

ICE Credit Derivative Services 4Q 2022 Update

Clearing Highlights

- **ICE Clear Credit experienced exceptional growth of its index options clearing services, attracting significant buy-side participation, and building open interest spanning all 9 available expiries and broad range of strikes, see Figure 1**
 - 67% of cleared CDS index option notional was cleared at ICE Clear Credit in 2022
 - Over \$85B of open interest was established at ICE Clear Credit going into the December 2022 expiry
- **Market participants cleared record CDS notional amounts across all 3 clearinghouses during 2022, as inflation uncertainty and geopolitical events led to elevated and persisting volatility**
 - Total cleared notional amount across the 3 CDS clearinghouses increased by 39% from \$36.6T in 2021 to \$50.9T in 2022, a new clearing record
 - From January through September 2022, monthly cleared volumes reflected significant year-over-year (YOY) CDS market growth followed by a slow-down in 4Q, see Figure 2
- **ICE Clear Credit increased its share of combined client/dealer volume over LCH and ICE Clear Europe by 1.25pts for EUR denominated instruments¹, clearing 64% of EUR iTraxx index notional and 42% of EUR Corporate SN notional, see Figure 3(A)**
- **ICE Clear credit continues to be the clearinghouse of choice for North American and European CDS client clearing, with the 2022 share of client notional in EUR denominated instruments split 88%, 8%, 4% between ICE Clear Credit, ICE Clear Europe and LCH, respectively (97.75%, 1.75%, 0.5% for USD denominated instruments)**

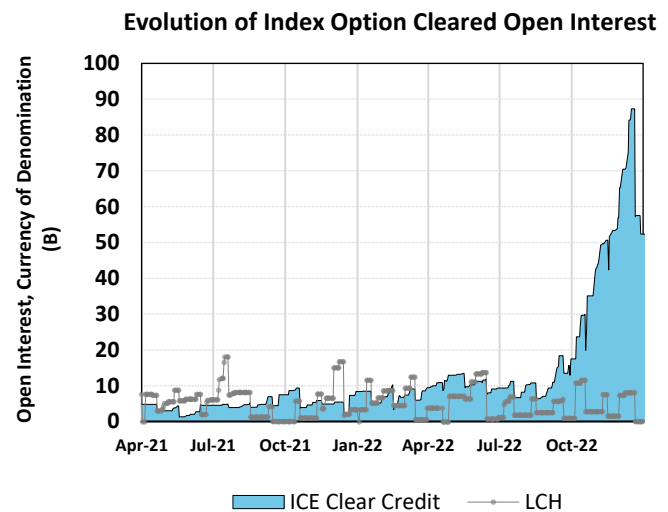
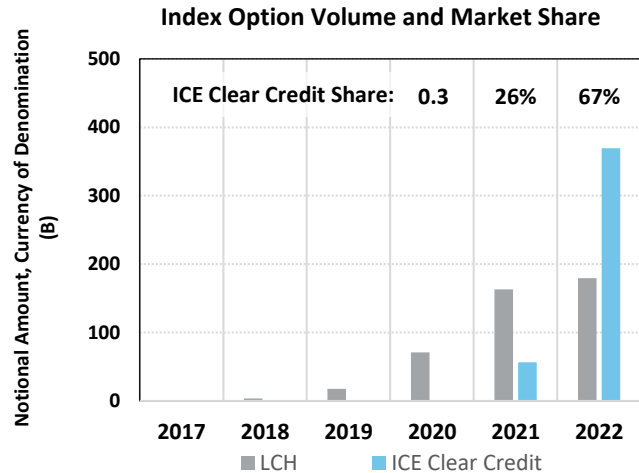


Figure 1: ICE Clear Credit CDS Index Options evolution of cleared notional amounts and open interest.

- **ICE Clear Credit is preparing to add in 3Q 2023, SN instruments referencing subordinated debt for 28 entities that are constituents of the iTraxx Subordinated Financial indices**

¹ Based on ICE analysis of ICE Clear Credit and ICE Clear Europe client clearing volumes, and LCH social media posts reporting LCH client cleared notional amounts.

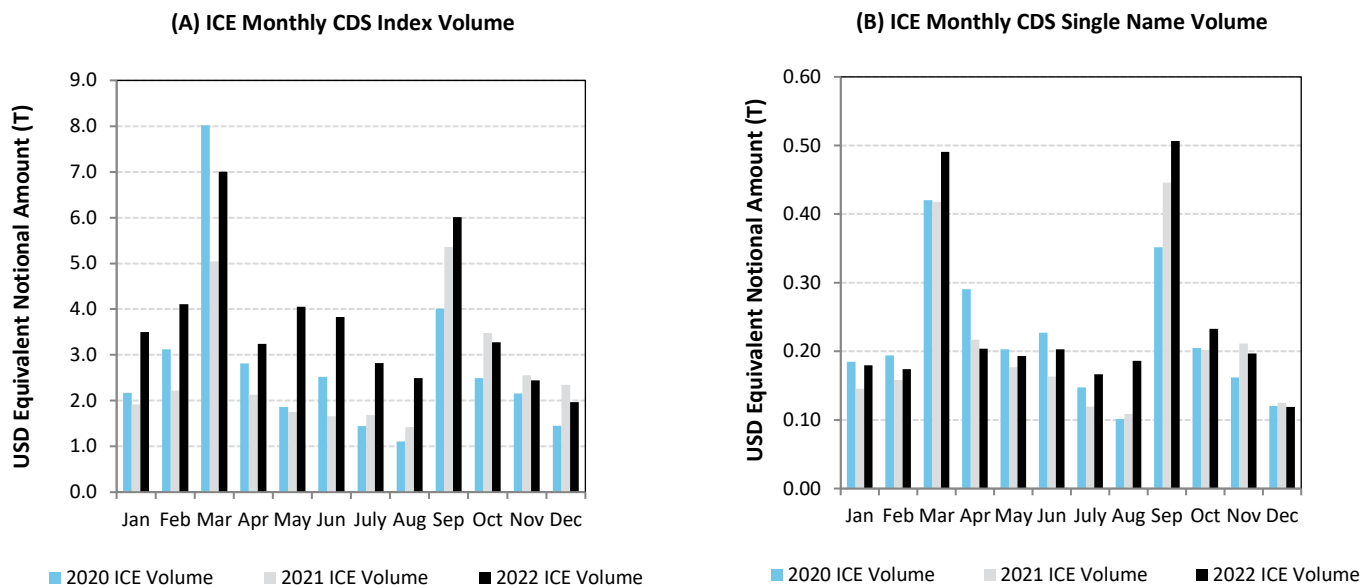


Figure 2: ICE monthly combined client/dealer notional amounts from January 2020 through December 2022

Full-Year Volumes

- In 2022, ICE Clear Credit set the following records for annual notional amount cleared at any CDS clearinghouse, see Figure 3(C) and (D):

Combined Client/Dealer

- \$24.1T CDX Index (+46% YOY)
- €13.2T EUR iTraxx (+58% YOY)
- \$318B APAC iTraxx (+19% YOY)
- €420B EUR Corporate SN (+39% YOY)

Client

- \$10.7T CDX Index (+55% YOY)
- €5.6T EUR iTraxx (+65% YOY)
- \$111B APAC iTraxx (+26% YOY)
- \$263B USD Corporate SN (+11% YOY)
- €160B EUR Corporate SN (+25% YOY)
- \$281B Sovereign SN (+45% YOY)

- ICE Clear Credit client portion² of 2022 annual cleared volumes (non-record categories):

- 85% iTraxx Main and Crossover
- 76% EUR Corporate SN

- ICE Clear Credit client portion of 2022 annual cleared notional amounts setting new records:

- 88% CDX Index
- 69% APAC iTraxx
- 50% USD Corporate SN
- 54% Sovereign SN

Historical Volumes

Figures 4 and 5 provide annual combined cleared client/dealer volumes and client volumes, respectively, from 2013 to 2022. The visualized trends have been discussed previously and the main themes continue, as follows:

- Growth in ICE Clear Credit Index combined client/dealer volume (Figure 4(C)), and client volume (Figure 5(A))
- Growth in voluntary client clearing of EUR and USD Corporate SNs at ICE Clear Credit (Figure 5(B))
- Growth in EUR Corporate SN combined client/dealer volume (Figure 4(D))
- Growth in client clearing of APAC iTraxx and CDX EM indices at ICE Clear Credit (Figure 5(E))

² Computed as Combined Client/Dealer Notional / (2 x Client Notional), such that 100% results if all cleared trades were between a dealer and a client.

(A) Combined FY 2022 Client/Dealer Notional Amount in Currency of Denomination or USD Equivalent, Share of Notional Amount, and Change in Share of Notional Amount Relative to FY 2021

Instrument Category	Currency	Notional Amount	ICC		ICEU		LCH	
			Share (%)	ΔShare	Share (%)	ΔShare	Share (%)	ΔShare
All	USD Eq.	50.9T	81.75	+0.75	11.75	-0.50	6.50	-0.25
CDX	USD	24.9T	97.25	+0.25	2.25	-0.50	0.50	+0.25
EUR iTraxx	EUR	20.7T	64.00	+1.25	23.00	-0.25	13.00	-1.00
APAC iTraxx	USD	325B	100	-	-	-	-	-
CDX EM	USD	675B	100	-	-	-	-	-
Sovereign SN	USD	1.08T	95.75	+3.75	4.25	-3.75	0.00	0.00
USD Corp. SN	USD	1.05T	99.75	-0.25	-	-	0.25	+0.25
EUR Corp. SN	EUR	1.00T	42.00	+0.75	27.75	-2.75	30.25	+2.00

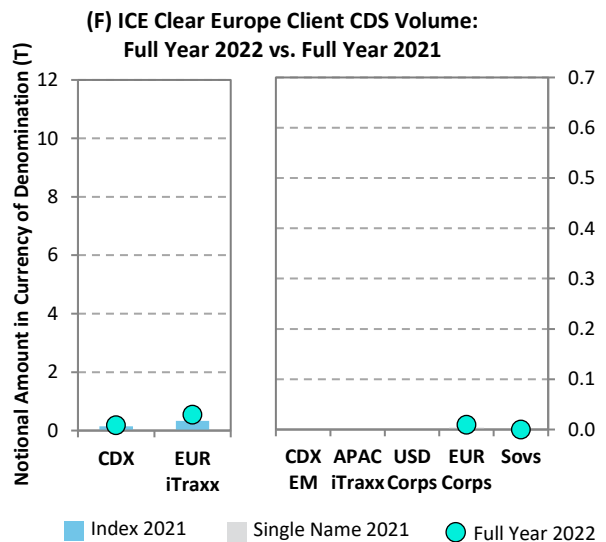
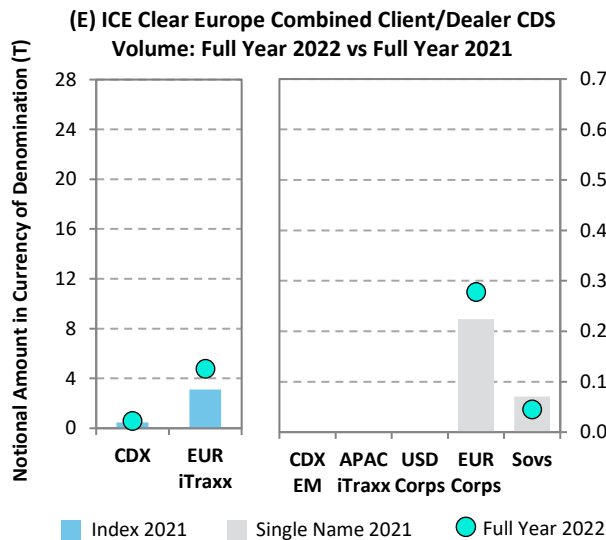
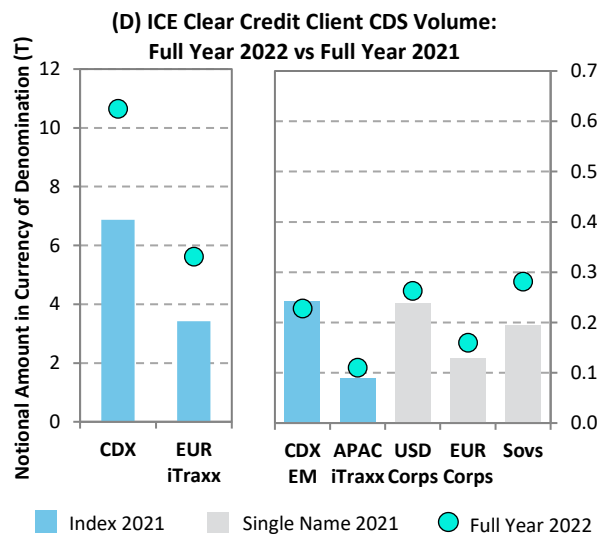
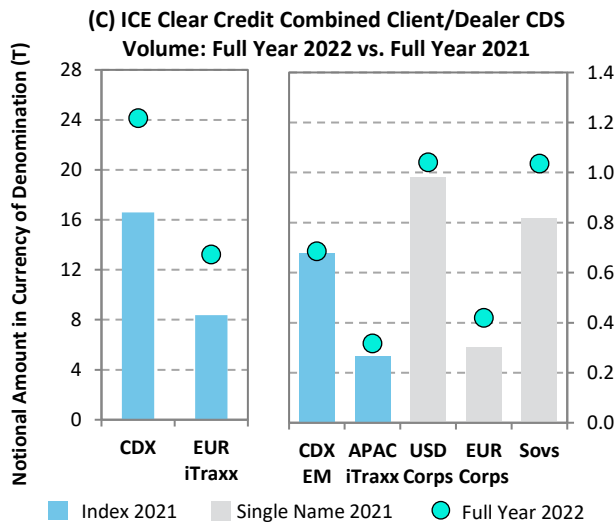


Figure 3: Cleared notional amounts, share of cleared notional amounts and change in cleared notional amounts for FY 2022 vs. FY 2021, by clearinghouse and instrument type. Abbreviations: CDX.IG and CDX.HY indices (CDX), EUR denominated iTraxx indices (EUR iTraxx), emerging markets CDX indices (CDX EM), Asia-Pacific iTraxx indices (APAC iTraxx), USD denominated Corporate SNs (USD Corps), EUR denominated Corporate SNs (EUR Corps), and Sovereign SNs (Sovs). Share is rounded to nearest 0.25%.

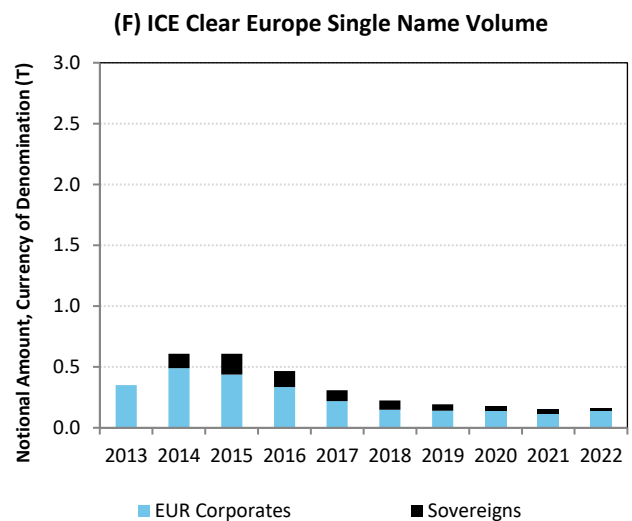
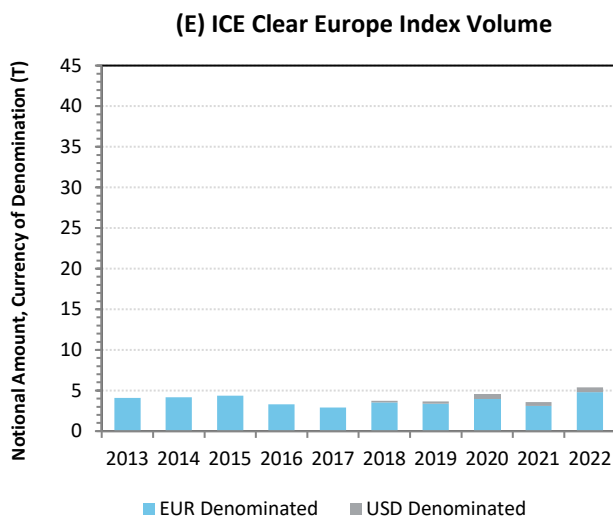
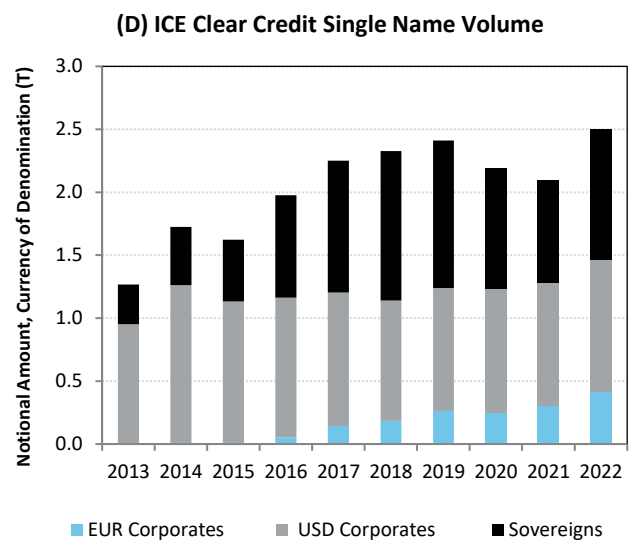
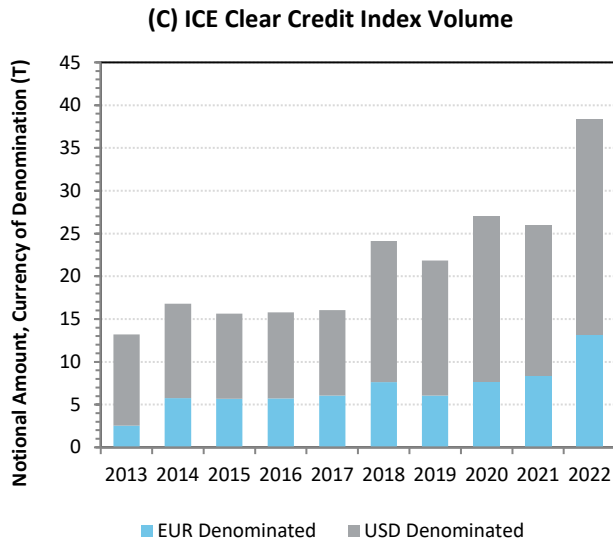
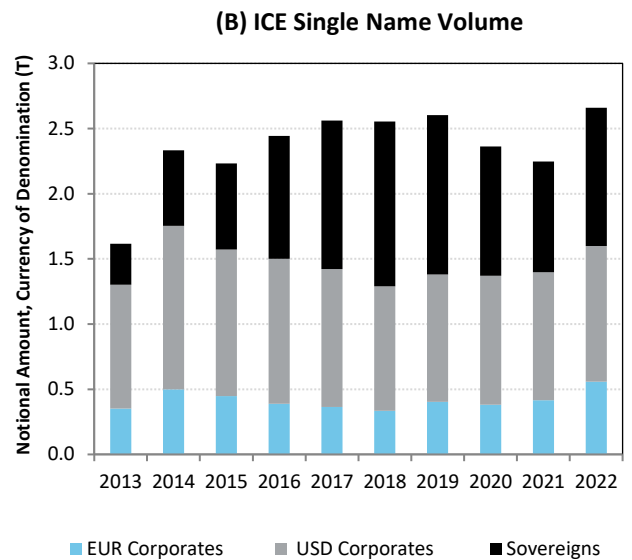
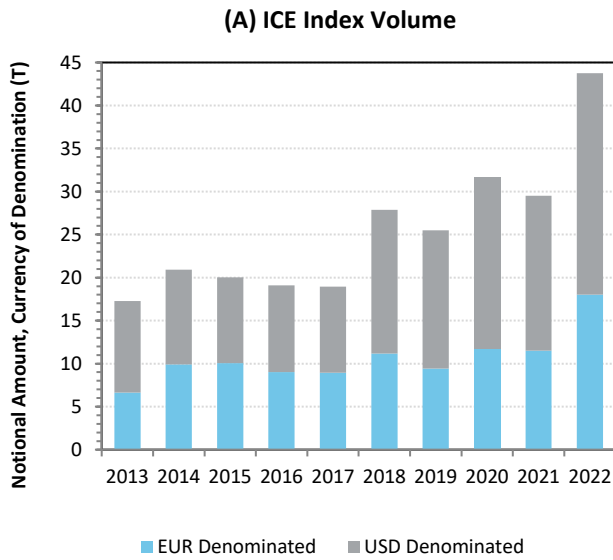


Figure 4: Combined client/dealer annual notional amounts for index and SN instruments at ICE Clear Credit, ICE Clear Europe and in total across both ICE CDS clearinghouses.

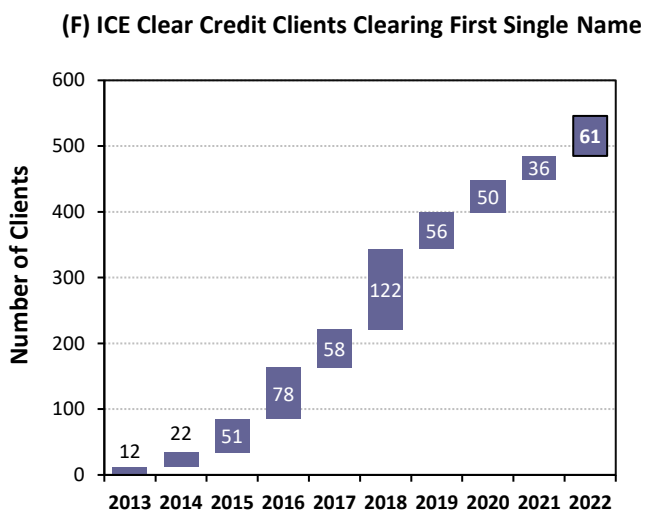
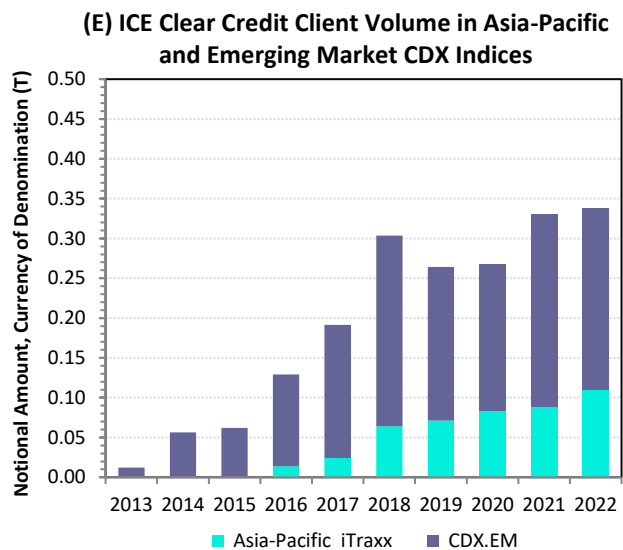
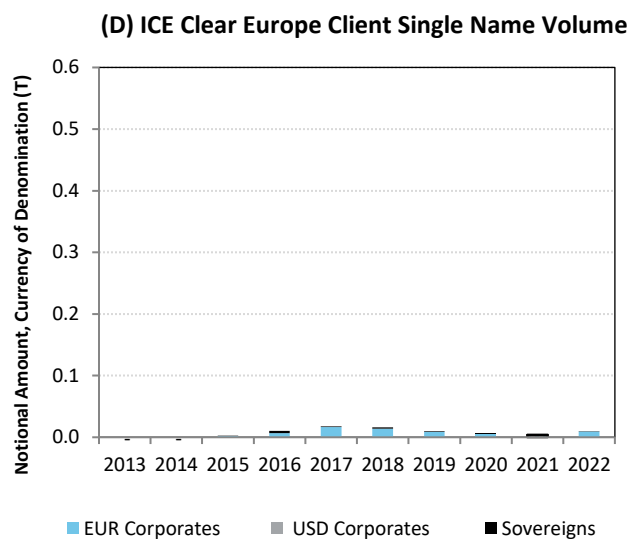
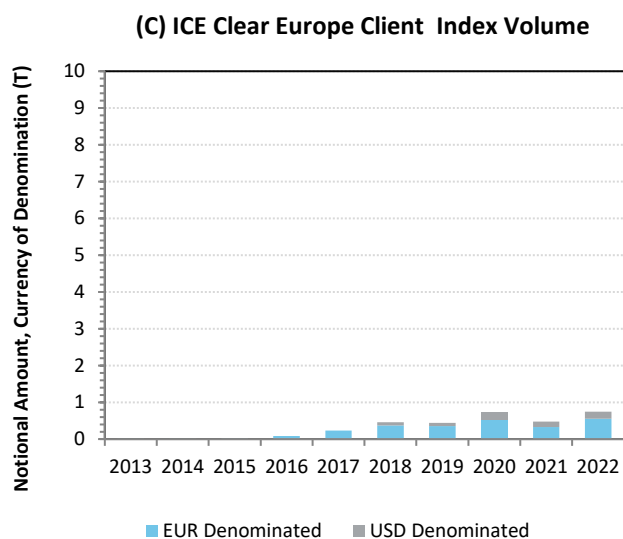
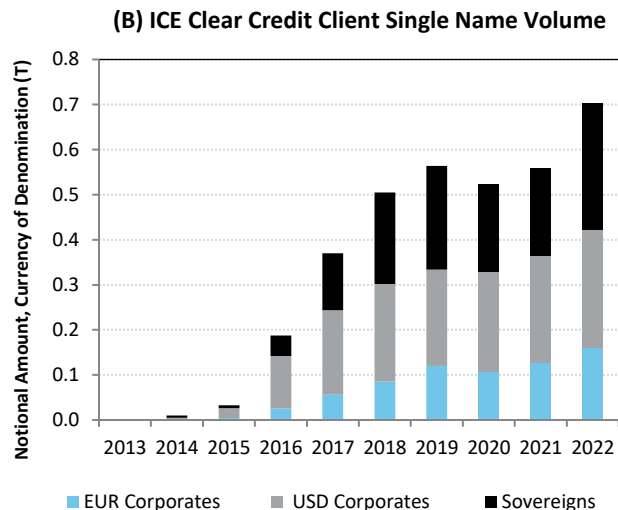
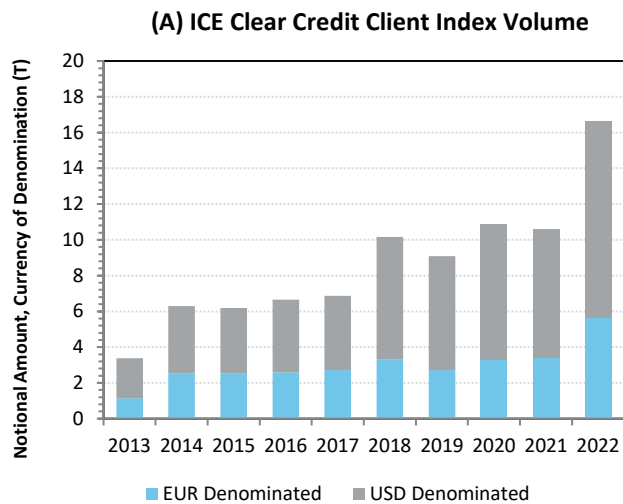


Figure 5: Index and SN annual client notional amounts cleared at ICE Clear Credit and ICE Clear Europe, and number of clients clearing their first SN at ICE Clear Credit. The notional amounts provided for USD denominated index instruments at ICE Clear Credit include the separately-shown notional amounts for Asia-Pacific iTraxx and CDX.EM indices.

New Single Name Additions

ICC plans to launch 2 new North American (NA) corporate reference entities and 4 new Asian corporate reference entities in early 2023 and introduce for the first time SNs referencing subordinated debt, beginning with 28 reference entities in July 2023 (subject to approvals), as detailed in Table 1.

Table 1: New SN reference entities planned to be added for clearing at ICE Clear Credit through July 10, 2023.

Reference Entity	Tier	ISDA Def.	Date
Single Names Referencing Subordinated Debt			
BANCO BILBAO VIZCAYA ARGENTARIA	SUBLT2	MM14	Jul10 '23
BANCO SANTANDER, S.A.	SUBLT2	MM14	Jul10 '23
BARCLAYS PLC	SUBLT2	MM14	Jul10 '23
BNP PARIBAS	SUBLT2	MM14	Jul10 '23
COMMERZBANK AG	SUBLT2	MM14	Jul10 '23
COOPERATIEVE RABBOBANK U.A.	SUBLT2	MM14	Jul10 '23
CREDIT AGRICOLE SA	SUBLT2	MM14	Jul10 '23
DANSKE BANK A/S	SUBLT2	MM14	Jul10 '23
DEUTSCHE BANK AG	SUBLT2	MM14	Jul10 '23
HSBC HOLDINGS plc	SUBLT2	MM14	Jul10 '23
ING Groep N.V.	SUBLT2	MM14	Jul10 '23
INTESA SANPAOLO SPA	SUBLT2	MM14	Jul10 '23
LLOYDS BANKING GROUP PLC	SUBLT2	MM14	Jul10 '23
MEDIOBANCA BANCA	SUBLT2	MM14	Jul10 '23
NatWest Group plc	SUBLT2	MM14	Jul10 '23
SOCIETE GENERALE	SUBLT2	MM14	Jul10 '23
STANDARD CHARTERED PLC	SUBLT2	MM14	Jul10 '23
UNICREDIT, SOCIETA PER AZIONI	SUBLT2	MM14	Jul10 '23
Aegon N.V.	SUBLT2	CR14	Jul10 '23
Allianz SE	SUBLT2	CR14	Jul10 '23
ASSICURAZIONI GENERALI	SUBLT2	CR14	Jul10 '23
AVIVA PLC	SUBLT2	CR14	Jul10 '23
AXA	SUBLT2	CR14	Jul10 '23
HANNOVER RUECK SE	SUBLT2	CR14	Jul10 '23
MUENCHENER RUECKVERISCHERUNGS	SUBLT2	CR14	Jul10 '23
PRUDENTIAL PLC	SUBLT2	CR14	Jul10 '23
SWISS REINSURANCE COMPANY LTD	SUBLT2	CR14	Jul10 '23
ZURICH INSURANCE COMPANY LTD	SUBLT2	CR14	Jul10 '23
North American Corporate Single Names			
ANTERO RESOURCES CORPORATION	SNRFOR	XR14	Feb21 '23
PG&E CORPORATION	SNRFOR	XR14	Feb21 '23

Asian Corporate Single Names			
PETROLIAM NASIONAL BERHAD	SNRFOR	CR14	Feb21 '23
PT PERTAMINA	SNRFOR	CR14	Feb21 '23
RELIANCE INDUSTRIES LIMITED	SNRFOR	CR14	Feb21 '23
SWIRE PACIFIC LIMITED	SNRFOR	CR14	Feb21 '23

Technical Notes

Volume Reporting

Combined client/dealer volumes are reported as double-sided, i.e., a transaction between two counterparties clearing a trade executed on a notional amount of \$10 million is reported as a volume of \$20 million.

Client volumes are reported based on the notional amount of each transaction leg associated with a buy-side counterparty. For example, a transaction between a dealer and client with a notional amount of \$10 million is reported as \$20 million combined client/dealer volume and \$10 million client volume. A transaction between two clients with a notional amount of \$10 million is reported as a combined client/dealer volume of \$20 million, and a client volume of \$20 million. Please note that the clearing volumes on the ICE website are single-sided combined client/dealer volumes, and therefore are half the respective combined client/dealer volumes reported here.