

PUBLIC QUANTITATIVE DISCLOSURE

PQD QUARTERLY TRENDS REPORT

2024 Q4 DATA





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CCP PQDs

The CCP Global PQD Quarterly Trends Report provides an overview of the risk management provided by CCPs across the globe. It complements existing public statistics, such as the BIS derivatives statistics, by providing a summary of key indicators which provides market participants an overview of the CCP ecosystem. The publication underlines the scope and scale of risk mitigation provided by central clearing:

- CCPs exposure to credit risk is collateralized through high-quality and liquid collateral;
- CCPs risk-manage their actual clearing exposure by collecting *mark-to-market* losses through regular variation margin (or similar) payments, and their potential future exposure by collecting initial margin.

This CCP Global PQD Quarterly Trends Report helps to inform market participants, authorities, and the general public of key features, the scale and nature of financial market infrastructure risk management. The data is aggregated directly from the CCPs themselves according to the CCP Global standardized template, carrying information stipulated in global regulatory guidance. Further details for individual CCPs can be found in links provided on the CCP Global website and page 23 of this report.

KEY STATISTICS FOR 2024 Q4 (USD)*

60 CCPs across Americas (17), APAC (23), and EMEA (20). Equivalent to 38 CCP Global members included in this quarter's collation[†]:

6.1.1 GLOBAL IM (REQUIRED)

1,282B

▼ -2.0%

6.2.15 GLOBAL IM (HELD)

1,634B

4.1.4 GLOBAL DF (REQUIRED)

172B

+1.9%

4.3.15 GLOBAL DF (HELD)

205B

+2.1%

6.6.1 GLOBAL VM FLOW

37B

V -0.4%

TOTAL (IM & DF) GLOBAL OVERCOLLATERALIZATION[‡]

385B

% change from the previous quarter

For any questions, please get in touch: question.pgd@ccp-global.org

based on a conversion from quarter-end FX rates provided by the ECB. All figures have been rounded up to the nearest billion in charts and tables.

Euronext Learning (LCLsos) and intell PQU rigures are incorporated as non-CLP cloods imminers. NCL (Lentral Counterparty National Learning Learning Learning Laboratory and a sas been removed from the PQD Q It is statistics starting from the 2024Q4 PQD data to better reflect the global view of IM and DF Held. (See the 2024 Q3 QTR for an explanation). CCPG undertakes periodic improvements to the data quality of the PQD aggregation for the QTR on a quanterly basis and thus changes to previous figures may incur as a result of enhancing data accuracy and reliability of how the data is calculated on an aggregate basis.

DTCC and SHCH 2024Q3 PQD figures have been used since these were not available for the aggregation at the time of the report preparation. The release of the SHCH Q4 PQD coincides with the release of their annual audit

report, therefore, the previous quarter's PQD figures were used while the Q4 PQD will be available later in the release month.

*Total OC = $(IM_{Retal} + DF_{Retal}) - (IM_{Required} + DF_{Required})$ = Disclosures (6.2.15 + 4.3.15) - (6.1.1 + 4.1.4). Only PostHaircut values are used for <u>Held</u> values. Mar-25 CCPG PQD QUARTERLY TRENDS - 2024 Q4



Commentary for the quarter: 2024 Q4

Key market developments which took place in 2024 Q4:

- Entering the fourth quarter of 2024, despite lingering risks, investor optimism about the near-term outlook set the tone for financial markets during the review period. The global economy seemed to be heading for a smooth landing, and the results of the US presidential election were conclusive. As a result, stock markets rose and credit spreads narrowed, easing global financial conditions. At the same time, rising government bond yields and an appreciating US dollar tightened them, pulling in different directions. Measures of risk premia and volatility ticked up in bond markets, amid signs that investors were pricing in higher fiscal and (geo)political risks. However, the markets for risk assets mostly shrugged off these uncertainties and sentiment remained positive on balance.¹
- The fourth quarter saw the interest rate cutting cycle in many major economies. The Federal Reserve (Fed) lowered interest rates by 25 basis points (bps) in both November and December. This lowers the target interest rate range to 4.25%-4.50% and reflects the Fed's ongoing commitment to achieving its dual goals of maximum employment and price stability. The European Central Bank (ECB) cut interest rates by 25 bps to 3.25% in October and cut again to 3.00% in December. The Bank of England (BoE) lowers interest rates by 25 bps to 4.75% in November. The Bank of Japan (BoJ) kept its interest rates at 0.25% in December.²
- The annual inflation rate in the US slightly increased over the period from 2.6% in October to 2.7% in November and 2.9% in December. At the same time, Euro area annual inflation slightly rose from 2.0% in October to 2.2% in November and 2.4% in December.
- In the bond market, the US 10-year Treasury experienced a notable rise from 3.81% at the end of Q3 to 4.58% at the end of Q4. The UK 10-year gilt yield increased from 4.01% at the end of Q3 to 4.57% at the end of Q4, while the German 10-year bond yield rose from 2.13% to 2.36%.³
- The S&P GSCI Index gained in the fourth quarter. Energy and livestock were the best performing components of the index, while industrial metals and precious metals both declined in the quarter. Within energy, all sub-components achieved robust gains in the quarter. Within the agriculture component, there were some dramatic price movements in the quarter. Coffee and cocoa prices were significantly higher, while cotton and sugar prices were sharply lower. In industrial metals, all sub-components declined, with the biggest price declines seen in nickel and copper. In precious metals, gold and silver prices both fell in the quarter.⁴
- Total global volumes of ETD contracts reached 13.03 billion in December 2024. Options volumes reached 10.75 billion contracts, while futures volumes reached 2.28 billion.⁵

¹ https://www.bis.org/publ/qtrpdf/r_qt2412.pdf

² https://data.bis.org

³ https://tradingeconomics.com/forecast/government-bond-10y

https://www.schroders.com/en/global/individual/insights/quarterly-markets-review---q4-2024

https://www.fia.org/fia/etd-tracker



Headline Statistics of the Public Quantitative Disclosures

2024 Q4

Global CCP Margin* (USD B)		
Global Initial Margin & Default Fund (Required):		
Total Global IM Required (6.1.1)	1,282	
Total Global DF Required (4.1.4)	172	
Total Global CCP Collateral Required (6.1.1 + 4.1.4)	1,454	
Global IM & DF Held (PostHaircut):		
Total Global IM Held (PostHaircut) (6.2.15)	1,634	
Total Global DF Held (PostHaircut) (4.3.15)	205	
Total Global CCP Collateral Held (PostHaircut) (6.2.15 + 4.3.15)	1,839	
Global Variation Margin (VM)		
Sum of Total Global Average Daily VM Paid to the CCP by participants		
each business day (6.6.1)	37	
Global Overcollateralization (OC)†		
Total Global IM Overcollateralization	352	
Total Global DF Overcollateralization	33	
Total Global Overcollateralization	385	

Total Global CCP Collateral (Held) (PostHaircut) in form of*:

Cash At Central Bank	Disclosure (6.2.1 + 6.2.2)	Initial Margin 13.2%	Disclosure (4.3.1 + 4.3.2)	Default Fund 39.2%
Secured Cash (incl. Reverse Repos) at Commercial Banks	6.2.3	8.7%	4.3.3	7.0%
Unsecured Cash at Commercial Banks	6.2.4	4.0%	4.3.4	7.6%
Non-Cash	/ >-			
Sovereign Gov Bonds - Domestic	6.2.5	26.9%	4.3.5	37.9%
Sovereign Gov Bonds – Foreign	6.2.6	20.1%	4.3.6	2.1%
Agency Bonds	6.2.7	1.1%	4.3.7	4.7%
State/Municipal Bonds	6.2.8	1.4%	4.3.8	0.2%
Corporate Bonds	6.2.9	2.9%	4.3.9	0.9%
Equities	6.2.10	16.3%	4.3.10	0.2%
Commodities – Gold	6.2.11	0.3%	4.3.11	0.0%
Commodities – Other	6.2.12	0.0%	4.3.12	0.0%
Mutual Funds/UCITs	6.2.13	1.6%	4.3.13	0.1%
Other	6.2.14	1.3%	4.3.14	0.2%

^{*}All figures have been rounded to the nearest whole number, therefore, may be a slight differences in the total figures in the region of ±USD 1 billion

Mar-25 CCPG PQD QUARTERLY TRENDS – 2024 Q4 5

The sum of the % in the IM column \neq 100% since: The sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0) = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0 = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0 = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.0 = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.5 = (0.1.1 + 4.1.4). Only rostralicular discussion in the sum of IM Held across 6.2.1.5 + 4.3.1.5 = (0.1.1 + 4.1.

^{*}The sum of the % in the IM column ≠ 100% since: The sum of IM Held across 6.2.1 – 6.2.14 is lower than the Total IM Held Values for 6.2.15, due to certain PQDs not providing a breakdown of the IM held across 6.2.1 – 6.2.14 is lower than the Total IM Held values for 6.2.15, tigures be equivalent to 4.3.15 figures, therefore no breakdown for 6.2.1 – 6.2.14 is provided, and 2). OCC 6.2.15 total > sum of 6.2.1 – 6.2.14. As of 2023 (3), all OCC "Pcel-laircut" figures for Client/House IM are considered "Post-laircut", thus a clearer view of the proportions of IM held for 6.2.1 – 6.2.14 can be observed Four other CCPs only provide totals for their 6.2.15 values. Data has been normalized to USD equivalent, based on a conversation from quarter-end FX rates provided by the ECB.

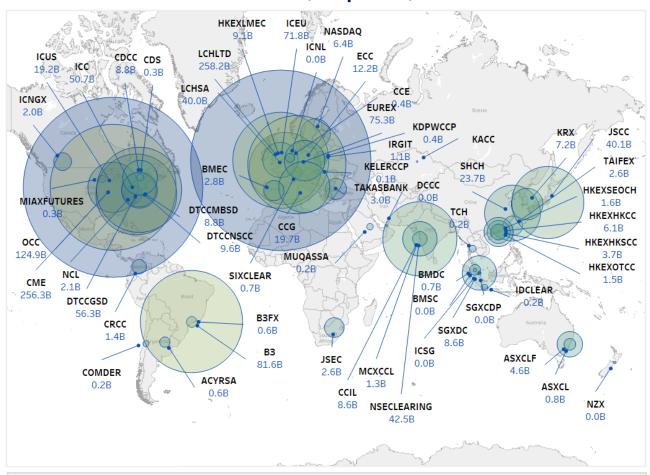


Collateral View

A collection of maps each quarter providing an overview of the global distribution of Initial Margin, Default Fund, and Variation Margin from a global perspective.

2024 Q4

6.1.1: Global IM (Required) Per CCP*



Note: 6.1.1 amounts which are less than USD 0.1B are not observable in the map. Please see the table below for the figures.



The coloured disks indicate the size of the IM (Required) (according to the key, opposite), from a geographical perspective.

6.1.1 USD		~
0.0B		258.2B
6.1.1 USD		
		0.0B
		50.0B
		100.0B
		150.0B
		200.0B
		258.2B

6.1.1 IM values (not seen from ma			
CCP	6.1.1 USD		
ICNL	0.00		
KACC	0.00		
ICSG	132,260.84		
NZX	3,951,902.45		
DCCC	4,457,531.00		
BMSC	21,131,010.04		
SGXCDP	27,121,468.15		
KELERCCP	74,185,065.17		

*Based on the CCP's city location. For CCPs that are from the same city location, they are hidden behind the larger transparent disks.

Muqassa: In some cases, the IM (Required) = 0 for certain quarters. This is due to certain reporting dates where there are no open contracts and hence no IM requirement for any members.

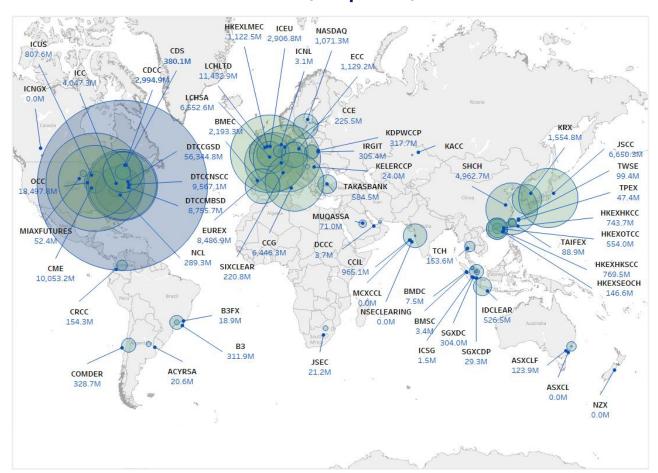


Collateral View

A collection of maps each quarter providing an overview of the global distribution of Initial Margin, Default Fund and Variation Margin from a global perspective.

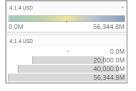
2024 Q4

4.1.4: Global DF (Required) Per CCP*





The coloured disks indicate the size of the DF fund (Required) per CCP (according to the key, opposite), from a geographical perspective.



^{*}Based on the CCP's city location. For CCPs that are from the same city location, they are hidden/overlayed behind the larger transparent disk 4.1.4 DF (Required) is zero in the PQDs for ASXCL, ICNGX, MCXCCL, NSE, NZX. For further details, please see the respective CCP's PQD.

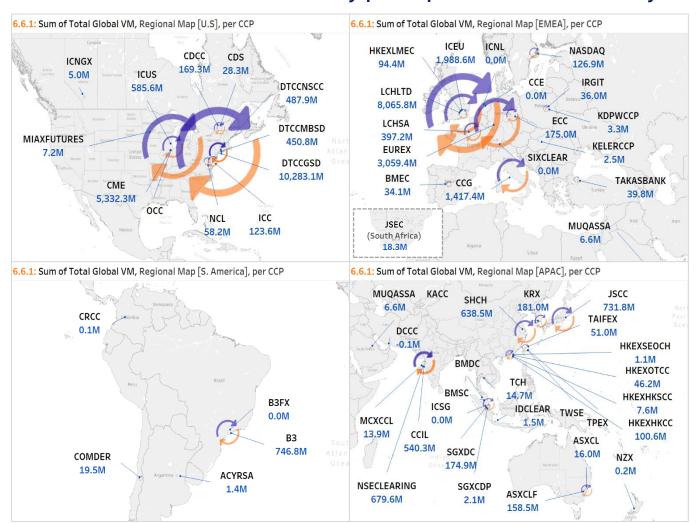


Collateral View

A collection of maps each quarter providing an overview of the global distribution of Initial Margin, Default Fund and Variation Margin from a global perspective.

2024 Q4

6.6.1: Total VM Paid to the CCP by participants each business day*



Note: 6.6.1 amounts which are less than USD 0.1M are not observable in the map. Please see the table opposite.



The double arrows indicate the size of the variation margin (VM) flow from a geographical perspective*. Please see the footnote below and page 15 for details about VM.

Maps not to scale relative to each other 6.6.1 values < USD 100,000 (not seen from map) ССР ВЗFX 0.00 ICNI 0.00 OCC SIXCLEAR 0.00 0.00 TPEX TWSF 0.00 215.78 88.936.98

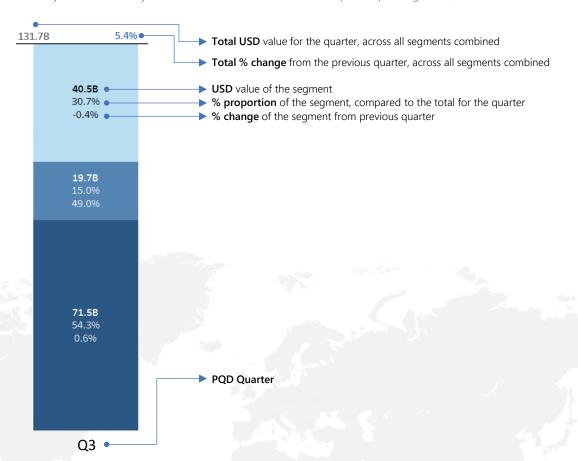
*CCPs collect VM from clearing members for losses on positions and pay the gains with finality to those clearing members with positions that have a net increase in value based on marked-to-market prices. VM is not paid directly from any specific clearing member or customer counterparty to another as a pass-through transfer, VM is a <u>netted cash flow</u> from a clearing member to (or from) the CCP. 6.6.1: OCC – See PQD explanatory notes. For values which are zero, these are based on the respective PQDs. Mar-25



PQD Statistics Key

Bar Chart Key:

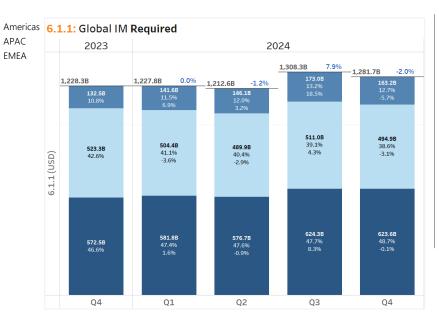
The key below provides details on how to interpret statistics in the subsequent charts of this report. The key is used for only charts where there are three data points per segment, as shown below:





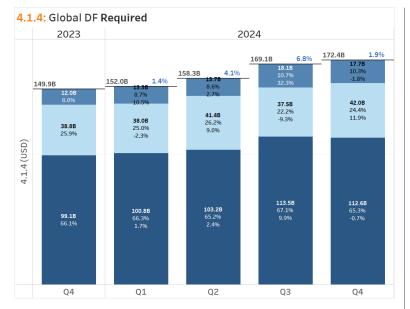
Total IM Required decreases -2.0% for 2024 Q4. DF Required increased by +1.9% over the quarter.

Global CCP Collateral (Required) - Grand Total 2023 Q4 to 2024 Q4 (USD B, %)



The chart opposite (6.1.1: Global IM Required) indicates the total amount of initial margin in total for the CCPs by their clearing members across the respective regions which is reported at the quarter-end under disclosure 6.1.1 in the CCP Public Quantitative Disclosures.

The initial margin collateral posted by clearing members functions as one of the initial lines of defence to cover the potential losses incurred if that clearing member was to default. CCPs are therefore able to have a very high level of resilience in the form of liquidity and low risk exposure.



The chart opposite (4.1.4: Global DF Required) indicates the total amount of default fund contributions in total for the CCPs by their clearing members across the respective regions which is reported at the quarterend under disclosure 4.1.4 in the CCP Public Quantitative Disclosures.

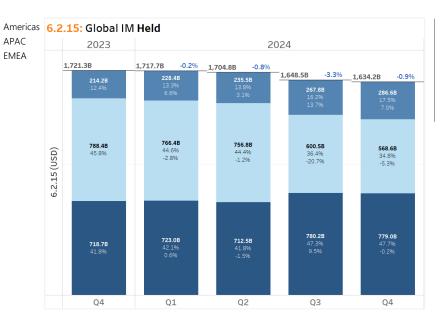
The purpose of the mutualized CCP default fund is to provide the necessary funds in case the losses from a clearing member's default exceeds the clearing member's margin collateral and individual default fund contributions. It is part of the risk management incentives framework in central clearing.

More information regarding the CCP lines of defence can be found on the CCP Global website here.

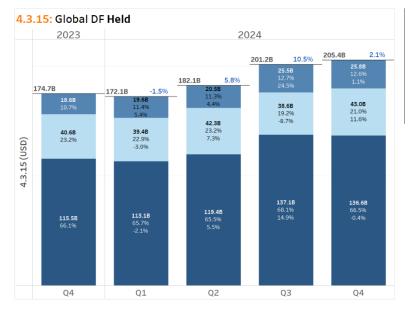


Total IM Held decreased for 2024 Q4 by -0.9%. DF Held increased by +2.1%. Distribution of IM Held is the largest for the Americas, followed by EMEA & APAC.

Global CCP Collateral (Held) (PostHaircut) - Grand Total 2023 Q4 to 2024 Q4 (USD B, %)



The chart opposite (6.2.15: Global IM Held) indicates the total amount of initial margin in total for the CCPs by their clearing members across the respective regions which is reported at the quarter-end under disclosure 6.2.15 in the CCP Public Quantitative Disclosures..



The chart opposite (4.3.15: Global DF Held) indicates the total amount of default fund contributions in total for the CCPs by their clearing members across the respective regions which is reported at the quarterend under disclosure 4.3.15 in the CCP Public Quantitative Disclosures.



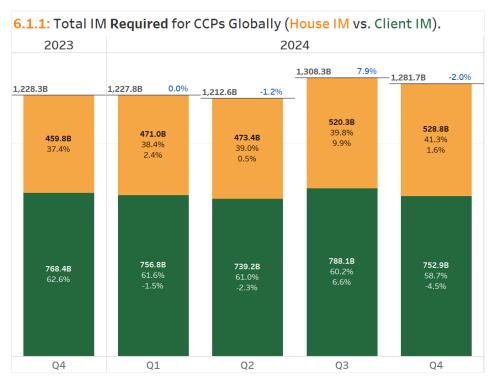
From the House IM vs Client IM split, House IM increased by +1.6%. Client IM decreased by -4.5%. House IM accounted for 41.3% of the margin requirement, compared to 58.7% for Client IM.

Global IM breakdown: House IM vs. Client IM (Required)

Disclosure (6.1.1):

2023 Q4 to 2024 Q4 (USD B, %)

House IM
Client IM



The chart above (6.1.1: Total IM required for CCPs Globally (House IM vs. Client IM)) indicates a split between House and Client IM which is reported at the quarter-end under disclosure 6.1.1.

The House IM segment is the initial margin requirement for positions held by clearing members for their own portfolios, as opposed to the initial margin requirement for the clearing member's clients. House Gross/Net and Client Gross/Net are grouped for the purpose of analysis.

Mar-25

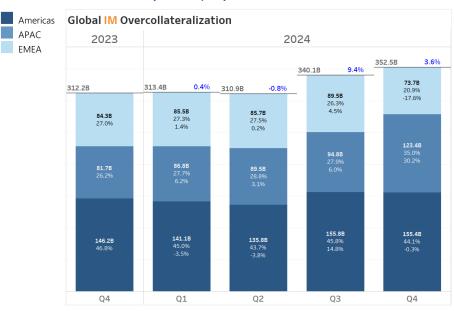
^{*}The sum of IM Required is slightly lower than the Total IM Required (previous page), due to no breakdown of House/Client IM Required for HKEX HKSCC, HKEX OTCC, and NSE. As a result, these are assumed House IM.

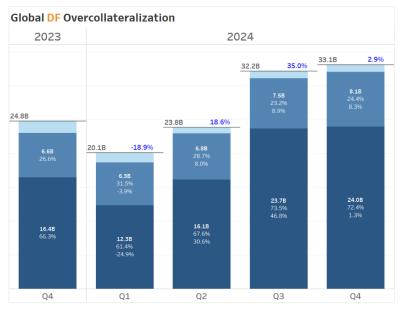


Global IM Overcollateralization ("OC") was USD 352.5B for 2024 Q4. Global DF OC was USD 33.1B for 2024 Q4.

Global CCP IM and DF Overcollateralization*

Disclosures IM OC: (6.2.15) – (6.1.1) Disclosures DF OC: (4.3.15) – (4.1.4) 2023 Q4 to 2024 Q4 (USD B, %)





*IM OC calculated as = (IM_{Held} – IM_{Required}), (6.2.15 Held PostHaircut) - (6.1.1 Required). DF OC = (DF_{Held} – DF_{Required}), (4.3.15 Held PostHaircut) - (4.1.4 Required). (Only PostHaircut values used for Held values). OC: "Overcollateralization".

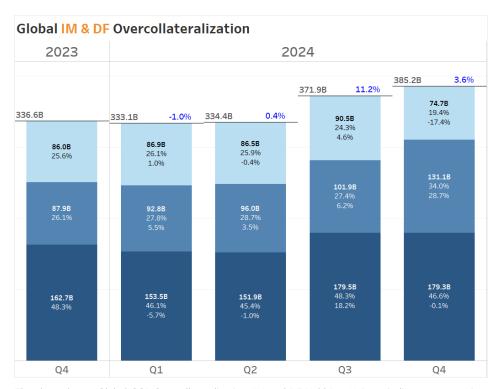
lar-25 CCPG PQD QUARTERLY TRENDS — 2024 Q4



Total Overcollateralization* was USD 385.2B for 2024 Q4.

Global CCP Overcollateralization (IM & DF <u>Held (PostHaircut)</u> – IM & DF <u>Required</u>) Disclosures Total OC: (6.2.15 + 4.3.15) – (6.1.1 + 4.1.4) 2023 Q4 to 2024 Q4 (USD B, %)





The chart above (Global CCP Overcollateralization (IM and DF Held PostHaircut) indicates an overview of the IM and DF overcollateralization per region, reported at the quarter-end.

Global CCP Overcollateralization provides a sense of how a CCP is collateralized when comparing the held amounts against the required amounts. The Total Global CCP Overcollateralization calculation is equivalent to PQD disclosures (6.2.15+4.3.15) – (6.1.1+4.1.4).

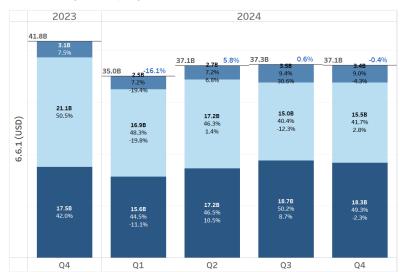


Sum of the Average Total VM Paid to the CCP by participants each business day in 2024 Q4 was USD 37.1B, representing a decrease of -0.4%.

Sum of Average Total Global VM Paid to the CCP by participants each business day[†] Disclosure (6.6.1)

2023 Q4 to 2024 Q4 (USD B, %)





The chart opposite, (6.6.1: Sum of Average Total Global VM Paid to the CCP by Participants Each Business Day) indicates the sum total flow of the average variation margin through global CCPs split by region.

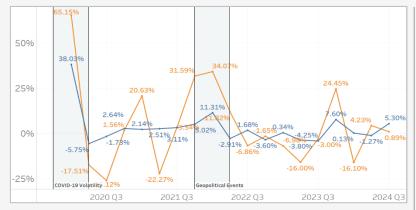
Variation margin payments are usually made daily (in cash) or intra-day from the party whose position has reduced in value to the party that has increased in value.

These daily mark-to-market payments prevent the unnecessary build-up of large losses over time and are one of the many different aspects of a CCP's lines of defence.

(6.6.1) Total Δ% (6.1.1) Total Δ%

PQD Insight 🛞

6.6.1 vs. 6.1.1: Sum of Total Global VM Paid to the CCP by participants each business day vs. Total IM (Required), % Change QoQ[†] 2019 Q4 to 2024 Q4 (% change)



The chart opposite, 6.6.1 vs. 6.1.1: % Difference QoQ, provides a summary of the % change of the Total Global VM Paid to the CCP by participants each business day and the Total IM (Required).

It is important to note that during extreme volatility periods such as the CC* or 2022 Q1 geopolitical turmoil, global volatility indices (e.g., VIX, VSTOXX, and NIKKEI VI), have seen much higher increases in comparison. Please see the CCP Global Annual Markets Review in Central Counterparty Clearing.

VM: Variation Margin

*CC: COVID-19 crisis in 2020 Q1. Global VM 6.6.1 increased 65.15%, represented by USD 40.9 B – please see the CCP Global 2020 Q1 PQD Newsflash.

*Note: This is the sum total of the average VM paid out to the CCP by participants each business day across the respective regions. Not the average per CCP per region

Mar-25

CCPG PQD QUARTERLY TRENDS – 2024 Q4



Total Cash Held* for IM decreased by -8.3% for 2024 Q4. Majority of all cash resources have continued to be deposited at Central Banks[†].

6.2.1 – 6.2.4: Global CCP IM (Held) (PostHaircut), Cash Total 2023 Q4 to 2024 Q4 (USD B, % change QoQ)

(6.2.4) Unsecured at Commercial Banks
(6.2.3) Secured Cash at Commercial Banks (Incl. Reverse Repos)
(6.2.1 + 6.2.2) Central Bank†



Central Bank accounts are widely agreed by the industry and regulatory community as the safest option for the safekeeping of CMs' margin. Many CCPs maintain large daily cash balances and although the CCPs continue to operate extensive collateral management functions to ensure the safety of the margin that they receive, direct access to a central bank account would only enhance this security further.

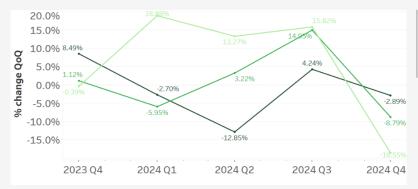


The chart opposite, (6.2.1 – 6.2.4: Global CCP IM (Held) (PostHaircut), Cash Total) provides an overview of the split of IM (Held) deposits at central banks and commercial banks under disclosures 6.2.1 – 6.2.4.

(6.2.4) Δ% (6.2.3) Δ% (6.2.1)+ Δ%

PQD Insight 🖗

6.2.1 – 6.2.4: Global Cash IM (Held) (PostHaircut), % Difference QoQ per segment 2023 Q4 to 2024 Q4 (% change)



The chart opposite (6.2.1 – 6.2.4: Global Cash IM (Held) (PostHaircut), % Difference QoQ per segment) provides an overview of the quarterly change of IM (Held) deposits.

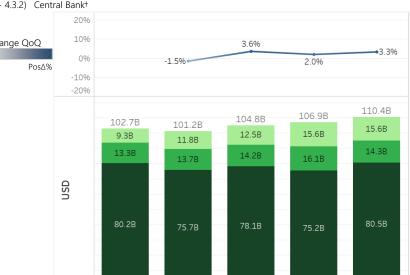
^{*}Figures as of quarter-end. Sum of IM Held across 6.2.1 – 6.2.14 is slightly lower than the Total IM Held Values for 6.2.15, due to: (1). DTCC have requested that 6.2.15 figures be equivalent to 4.3.15 figures, (2). For OCC 6.2.15 total > sum of 6.2.1 – 6.2.14. TCH provide the full breakdown of 6.2.15 split across 6.2.1 – 6.2.14 as of 2020 Q2. tCash deposited at "Other Central Bank of Issue" (IM: 6.2.2, DF: 4.3.2) makes up <0.5% of the total cash collateral for IM and <0.5% for the DF. Therefore, "Central Bank of Issue" and "Other Central Bank" (ash deposits grouped together within charts.



Total Cash Held* for DF increased by +3.3% for 2024 Q4. Majority of all cash resources have continued to be deposited at Central Banks[†].

4.3.1 – 4.3.4: Global CCP DF (Held) (PostHaircut), Cash Total 2023 Q4 to 2024 Q4 (USD B, % change QoQ)





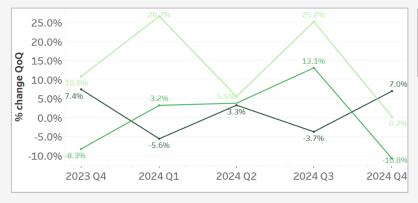
The chart opposite, (4.3.1 – 4.3.4: Global CCP DF (Held) (PostHaircut), Cash Total) provides an overview of the split of DF (Held) deposits at central banks and commercial banks under disclosures 4.3.1 - 4.3.4.

(4.3.4) Δ% (4.3.3) Δ% (4.3.1)† Δ%

PQD Insight 🛞

Neg∆%

4.3.1 - 4.3.4: Global Cash DF (Held), % Difference QoQ per segment 2023 Q4 to 2024 Q4 (% change)



June 2024

September 2024 December 2024

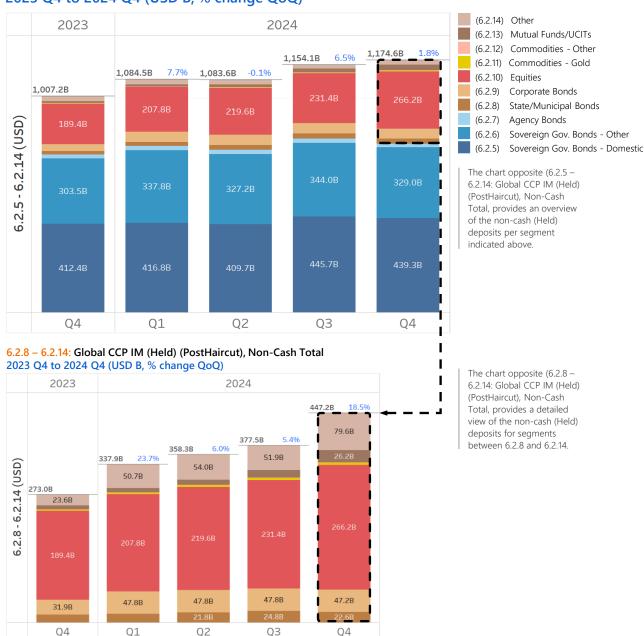
The chart opposite (4.3.1 -4.3.4: Global Cash DF (Held), % Difference QoQ per segment) provides an overview of the quarterly change of DF (Held) deposits.

^{*}Figures as of quarter-end. The sum of IM Held across 6.2.1 – 6.2.14 is slightly lower than the Total IM Held Values for 6.2.15, due to: (1). DTCC has requested that 6.2.15 figures be equivalent to 4.3.15 figures, (2). For OCC 6.2.15 total > sum of 6.2.1 - 6.2.14. TCH provides the full breakdown of 6.2.15 split across 6.2.1 - 6.2.14 as of 2020 Q2 Cash deposited at "Other Central Bank of Issue" (IM: 6.2.2, DF: 4.3.2) makes up < 0.5% of the total cash collateral for IM and < 0.5% for the DF. Therefore, "Central Bank of Issue" and "Other Central Bank" Cash deposits are grouped together within charts.



During 2024 Q4, total global Non-Cash IM Held increased by +1.8%. The split across each segment has remained similar from the previous quarter.

6.2.5 – 6.2.14: Global CCP IM (Held) (PostHaircut), Non-Cash Total 2023 Q4 to 2024 Q4 (USD B, % change QoQ)



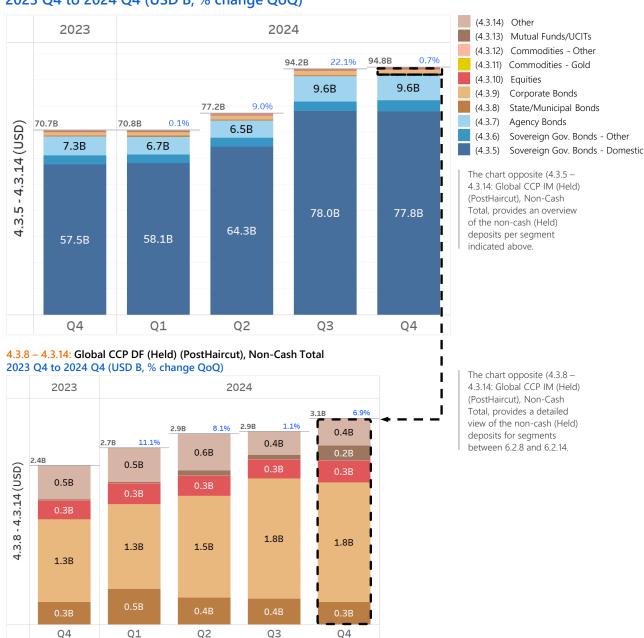
*Figures as of quarter end. The sum of IM Held across 6.2.1 – 6.2.14 is lower than the Total IM Held Values for 6.2.15, due to certain PQDs not providing a breakdown of the IM held across these data points. This is also due to the following: 1). DTCC has requested that 6.2.15 figures be equivalent to 4.3.15 figures, therefore no breakdown for 6.2.1 – 6.2.14 is provided, and 2). OCC 6.2.15 total > sum of 6.2.1 – 6.2.14. As of 2023 Q4all OCC "PreHaircut" figures for Client/House IM are considered "PostHaircut" thus a clearer view of the proportions of IM held for 6.2.1 – 6.2.14 can be observed. TCH provides the full breakdown of 6.2.15 split across 6.2.1 - 6.2.14 as of 2020 Q2.

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During 2024 Q4, total global Non-Cash DF Held increased by +0.7%. The split across each segment has remained similar from the previous quarter.

4.3.5 – 4.3.14: Global CCP DF (Held) (PostHaircut), Non-Cash Total 2023 Q4 to 2024 Q4 (USD B, % change QoQ)

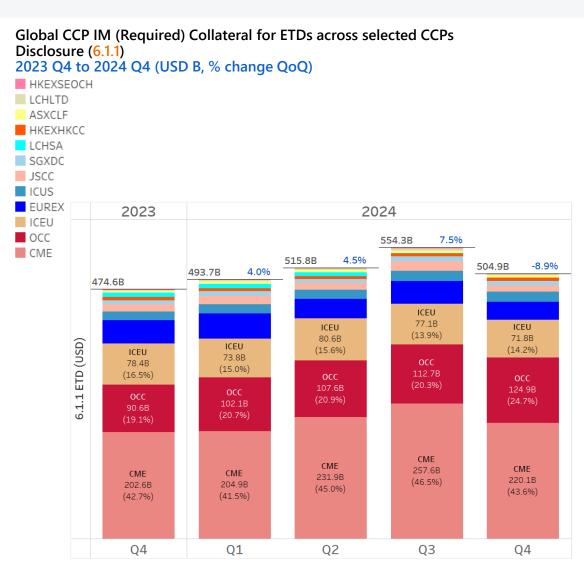


*Figures as of quarter end. Sum of IM Held across 6.2.1 – 6.2.14 is slightly lower than the Total IM Held Values for 6.2.15, due to 1). DTCC have requested that 6.2.15 figures be equivalent to 4.3.15 figures, and 2). OCC 6.2.15 total > sum of 6.2.1 – 6.2.14. TCH provide the full breakdown of 6.2.15 split across 6.2.1 - 6.2.14 as of 2020 Q2. †Disclosures 4.3.8 – 4.3.14 constitute on average <1.5% of total non-cash collateral per quarter.

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For 2024 Q4 the IM required for ETDs across the following selected 12 CCPs decreased by -8.9%. Proportion of IM across each CCP has remained consistent QoQ.



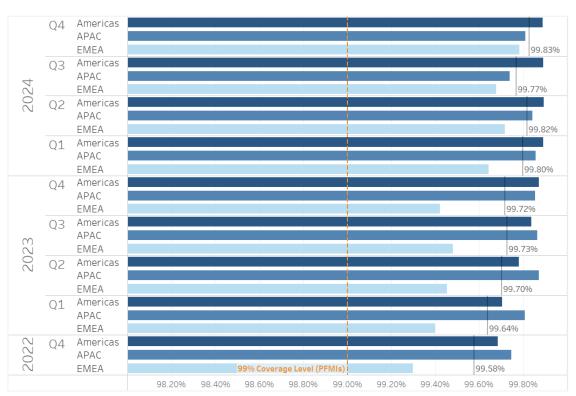
The chart above (6.1.1: Global CCP IM (Required) Collateral for ETDs across selected CCPs) provides a summary of the IM required for ETDs across a number of selected CCPs chosen for a global geographical representation.



Results of backtesting of initial margin (ACL - Achieved Coverage Level) reached 99.83% (on average) across all regions for 2024 Q4, higher than the previous quarter.

Results of backtesting of initial margin – ACL* Disclosure (6.5.3) 2022 Q3 to 2024 Q4 (%)

Americas
APAC
EMEA



The chart above (Results of backtesting of Initial Margin – Achieved Coverage Level). Backtesting is an important technique that a CCP utilizes to ensure that its initial margin model is performing as expected and that the assumptions within the model are valid. A CCP should assess its initial margin coverage by performing an ex-post comparison of observed profit and loss moves of a given portfolio against the initial margin collected.

According to the <u>Principles for Financial Market Infrastructures</u>, a 99.00% coverage of backtesting is used as a benchmark to assess the efficiency of the initial margin model, however, a CCP may use a higher (percentile) benchmark. As can be seen from the above metrics, global CCPs on average have achieved above 99.00% in all instances from recent years.

For further information, please see the CCP Global White Paper – Primer on Initial Margin.

*Average has been taken across all CCPs within each respective region.



CCPs reported availability to core clearing systems of 99.98% over the previous 12-month period, the same as last quarter*

Availability, Failures and Recovery Time Objectives 2024 Q4

CCPs report the quantity and duration of operational failures affecting their core clearing systems over the previous 12-months on a quarterly basis:

- **Core Systems:** Within clearing, systems enable the acceptance and novation of trades, and provide the calculation of margin and settlement obligations;
- Loss of Availability: An incident that results in an interruption to the CCP's ability to perform its own functions in relation to trade acceptance and novation, or calculation of margin and settlement obligations. An incident that compromises the CCP's ability to correctly perform the aforementioned functions is also considered a 'loss of availability', even if there is no actual outage. Failure to a backup site without interruption to services would not count as a loss of availability.

Disclosure (17.2):

The average actual core clearing system availability over the previous twelve-month period (January 1, 2024, to December 31, 2024) across CCP PQDs this quarter was: **99.98**%

Disclosure (17.4):

60 CCP PQDs representing 38 CCP Global Members & 2 Non-Members				
2 CCPs	Target recovery time within:	45 mins		
2 CCPs	Target recovery time within:	60 mins		
52 CCPs	Observe the standard target recovery time of within:	120 mins		
2 CCP	Target recovery time within:	240 mins		
2 CCPs	Target recovery time within:	12 hrs		

According to the <u>Principles for Financial Market Infrastructures</u>, the objectives of a CCP's business continuity plan should detail the system's target recovery time ("TRT") and recovery point information. Based on the PFMI's, a CCP should aim to be able to resume operations within two hours following a disruptive event(s); however, backup systems should preferably commence processing immediately upon such a disruption.

As seen from the above table, the majority of global CCPs have a target recovery time set as two hours or shorter; with only four CCPs observing a slightly longer TRT based on their respective regulatory requirements.

^{*}For 2024 Q3, the average availability of core clearing systems over the previous 12-month period across all CCPs was 99.98%.
†All figures are based on the respective CCP's regulatory requirements in their local jurisdiction. CC&G and IRGIT PQD data are incorporated as non-CCP Global members



CCP Global Member List*

CCPG Member	CCP Mnemonic	Region	Country	PQD Hyperlink
ABAXX	ABAXX	APAC	Singapore	Abaxx Exchange Pte Ltd
ACYRSA	ACYRSA	Americas	Argentina	Argentina Clearing y Registro S.A.
ASX	ASXCL	APAC	Australia	Australia Securities Exchange Clear
ASX	ASXCLF	APAC	Australia	<u>Australia Securities Exchange Clear Futures</u>
B3	B3	Americas	Brazil	Brasil, Bolsa, Balcão (B3 Clearinghouse)
B3	B3FX	Americas	Brazil	Brasil, Bolsa, Balcão (B3 Foreign Exchange Clearinghouse)
BMAL	BMDC	APAC	Malaysia	Bursa Malaysia Derivatives Clearing
BMAL	BMSC	APAC	Malaysia	Bursa Malaysia Securities Clearing
CBOECLEAR	CCE	EMEA	Netherlands	Choe Clear Europe N.V. (Choe Clear) The Clearing Correction of India India
CCIL	CCIL	APAC	India	The Clearing Corporation of India Ltd. Chicago Mercantile Exchange
CME COMDER	CME COMDER	Americas Americas	United States of America Chile	ComDer Contraparte Central S.A.
CRCC	CRCC	Americas	Colombia	Cámara de Riesgo Central de Contraparte S.A.
DCCC	DCCC	EMEA	United Arab Emirates	The Dubai Commodities Clearing Corporation
DUBAICLEAR	DUBAICLEAR	EMEA	United Arab Emirates	Dubai Clear
DTCC	DTCC_GSD	Americas	United States of America	Depository Trust and Clearing Corporation – Government Securities Division Solutions
DTCC	DTCC MBSD	Americas	United States of America	Depository Trust and Clearing Corporation – Mortgage-Backed Securities Division
DTCC	DTCC NSCC	Americas	United States of America	Depository Trust and Clearing Corporation – National Securities Clearing Corporation
ECAG	ECAG	EMEA	Germany	Eurex Clearing Group
ECAG	ECC	EMEA	Germany	European Commodity Clearing
ECAG	NCL	Americas	United States of America	Nodal Clear
HKEX	HKEX_HKCC	APAC	Hong Kong	HKFE Clearing Corporation Limited
HKEX	HKEX_HKSCC	APAC	Hong Kong	Hong Kong Securities Clearing Company Limited
HKEX	HKEX_LME	EMEA	United Kingdom	The London Metal Exchange
HKEX	HKEX_OTCC	APAC	Hong Kong	OTC Clearing Hong Kong Limited
HKEX	HKEX_SEOCH	APAC	Hong Kong	The SEHK Options Clearing House Limited
ICE	ICC	Americas	United States of America	ICE Clear Credit
ICE	ICEU	EMEA	United Kingdom	ICE Clear Europe
ICE	ICNGX	Americas	Canada	ICE Clear Canada
ICE	ICNL	EMEA	Netherlands	ICE Clear Netherlands
ICE	ICSG	APAC	Singapore	ICE Clear Singapore
ICE	ICUS	Americas	United States of America	ICE Clear US
IDCLEAR	IDCLEAR	APAC	Indonesia	ID Clear
NON-MEMBER*	IRGIT	EMEA	Poland	Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT, Clearing House)
JSCC	JSCC	APAC	Japan	Japan Securities Clearing Corporation
JSE	JSEC	EMEA	South Africa	Johannesburg Stock Exchange
KACC	KACC	EMEA	Kazakhstan	Kazakhstan Stock Exchange (KACC)
KELER	KELERCCP	EMEA	Hungary Poland	KELER CCP
KRX	KRX	EMEA APAC	South Korea	KDPW CCP Korea Exchange
LSEG	LCHLTD	EMEA	United Kingdom	London Clearing House Ltd.
LSEG	LCHSA	EMEA	France	London Clearing House S.A.
MCXCCL	MCXCCL	APAC	India	Multi Commodity Exchange Clearing Corporation Limited
MIAX	MIAXFUTURES	Americas	United States of America	MIAX Futures Exchange
MUQASSA	MUQASSA	EMEA	Saudi Arabia	Securities Clearing Center Company (Muqassa)
NASDAQ	NASDAQ	EMEA	Sweden	Nasdag Clearing
NON-MEMBER*	NCC	EMEA	Russia	Central Counterparty National Clearing Centre
NON-MEMBER*	CCG	EMEA	Italy	Cassa di Compensazione e Garanzia S.p.A.
NSE	NSE	APAC	India	NSE Clearing Limited
NZX	NZX	APAC	New Zealand	New Zealand Exchange
OCC	OCC	Americas	United States of America	The Options Clearing Corporation
SIX	SIXCLEAR	EMEA	Switzerland	SIX Group Ltd (SIX)
SIX	BMEC	EMEA	Madrid	BME Clearing (a SIX company)
SGX	SGX_CDP	APAC	Singapore	Singapore Exchange (Central Depository (Pte) Limited)
SGX	SGX_DC	APAC	Singapore	Singapore Exchange (Derivatives Clearing)
SHCH	SHCH	APAC	China	Shanghai Clearing House
TAIFEX	TAIFEX	APAC	Taiwan	Taiwan Futures Exchange (Taifex)
TAKASBANK	TAKASBANK	EMEA	Turkey	<u>Takasbank</u>
TCH	TCH	APAC	Thailand	Thailand Clearing House Co. Ltd.
TMX	CDS	Americas	Canada	TMX Group - Canadian Depository for Securities Limited (CDS Ltd.)
TMX	CDCC	Americas	Canada	TMX Group - Canadian Derivatives Clearing Corporation (CDCC)
TPEX	TPEX	APAC	Taiwan (R.O.C.)	TPEX
TWSE	TWSE	APAC	Taiwan (R.O.C.)	TWSE Vioteom Sequifica Penasitory
NON-MEMBER*	VSDC	APAC	Vietnam	Vietnam Securities Depository

CCP Global non-members included in the CCP Global PQD Quarterly Trends Report analysis are clearly indicated



About CCP Global

CCP Global is the global association for CCPs, representing 42 members who operate over 60 individual central counterparties (CCPs) globally across the Americas, EMEA, and the Asia-Pacific region. CCP Global promotes effective, practical, and appropriate risk management and operational standards for CCPs to ensure the safety and efficiency of the financial markets it represents.

CCP Global leads and assesses global regulatory and industry initiatives that concern CCPs to form consensus views, while also actively engaging with regulatory agencies and industry constituents through consultation responses, forum discussions, and position papers.

For more information, please contact the office by e-mail at office@ccp-global.org or through our website by visiting www.ccp-global.org.





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CCP Global Members





















































































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