executed with a person other than its clearing member)?	N/A	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 at risk?	Members would be required to contribute Guaranty Fund (which is separate from initial margin requirements) and may be subject to Default Assessment up to 200% of their Guaranty Fund obligations. CMESC Rules 401(a) and 402(c). The total Guaranty Fund would be at least equal to the largest theoretical loss to CMESC in excess of initial margin resulting from the default of two Member families (the "Cover Two" standard). CMESC Procedure 4-1(a). The Guaranty Fund is not segregated and may be used for loss mutualization purposes.	Users would not be required to contribute to Guaranty Fund. CMESC Rule 401(a).	Users would not be required to contribute to Guaranty Fund. CMESC Rule 401(a).	Treasury Participants are subject to guaranty fund requirement ("Required Contribution"), which is the greater of (x) the Treasury Participant's proportionate share of the aggregate "Treasury Participant Loss Exposure" (calculated using a "Cover Two" standard) and (y) $20 million. If a Treasury Participant's Required Contribution exceeds 25% of its excess net capital (as calculated pursuant to SEC Rule 15c3-1), the Treasury Participant may be required to make an additional "Prepaid Contribution." ICC Rules 209 and 801(a). ICC is permitted to make assessments up to three times of a Treasury Participant's Required Contribution amount in a given 30-day cooling off period after either (i) ICC makes an assessment call or (ii) the replenishment contributions of a non-defaulting Treasury Participant to the guaranty fund, following defaults of at least two Treasury Participants, exceed the Required Contribution prior to the first such default (either such circumstance, a "Cooling-off Period Trigger Event"). If a subsequent Cooling-off Period Trigger Event occurs 30 or fewer days after the previous one, the cooling-off period will be extended until 30 days after such subsequent Cooling-off Period Trigger Event. ICC Rules 803(b) and 806. The guaranty fund is not segregated and may be used for loss mutualization purposes.	Non-Participant Parties are not required to make contributions to the guaranty fund. ICC Rule 801(a)(i).
Where is collateral held by the CCP?	CMESC would establish three separate omnibus accounts at each of its bank(s) for holding of initial margin and for receiving and making OES payments, one for each of (i) Members, (ii) Supported Users of broker-dealer Members, and (iii) all other Users. CMESC Rule 507(a).	CMESC would establish three separate omnibus accounts at each of its bank(s) for holding of initial margin and for receiving and making OES payments, one for each of (i) Members, (ii) Supported Users of broker-dealer Members, and (iii) all other Users. CMESC Rule 507(a).	CMESC would establish three separate omnibus accounts at each of its bank(s) for holding of initial margin and for receiving and making OES payments, one for each of (i) Members, (ii) Supported Users of broker-dealer Members, and (iii) all other Users. CMESC Rule 507(a).	ICC holds margin or collateral transferred by Treasury Participants in bank and securities accounts specified by ICC. ICC Rule 101 (definition of "Transfer").	ICC holds margin or collateral provided by Non-Participant Parties in an account with the Federal Reserve or a bank meeting the requirements of SEC Rule 15c3-3a, Note H(b)(2)(iv). ICC Rule 407(g).
How is initial margin (or similar) segregated?	CMESC would maintain separate accounts on its books for each Member, Independent User, and Supported User to which it would record margin it holds. The segregation of Member's initial margin is segregated from its Users. CMESC Rules 406 and 513.	CMESC would maintain separate accounts on its books for each Member, Independent User, and Supported User to which it would record margin it holds. The segregation of Supported User's initial margin is equivalent to LSOC and not subject to any kind of loss mutualization. CMESC Rules 406 and 513.	CMESC would maintain separate accounts on its books for each Member, Independent User, and Supported User to which it would record margin it holds. The segregation of Independent User's initial margin is equivalent to LSOC and not subject to any kind of loss mutualization. CMESC Rules 406 and 513.	ICC maintains separate accounts on its books for each Treasury Participant's house positions and client-related positions, to which it credits the relevant margin. ICC Rule 401(f).	ICC segregates margin posted in relation to each of the following categories: (1) Treasury Participants' house positions, (2) net margined client-related positions, (3) gross margined client-related positions fully funded by Treasury Participants, (4) gross margined client-related positions fully funded by Non-Participant Parties, (5) margin funded by customer in connection with hybrid funded client-related positions on a sub-account level, and (6) margin funded by Treasury Participants in connection with hybrid funded client-related positions on a sub-account level. ICC Rules 401(f), 407, and 409(c).
Default management obligations (i.e., loss allocation/liquidity obligations) – who has these, what are they?	Members would be required to contribute Guaranty Fund and may be subject to Default Assessment up to 200% of their Guaranty Fund obligations. CMESC Rules 401(a) and 402(c). In addition, Members are required to have a Capped Liquidity Facility ("CLF") in place with CMESC. CMESC requires each Member to enter into a CLF MRA to provide liquidity support in case of a participant default. CMESC Rule 410(a), CMESC Procedure 4-9(c)(ii).	Users would not be required to contribute to Guaranty Fund or CLF. CMESC Rules 401(a) and 410(a).	Users would not be required to contribute to Guaranty Fund or CLF. CMESC Rules 401(a) and 410(a).	Treasury Participants are subject to guaranty fund requirement equal to the Required Contribution (including any applicable Prepaid Contribution) and may be subject to assessments up to three times of a Treasury Participant's Required Contribution amount in a given 30-day cooling off period after a Cooling-off Period Trigger Event. If a subsequent Cooling-off Period Trigger Event occurs 30 or fewer days after the previous Cooling-off Period Trigger Event, the cooling-off period will be extended until 30 days after such subsequent Cooling-off Period Trigger Event. ICC Rules 209, 801(a), 803(b), and 806. ICC may designate a "Settlement Liquidity Event" upon settlement failures, allowing ICC to borrow against Treasury Participants' cash contributions (but not cash initial margin in respect of Non-Participant Party's positions), require Treasury Participants to substitute cash for non-cash initial margin in respect of house positions and guaranty fund and borrow against such cash or require Treasury Participants to provide liquidity (either secured or unsecured) up to five times the Required Contribution. ICC Rule 812. ICC may also impose tear-ups as well as variation margin gains haircuts to mitigate risk. ICC Rules 20-605(f) and 808.	Non-Participant Parties are not required to make contributions to the guaranty fund and ICC may not use margin for Non-Participant Parties' positions for liquidity resources. ICC Rules 801(a)(i) and 812.
Treatment of clients upon intermediary default (if applicable)	N/A	If a Member defaults, CMESC may transfer the positions and associated margin of any non-defaulting User(s) of such Member to a non-defaulting authorizing Member of the User, or liquidate such positions in its discretion. Prior to any transfer or liquidation described above, CMESC may collect OES payments directly from any non-defaulting Supported User of such Member. CMESC Rule 412.	If a Member defaults, CMESC may transfer the positions and associated margin of any non-defaulting User(s) of such Member to a non-defaulting authorizing Member of the User, or liquidate such positions in its discretion. CMESC Rule 412. Notably, IM and OES payments are already transferred directly between the Independent Users and CMESC.	N/A	Following a Treasury Participant default, ICC will close out the house positions and close out or, to the extent permitted by law, port the client-related positions ICC Rules 20-605(c) and 20A-02. For client-related position, ICC may permit variation payment (but not final settlement amount) to be settled directly by a Non-Participant Party that fully funds its margin requirement calculated on a gross basis. ICC Rule 20-605A.
Obligations of intermediary if client defaults (if applicable)	N/A	If CMESC determines that a User defaults, CMESC would allow the User's authorizing Member(s) to close out the User's positions by satisfying any obligations owing to CMESC. If the Member does not do so, CMESC would perform the close-out itself. The Member is responsible for amounts owing to CMESC by the User after such close out. CMESC Rule 1507, CMESC Procedure 4-4(b). The CMESC Rules do not provide a mechanism for a Member to close out its User if CMESC has not determined that the User has defaulted.	If CMESC determines that a User defaults, CMESC would allow the User's authorizing Member(s) to close out the User's positions by satisfying any obligations owing to CMESC. If the Member does not do so, CMESC would perform the close-out itself. The Member is responsible for amounts owing to CMESC by the User after such close out. CMESC Rule 1507, CMESC Procedure 4-4(b). The CMESC Rules do not provide a mechanism for a Member to close out its User if CMESC has not determined that the User has defaulted.	N/A	Upon a Non-Participant Party default, the relevant Treasury Participant may elect to either (1) have ICC manage the close-out of the defaulting Non-Participant Party's positions or (2) liquidate the defaulting Non-Participant Party's positions by submitting new house positions to offset those customer positions, or by converting those customer positions into house positions. ICC Rules 316(g), (e), and 402(d).
Whether there is industry or ad hoc opinion available to address netting against U.S. Customers for U.S. Regulatory Capital purposes	N/A	N/A	N/A	N/A	N/A

Other Repo Clearing Models – LCH Repo Clear

	RepoClear Member	RepoClear Dealer	Sponsored Member
Description	LCH permits RepoClear Members to clear proprietary trades and trades of clients that are RepoClear Dealers. LCH Procedures, Section 2B, RepoClear Clearing Service, Sections 1.3.1 and 1.3.2. The cleared transaction is between the RepoClear Member and LCH as principals. Please See Column P for information on client transactions.	LCH permits RepoClear Dealers to clear transactions through a RepoClear Member. LCH Procedures, Section 2B, RepoClear Clearing Service, Sections 1.3.1 and 1.3.2. The cleared transaction is between the RepoClear Member and LCH as principals, with the RepoClear Member and RepoClear Dealer entering into a back-to-back transaction.	LCH allows a Sponsored Member to clear repos through an Agent Member. SC Regulation 4. The Agent Member acts as paying agent for the Sponsored Member's margin and is responsible for default fund and certain other financial obligations related to a Sponsored Member's positions, but does not guarantee the Sponsored Member's obligations. SC Regulation 6.
Direct/Indirect (i.e., whether pre-novation counterparties are in privity with the CCP)	Direct	Indirect	Direct
Membership eligibility			
Mechanics of submitting transactions	RepoClear Members submit eligible repos to LCH for "registration" via an "Approved Trade Matching System" or "Automated Trading System". General Regulations, Section 12(a); LCH Procedures, Section 2B, RepoClear Clearing Service, Section 1.3.2.	After LCH has obtained written authorization from a RepoClear Dealer's RepoClear Member to allow ongoing trade submission by the RepoClear Dealer, the RepoClear Dealer may submit eligible repos to LCH for "registration" via an "Approved Trade Matching System" (ATMS) or "Automated Trading System" (ATS). The written authorization is specific to each ATMS or ATS. General Regulations, Section 12(a); LCH Procedures, Section 2B, RepoClear Clearing Service, Section 1.3.2.	Sponsored Members may submit eligible repos to LCH for "registration" via a "Matching System" or an "Automated Trading System". SC Regulation 14; Regulation 37(d). The LCH rules contemplate the ability to submit OTC Transactions (i.e., eligible repos that not executed through a Matching System or Automated Trading System) for registration, but the mechanism by which to do so is unclear. SC Regulation 12(i).
Mechanics of posting/receiving daily margin/payments	Margin for a RepoClear Member's proprietary trades is calculated on a net basis for such RepoClear Member. General Regulations, Regulation 10(b); LCH Procedures, Section 2B, RepoClear Clearing Service, Sections 1.7 and 1.8.	Margin for RepoClear Dealers' transactions is calculated on a net basis across the same "C" Client Account of the RepoClear Member, which may be individually segregated accounts of particular RepoClear Dealers, or may be omnibus segregated accounts (i.e., an account to which multiple RepoClear Dealer's transactions, but not the RepoClear Member's proprietary trades, are credited). General Regulations, Regulation 10(c); LCH Procedures, Section 2B, RepoClear Clearing Service, Sections 1.7 and 1.8.	Margin for Sponsored Member positions is calculated on a net basis for each account of the Sponsored Member. LCH collects margin from a Sponsored Member, who may "outsource" to its Agent Member to post such margin. However, the principal obligation to provide margin remains with Sponsored Member. SC Regulation 15(b); SC Procedures, Section 2.8.
Legal counterparty	RepoClear Member	RepoClear Member	Sponsored Member
Entity to whom CCP has recourse	RepoClear Member	RepoClear Member	Sponsored Member
Liability/obligations of intermediary (if applicable)	N/A	RepoClear Member is responsible for all obligations owed to LCH with respect to the transactions of its RepoClear Dealers. General Regulations, Regulation 10(a); Regulation 16(f); LCH Procedures, Section 2B, RepoClear Clearing Service, Section 1.1.7.	Agent Member does not guarantee its Sponsored Member's obligations. However, Agent Member is responsible for posting "Agent Buffer" (i.e., collateral that LCH may apply to cover a shortfall in margin required to be posted by a Sponsored Member or default fund or Agent Resource Contribution obligations of Agent Member). SC Regulation 16. Agent Member is also required to post default fund contributions for Sponsored Member positions, as well as additional collateral known as "Agent Resource Contribution". SC Regulation 17.
Available for done away transactions (i.e., whether a customer can clear trades executed with a person other than its clearing member)?	N/A	Yes	Yes
Obligations to default fund/clearing fund – who bears these, how are they calculated, how are they segregated and what is at risk?	RepoClear Member bears Default Fund obligation. Default Rules, Schedule 7, Section R1; Procedures, Section 2B, RepoClear Clearing Service, Section 1.14.13(k). Default fund contribution requirements are calculated on the basis of the stress-tested losses in excess of the amount of initial margin in respect of the RepoClear Member's "RepoClear Business" (defined to include all fixed income transactions carried by that RepoClear Member). Default Rules, Schedule 7, Section R2. RepoClear Default Fund is segregated from LCH's other default funds. PFMI p. 27.	RepoClear Member bears Default Fund obligation. Default Rules, Schedule 7, Section R1; Procedures, Section 2B, RepoClear Clearing Service, Section 1.14.13(k). Default fund contribution requirements are calculated on the basis of the stress-tested losses in excess of the amount of initial margin in respect of the RepoClear Member's "RepoClear Business" (defined to include all fixed income transactions carried by that RepoClear Member). Default Rules, Schedule 7, Section R2. RepoClear Default Fund is segregated from LCH's other default funds. PFMI p. 27.	Agent Member bears Default Fund obligation. SC Regulation 6(a)(ii). Default fund contribution requirements are calculated on the basis of the stress-tested losses in excess of the amount of initial margin in respect of the Sponsored Member's positions. Default Rules, Schedule 7, Section R2. RepoClear Default Fund is segregated from LCH's other default funds. PFMI p. 27.
Where is collateral held by the CCP?	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks.	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks.	LCH states that it holds collateral at central securities depositories, and where those are not available, custodian banks.
How is initial margin (or similar) segregated?	A RepoClear Member's proprietary positions and margin are held in a separate account from the RepoClear Member's client positions and related margin. LCH Procedures, Section 2B, RepoClear Service, Sections 1.7 and 1.8.	A RepoClear Dealer's positions and initial margin are legally segregated from the RepoClear Member's proprietary positions and initial margin. If a RepoClear Dealer does not elect to have an Individual Segregated Account, it may be exposed to loss arising from the default of other clients of the RepoClear Member. LCH Procedures, Section 2B, RepoClear Service, Section 1.7.1.	A Sponsored Member's positions and margin are legally segregated from its Agent Member's proprietary positions and margin and from other Sponsored Members. SC Regulation 10(a); SC Procedures Section 2.8.
Default management obligations (i.e., loss allocation/liquidity obligations) – who has these, what are they?	RepoClear Member has loss mutualization obligations. In addition, LCH may demand additional contributions to replenish the default fund, and require tear-ups. Default Rules, Schedule 7, RepoClear Default Fund Supplement, Sections R7, R8, and R9. RepoClear Members must provide "expertise" in the default management process, but are not required to participate in auctions. Default Rules, Schedule 4, Section 1.2	RepoClear Member has loss mutualization obligations. In addition, LCH may demand additional contributions to replenish the default fund, and require tear-ups. Default Rules, Schedule 7, RepoClear Default Fund Supplement, Sections R7, R8, and R9. RepoClear Members must provide "expertise" in the default management process, but are not required to participate in auctions. Default Rules, Schedule 4, Section 1.2	Agent Member has loss mutualization obligations. In addition, LCH may demand additional contributions to replenish the default fund, and require tear-ups. Default Rules, Schedule 7, RepoClear Default Fund Supplement, Sections R7, R8, and R9. Sponsored Members must provide "expertise" in the default management process, but are not required to participate in auctions. Default Rules, Schedule 4, Section 1.2
Treatment of clients upon intermediary default (if applicable)	N/A	LCH will seek to port client positions and associated assets to another clearing member (the "Backup Clearing Member"). The Backup Clearing Member must accept the contracts to be ported. If porting is not achieved, LCH will close out the positions and liquidate the relevant collateral. Procedures, Section 2B, RepoClear Service, Section 1.14.3(i). Clearing Clients may select a Backup Clearing Member in advance and notify LCH of this choice. Procedures, Section 2B, RepoClear Service, Section 1.12.3. The treatment of a RepoClear Dealer's positions and related margin in the event of a failure of the RepoClear Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the RepoClear Member, its entity type and the clearing documentation.	Sponsored Members must appoint a "back-up" Agent Member to take over in the event of an "Agent Close-out Event," or elect to perform the services of a back-up Agent Member itself. SC Regulation 4(c). The treatment of a Sponsored Member's positions and related margin in the event of a failure of the Agent Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Agent Member, its entity type and the clearing documentation.
Obligations of intermediary if client defaults (if applicable)	N/A	If the RepoClear Member determines that an early termination date has occurred with respect to a client transaction, it may instruct LCH to transfer the relevant contract to its proprietary account. Procedures, Section 2B, RepoClear Service, Section 1.12.2.	An Agent Member does not guarantee its Sponsored Members' performance. However, Agent Member is responsible for posting "Agent Buffer" (i.e., collateral that LCH may apply to cover a shortfall in margin required to be posted by a Sponsored Member or default fund or Agent Resource Contribution obligations of Agent Member). SC Regulation 16. Agent Member is also required to post default fund contributions for Sponsored Member positions, as well as additional collateral known as "Agent Resource Contribution". SC Regulation 17.
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

Other Repo Clearing Models – Eurex Repo and CDCC Repo CCP

	Eurex Repo					CDCC Repo CCP		
	General Clearing Membership	Direct Clearing Membership	ISA Direct Clearing Membership / Clearing Agents	Undisclosed Clients	Disclosed Clients	Clearing Member	Limited Clearing Member	Sponsored Member
Description	Eurex permits a General Clearing Member to clear (1) its "Own Transactions," i.e., proprietary trades of the General Clearing Member; and (2) client transactions, including (a) transactions of its "Direct Clients" and (b) transactions of "Indirect Clients" (customers of its Direct Clients). Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 2.1.1(4). Please See Columns T and U for information on client transactions.	Eurex permits a Direct Clearing Member to clear (1) its "Own Transactions," i.e., proprietary trades of the General Clearing Member; and (2) client transactions, including (a) transactions of its "Direct Clients" and (b) transactions of "Indirect Clients" of its Direct Clients (but only if the Direct Clients are affiliated with the Direct Clearing Member). Eurex Clearing Conditions, General Provisions, Chapter I, Part 1, Section 2.1.1(4). Please See Columns T and U for information on client transactions.	Eurex permits certain buyside entities to become "ISA Direct Clearing Members" to clear proprietary trades through one or more General Clearing Members (in such capacity, "Clearing Agents"). Eurex Clearing Conditions, General Provisions, Chapter I, Part 1, Section 1.1.3(4). The Clearing Agent is responsible for processing all transactions for the ISA Direct Clearing Member. The cleared transaction is between Eurex and the ISA Direct Clearing Member.	Eurex permits a Clearing Member to clear transactions of Undisclosed Clients (including Indirect Clients and Undisclosed Direct Clients). Eurex Clearing Conditions, General Provisions, Chapter I, Part 1, Section 2.1.1(4). The cleared transaction is between the Clearing Member and Eurex as principals, with the Clearing Member entering into a back-to-back transaction with its Direct Client.	Eurex permits a Clearing Member to clear transactions of Disclosed Clients (which are all Direct Clients). Eurex Clearing Conditions, General Provisions, Chapter I, Part 1, Section 2.1.1(4). The cleared transaction is between the Clearing Member and Eurex as principals, with the Clearing Member entering into back-to-back a transaction with its Direct Client	CDCC permits certain Clearing Members to act as "Fixed Income Clearing Members" to clear proprietary and client repo transactions. CDCC Rules, Rule D-6. The cleared transaction is between the Fixed Income Clearing Member and CDCC as principals. For client trades, the Fixed Income Clearing Member may enter into a back-to-back transaction with its clients.	CDCC permits Limited Clearing Members (which are mostly pension plans) to act as "Fixed Income Clearing Members" to clear proprietary repo transactions. CDCC Rules, Rule D-6. The cleared transaction is between the Fixed Income Clearing Member and CDCC as principals.	N/A (It appears that CDCC is considering expanding its clearing services to include a sponsored model, but that is not currently provided under its rules).
Direct/Indirect (i.e., whether pre-novation counterparties are in privity with the CCP)	Direct	Direct	Direct	Indirect	Indirect	Indirect (for clients)	Direct	
Membership eligibility								
Mechanics of submitting transactions	Eurex becomes the counterparty to the Clearing Member in any transactions resulting from a quote or order submitted on Eurex Repo GmbH. In addition, a Clearing Member may submit transactions executed on another multilateral trading facility for novation. Eurex Repo Terms and Conditions, Part 1.3.1; Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 1.2.2.	Eurex becomes the counterparty to the Clearing Member in any transactions resulting from a quote or order submitted on Eurex Repo GmbH. In addition, a Clearing Member may submit transactions executed on another multilateral trading facility for novation. Eurex Repo Terms and Conditions, Part 1.3.1; Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 1.2.2.	Eurex becomes the counterparty to the ISA Direct Clearing Member in any transactions resulting from a quote or order submitted on Eurex Repo GmbH. In addition, a Clearing Agent may, on behalf of an ISA Direct Clearing Member, submit transactions executed on another multilateral trading facility for novation. Eurex Repo Terms and Conditions, Part 1.3.1; Eurex Clearing Conditions, General Provisions Chapter I, Part 6, Section 1.2.	Eurex becomes the counterparty to the Clearing Member in any transactions resulting from a quote or order submitted on Eurex Repo GmbH. In addition, a Clearing Member may submit transactions executed on another multilateral trading facility for novation. (It is unclear from the rules whether direct clients or indirect clients may be able to submit trades for novation or only Clearing Members are able to do so.) Eurex Repo Terms and Conditions, Part 1.3.1; Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 1.2.2.	Eurex becomes the counterparty to the Clearing Member in any transactions resulting from a quote or order submitted on Eurex Repo GmbH. In addition, a Clearing Member may submit transactions executed on another multilateral trading facility for novation. (It is unclear from the rules whether direct clients or indirect clients may be able to submit trades for novation or only Clearing Members are able to do so.) Eurex Repo Terms and Conditions, Part 1.3.1; Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 1.2.2.	The Fixed Income Clearing Member submits data to CDCC through an acceptable marketplace or the CDS trade matching facility, which, upon validation and confirmation by CDCC becomes novated to CDCC. CDCC Rules, Rule D-604, 605.	The Fixed Income Clearing Member submits data to CDCC through an acceptable marketplace or the CDS trade matching facility, which, upon validation and confirmation by CDCC becomes novated to CDCC. CDCC Rules, Rule D-604, 605.	
Mechanics of posting/receiving daily margin/payments	Eurex collects, returns, and posts margin from and to the Clearing Member in respect of its Own Transactions. Such amounts are calculated on a net basis across all of the Clearing Member's Own Transactions. Eurex Clearing Conditions General Provisions, Part 1, 3.1.2. Eurex settles payment and delivery amounts with the Clearing Member. Such amounts may be netted upon agreement between Eurex and the Clearing Member, provided that same day repos are not netted. Eurex Clearing Conditions, Chapter IV, Part 2, Section 2.5.1.	Eurex collects, returns, and posts margin from and to the Clearing Member in respect of its Own Transactions. Such amounts are calculated on a net basis across all of the Clearing Member's Own Transactions. Eurex Clearing Conditions General Provisions, Part 1, 3.1.2. Eurex settles payment and delivery amounts with the Clearing Member. Such amounts may be netted upon agreement between Eurex and the Clearing Member, provided that same day repos are not netted. Eurex Clearing Conditions, Chapter IV, Part 2, Section 2.5.1.	Eurex collects, returns, and posts margin from and to the ISA Direct Clearing Member (directly or through its Clearing Agent) in respect of its transactions. Such amounts are calculated on a net basis across all of the ISA Direct Clearing Member's transactions. Eurex Clearing Conditions, General Provisions Chapter I, Part 6, Sections 7 and 8. Eurex settles payment and delivery amounts with the ISA Direct Member. Such amounts may be netted upon agreement between Eurex and the ISA Direct Clearing Member, provided that same day repos are not netted. Eurex Clearing Conditions, Chapter IV, Part 2, Section 2.5.1.	Eurex collects, returns, and posts margin from and to the Clearing Member in respect of its Undisclosed Clients' cleared transactions. Such amounts are calculated on a net basis across all transactions held in the same net omnibus segregated account (NOSA). Eurex Clearing Conditions General Provisions, Chapter I, Part 1, 3.1.2. An NOSA may include transactions of multiple Undisclosed Direct Clients or transactions of multiple Indirect Clients of the same Direct Client. Eurex settles payment and delivery amounts with the Clearing Member. Such amounts may be netted upon agreement between Eurex and the Clearing Member, provided that same day repos are not netted. Eurex Clearing Conditions, Chapter IV, Part 2, Section 2.5.1.	Eurex collects, returns, and posts margin from and to the Clearing Member in respect of its Disclosed Direct Clients' cleared transactions. Such amounts are calculated on a net basis across all positions of the same Disclosed Direct Client. Eurex Clearing Conditions General Provisions, Chapter I, Part 1, 3.1.2. Eurex settles payment and delivery amounts with the Clearing Member. Such amounts may be netted upon agreement between Eurex and the Clearing Member, provided that same day repos are not netted. Eurex Clearing Conditions, Chapter IV, Part 2, Section 2.5.1.	CDCC collects and posts variation margin and settlement amounts from and to the Fixed Income Clearing Members on a net basis across all repo transactions (both proprietary and customer transactions), provided that settlement of same day repos are not netted. CDCC Rules, Rule D-606, 607.	CDCC collects and posts variation margin and settlement amounts from and to the Fixed Income Clearing Members on a net basis across all repo transactions, provided that settlement of same day repos are not netted. CDCC Rules, Rule D-606, 607.	
Legal counterparty	General Clearing Member	Direct Clearing Member	ISA Direct Clearing Member	Clearing Member	Clearing Member	Fixed Income Clearing Member	Limited Clearing Member	
Entity to whom CCP has recourse	General Clearing Member	Direct Clearing Member	ISA Direct Clearing Member (and, if the Clearing Agent is a "Indemnifying Clearing Agent," the Clearing Agent)	Clearing Member	Clearing Member	Fixed Income Clearing Member	Limited Clearing Member	
Liability/obligations of intermediary (if applicable)	N/A	N/A	Clearing Agent acts as processing agent only and is not responsible for satisfying any margin/settlement obligations of its ISA Direct Clearing Member, unless it is an Indemnifying Clearing Agent	Clearing Member is responsible for all obligations to Eurex in respect of trades submitted on behalf of clients. Eurex Clearing Conditions, Chapter I, Part 1, Section 1.2.2.	Clearing Member is responsible for all obligations to Eurex in respect of trades submitted on behalf of clients. Eurex Clearing Conditions, Chapter I, Part 1, Section 1.2.2.	Fixed Income Clearing Member is responsible for all obligations to CDCC in respect of both proprietary and client trades.	N/A	
Available for done away transactions (i.e., whether a customer can clear trades executed with a person other than its clearing member)?	N/A	N/A	Yes	Yes	Yes	Yes	Yes	
Obligations to default fund/clearing fund – who bears these, how are they calculated, how are they segregated and what is at risk?	The Clearing Member bears Default Fund obligation for its Own Transactions. Eurex Clearing Conditions Chapter I, Part 1, Section 6. Default Fund contribution requirements are calculated using a "Stress Loss-over-Margin" methodology that compares a "portfolio's" margin requirements to its performance in a stress scenario. Default Fund amounts are not segregated and may be used for loss mutualization purposes.	The Clearing Member bears Default Fund obligation for its Own Transactions. Eurex Clearing Conditions Chapter I, Part 1, Section 6. Default Fund contribution requirements are calculated using a "Stress Loss-over-Margin" methodology that compares a "portfolio's" margin requirements to its performance in a stress scenario. Default Fund amounts are not segregated and may be used for loss mutualization purposes.	The Clearing Agent bears the Default Fund obligations for the transactions of its ISA Direct Clearing Members. Eurex Clearing Conditions, General Provisions Chapter I, Part 6, Section 9.1. Default Fund contribution requirements are calculated using a "Stress Loss-over-Margin" methodology that compares a "portfolio's" margin requirements to its performance in a stress scenario. Default Fund amounts are not segregated and may be used for loss mutualization purposes.	The Clearing Member bears the Default Fund obligations for the transactions of its clients. Eurex Clearing Conditions Chapter I, Part 1, Section 6. Default Fund contribution requirements are calculated using a "Stress Loss-over-Margin" methodology that compares a "portfolio's" margin requirements to its performance in a stress scenario. Default Fund amounts are not segregated and may be used for loss mutualization purposes.	The Clearing Member bears the Default Fund obligations for the transactions of its clients. Eurex Clearing Conditions Chapter I, Part 1, Section 6. Default Fund contribution requirements are calculated using a "Stress Loss-over-Margin" methodology that compares a "portfolio's" margin requirements to its performance in a stress scenario. Default Fund amounts are not segregated and may be used for loss mutualization purposes.	The Fixed Income Clearing Member bears the Clearing Fund obligations for both proprietary and client transactions on a net basis, which are not segregated and may be used for loss mutualization purposes. CDCC Rules, Rule A-6; CDCC Risk Manual, Section 1.2.	The Limited Clearing Member does not bear any Clearing Fund obligations. CDCC Rules, Rule A-6.	
Where is collateral held by the CCP?	Eurex states that it holds non-cash instruments at central securities depositories. For cash, Eurex either invests the cash in highly liquid financial instruments or holds the cash at central banks (if authorized) or at authorized credit institutions. Eurex has broad rehypothecation rights with respect to cash collateral, but not with respect to securities collateral.	Eurex states that it holds non-cash instruments at central securities depositories. For cash, Eurex either invests the cash in highly liquid financial instruments or holds the cash at central banks (if authorized) or at authorized credit institutions. Eurex has broad rehypothecation rights with respect to cash collateral, but not with respect to securities collateral.	Eurex states that it holds non-cash instruments at central securities depositories. For cash, Eurex either invests the cash in highly liquid financial instruments or holds the cash at central banks (if authorized) or at authorized credit institutions. Eurex has broad rehypothecation rights with respect to cash collateral, but not with respect to securities collateral.	Eurex states that it holds non-cash instruments at central securities depositories. For cash, Eurex either invests the cash in highly liquid financial instruments or holds the cash at central banks (if authorized) or at authorized credit institutions Eurex has broad rehypothecation rights with respect to cash collateral, but not with respect to securities collateral.	Eurex states that it holds non-cash instruments at central securities depositories. For cash, Eurex either invests the cash in highly liquid financial instruments or holds the cash at central banks (if authorized) or at authorized credit institutions. Eurex has broad rehypothecation rights with respect to cash collateral, but not with respect to securities collateral.	CDCC states that collateral is maintained at either the central bank (for cash collateral), pledged to CDCC via the CDS settlement system, or held at approved custodians in segregated accounts subject to control agreements. CDCC has broad rehypothecation rights with respect to clearing fund, but not with respect to other collateral. CDCC Rules, Rule A-701(4).	CDCC states that collateral is maintained at either the central bank (for cash collateral), pledged to CDCC via the CDS settlement system, or held at approved custodians in segregated accounts subject to control agreements. CDCC has no rehypothecation rights with respect to collateral posted by a Limited Clearing Member. CDCC Rules, Rule A-701(4).	
How is initial margin (or similar) segregated?	Proprietary positions and assets of a Clearing Member are legally segregated from its client-related positions and assets.	Proprietary positions and assets of a Clearing Member are legally segregated from its client-related positions and assets.	An ISA Direct Clearing Member's positions and margin are legally segregated from those of the Clearing Agent and other parties and not exposed to loss arising from the default of the Clearing Agent or other parties.	An Undisclosed Client's positions and margins are legally segregated from the Clearing Member's proprietary positions and margin, but are exposed to loss arising from the default of other Undisclosed Clients.	If the Disclosed Direct Client elects to use the "Gross Omnibus Segregated Account" model, its positions and margin are legally segregated from the Clearing Member's proprietary positions and margin, but are at risk for a collateral shortfall (i.e., if the value of the collateral is not sufficient to satisfy all obligations of customers whose positions are carried in the account). If the Disclosed Direct Client elects to use the "Individually Segregated Account" model, then its positions and margin are legally segregated from those of the Clearing Members and other clients, and not exposed to loss arising from the default of the Clearing Members or other clients.	There is no requirement for initial margin or clearing fund in respect of repos to be segregated.	There is no requirement for initial margin in respect of repos to be segregated.	
Default management obligations (i.e., loss allocation/liquidity obligations) – who has these, what are they?	Clearing Member has loss mutualization obligations. In addition, Eurex may demand up to 2 assessments on Clearing Members if pre-funded Default Fund contributions and Eurex's own contributions are insufficient. Additionally, Clearing Members are required to participate in default management committees, and may be subject to tear-up of positions and required to participate in position auctions. Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 7.5.	Clearing Member has loss mutualization obligations. In addition, Eurex may demand up to 2 assessments on Clearing Members if pre-funded Default Fund contributions and Eurex's own contributions are insufficient. Additionally, Clearing Members are required to participate in default management committees, and may be subject to tear-up of positions and required to participate in position auctions. Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 7.5.	Clearing Agent is responsible for Default Fund attributable to its ISA Direct Clearing Members. Upon a Clearing Agent's default as a Clearing Member, its contribution to the Default Fund in respect of any ISA Direct Clearing Member would not be treated as its own Default Fund but subject to loss mutualization on a pari passu basis with contributions of all non-defaulting Clearing Members. If, following a default of an ISA Direct Clearing Member, the Default Fund attributable to the ISA Direct Clearing Member is not sufficient to cover the "Default Fund Secured Claims" against it, Eurex may at its discretion require additional Default Fund from the Clearing Agent to cover the Default Fund Secured Claims. Eurex Clearing Conditions, General Provisions Chapter I, Part 6, Section 9.1. ISA Direct Clearing Member may be subject to tear-up of positions. Eurex Clearing Conditions, General Provisions Chapter I, Part 1, Section 7.5.	Only Clearing Members have loss mutualization and default management obligations. A Clearing Member's transactions with Eurex that are entered into for its clients may be subject to tear-up.	Only Clearing Members have loss mutualization and default management obligations. A Clearing Member's transactions with Eurex that are entered into for its clients may be subject to tear-up.	Only Clearing Members have loss mutualization and liquidity ("Supplemental Liquidity Fund") obligations. CDCC may demand additional contributions to replenish Clearing Fund. CDCC has a process for voluntary tear-up of positions. CDCC Rules, Rule A-6, 6A, 1008; CDCC Default Manual.	Limited Clearing Members do not have loss mutualization or liquidity ("Supplemental Liquidity Fund") obligations. CDCC has a process for voluntary tear-up of positions. CDCC Rules, Rule A-6, 6A, 1008; CDCC Default Manual.	
Treatment of clients upon intermediary default (if applicable)	N/A	N/A	Upon a Clearing Agent default, its ISA Direct Clearing Member may within certain period (depending on when Eurex gives notice to the ISA Direct Clearing Member) elect to (i) find a replacement Clearing Agent, (ii) become a Direct Clearing Member, if eligible, or (iii) close out its transactions. Eurex Clearing Conditions, General Provisions Chapter I, Part 6, Section 11.2. The treatment of a ISA Direct Clearing Member's positions and related margin in the event of a failure of the Clearing Agent would depend on, among other things, the bankruptcy and insolvency laws applicable to the Clearing Agent, its entity type and the clearing documentation.	Eurex will cease accepting new client transactions. Eurex will transfer Undisclosed Clients' transactions (including related Indirect Client's transactions) to another Clearing Member, unless (i) transfer conditions under the Eurex rules are not satisfied, or (ii) if such transfer is not permitted in the jurisdiction of the defaulting Clearing Member, in which case such client transactions would be closed out. Eurex Clearing Conditions Chapter I, Part 2, Subpart A, Section 6.1 and Subpart C, Section 8; Part 4, Sections 8 and 10. The treatment of an Undisclosed Client's positions and related margin in the event of a failure of the Clearing Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Clearing Member, its entity type and the clearing documentation.	Eurex will cease accepting new client transactions. Eurex will transfer a Disclosed Direct Client's transactions (including related Indirect Client's transactions) to another Clearing Member, unless (i) the Disclosed Direct Client elects termination or does not timely elect transfer, (ii) if transfer conditions under the Eurex rules are not satisfied, or (iii) if such transfer is not permitted in the jurisdiction of the defaulting Clearing Member, in which case such client transactions would be closed out. Eurex Clearing Conditions Chapter I, Part 2, Subpart A, Section 6.1 and Subpart C, Section 8; Part 4, Sections 8 and 10. The treatment of a Disclosed Direct Client's positions and related margin in the event of a failure of the Clearing Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Clearing Member, its entity type and the clearing documentation.	CDCC does not have a legal relationship with clients of Fixed Income Clearing Members. Upon a Fixed Income Clearing Member's default, CDCC will close out all trades carried for clients by the Fixed Income Clearing Member. The treatment of a client's positions and related margin in the event of a failure of the Fixed Income Clearing Member would depend on, among other things, the bankruptcy and insolvency laws applicable to the Fixed Income Clearing Member, its entity type and the clearing documentation.	N/A	
Obligations of intermediary if client defaults (if applicable)	N/A	N/A	Clearing Agent has no obligations except for potential additional Default Fund requirement, unless it is an Indemnifying Clearing Agent (see Row 16 above). An Indemnifying Clearing Agent is responsible for any amount necessary to cover Eurex's losses due to its ISA Direct Clearing Member's default.	If the client has been excluded or restricted from trading, the Clearing Member may terminate the trades. Eurex Clearing Conditions, Chapter I, Part 1, Section 10.5. If the Clearing Member closes out the transaction between it and its client for another reason (e.g., pursuant to a bilateral agreement), the related transaction between the Clearing Member and Eurex will not be closed out but instead credited to the Clearing Member's proprietary account. Eurex Clearing Conditions, Chapter 1, Part 1, Section 10.7.	If the client has been excluded or restricted from trading, the Clearing Member may terminate the trades. Eurex Clearing Conditions, Chapter I, Part 1, Section 10.5. If the Clearing Member closes out the transaction between it and its client for another reason (e.g., pursuant to a bilateral agreement), the related transaction between the Clearing Member and Eurex will not be closed out but instead credited to the Clearing Member's proprietary account. Eurex Clearing Conditions, Chapter 1, Part 1, Section 10.7.	The Fixed Income Clearing Member is responsible for all obligations to CDCC in respect of trades submitted on behalf of clients. There is no CDCC rules permitting a Fixed Income Clearing Member to terminate novated trades that were submitted on behalf of a client upon the client's default.	N/A	
Whether there is industry or ad hoc opinion available to address netting against U.S. Customers for U.S. Regulatory Capital purposes	CRR Opinions are available for the UK and certain EU jurisdictions.	CRR Opinions are available for the UK and certain EU jurisdictions.	CRR Opinions are available for the UK and certain EU jurisdictions.	CRR Opinions are available for the UK and certain EU jurisdictions.	CRR Opinions are available for the UK and certain EU jurisdictions.	N/A	N/A	

This information contained in this chart is high level summary based on publicly available information and documents of relevant clearinghouses, does not address any regulatory requirements (except to the extent reflected in the rules, and except row 19), and does not constitute legal advice.
Firms should consult counsel in the relevant jurisdictions with respect to their rights and obligations in connection with any clearing model, including with respect to their rights in the event of an insolvency of an intermediary clearing member.