

Public Quantitative Disclosure

CCP12 Newsflash

2021 Q3 Data

January 2022



CCP12 PQDs



- The CCP12 Public Quantitative Disclosure Newsflash provides an overview of the risk management provided by CCPs around 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 clearing exposure by collecting *mark-to-market* losses through regular variation margin (or similar) payments.
- This CCP12 PQD Newsflash 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 CCP12 standardized template, carrying information stipulated in global regulatory guidance. Further details for individual CCPs can be found in links provided on the [CCP12 website](#).
- **PQD updates this quarter:**
 - The following PQDs have been added to this quarter's aggregation: New Zealand Clearing and Depository Corporation Limited
 - *As of January 2022, over 90% of all CCP12 members are publishing PQDs, representing a 32% increase in PQD publications since July 2020.*

In this collation for 2021 Q3*:

Data for 51 CCPs (equivalent to 33 CCP12 members) are included[†]:

- Americas 15
- APAC 20
- EMEA 16

6.1.1 Initial Margin (Required):	USD 1127 Billion
4.1.4 Default Fund Resources (Required):	USD 132 Billion
Global CCP Overcollateralization [‡] :	USD 465 Billion

*All dates within CCP PQDs are forced to "end-of-quarter dates" to reflect the end-of-quarter exchange rate for each PQD. i.e., if the dates in the PQDs are "2021-09-28", then, these are adjusted to "2021-09-30", and the corresponding FX rate for 2021-09-30 is used.

[†]CC&G data is incorporated as a non-CCP12 member.

[‡]Calculated as (Total IM and DF Held PostHaircut) minus (Total IM and DF Required) (Only PostHaircut values used for Held values). Disclosures (6.2.15 + 4.3.15) – (6.1.1 + 4.1.4) = Total Overcollateralization

Commentary on the quarter for 2021 Q3

Below are a few key market developments which took place in the third quarter of 2021:

- Global markets experienced mixed performance in 2021 Q3 as the ongoing spread of the COVID-19 Delta variant further slowed market growth and caused varied investor sentiment.
- Global equities remained relatively stable and resilient in certain jurisdictions with the U.S., Eurozone, UK and Japan being more or less flat or with slight increases over the quarter. The Eurozone and U.S. saw upward trends on the back of expected earnings growth. However, investor sentiment was mixed with concerns over a dovish U.S. fiscal stimulus and the prolonged effects of the global pandemic.¹
- Government Bond yields declined in advanced economies, despite the anticipated monetary policy being tightened. This further indicated the cautionary stance made by investors.¹
- Corporate bonds performed relatively well with high yield corporate bonds making positive bonds and investment grade credit unchanged. European investment grade corporate bonds outperformed government bonds. Corporate spreads continued to be unusually compressed although there was a slight increase at the beginning of the quarter. Overall, corporate spreads have remained well below the historical medians in the Eurozone and U.S.^{1,2}
- 2021 Q3 Global Futures & Options volumes were the highest figures recorded at 5.6B contracts for September 2022, mainly driven by the APAC and North America regions. Across asset classes, equity index and individual equity contracts were the prime drivers.³

¹ https://www.bis.org/publ/qtrpdf/r_qt2109.htm

² <https://www.schroders.com/en/us/professional-investor/insights/multi-asset/quarterly-markets-review---q3-2021/>

³ <https://www.fia.org/resources/etd-volume-september-2021>

Headline Statistics of the Public Quantitative Disclosures

2021 Q3

Total Global Margin* (USD B)

Required IM & DF:

Total Global Initial Margin (IM) Requirement (6.1.1)	1,127
Total Global Default Fund (DF) Requirement (4.1.4)	132
Total Global CCP Collateral Requirement (6.1.1 + 4.1.4)	1,259

Held (PostHaircut) IM & DF:

Total Global IM Held (PostHaircut) (6.2.15)	1,575
Total Global DF Held (PostHaircut) (4.3.15)	149
Total Global CCP Collateral Held (PostHaircut) (6.2.15 + 4.3.15)	1,724

Variation Margin (VM)

Total Global Average Daily VM Paid to the CCP by participants each business day (6.6.1)	25
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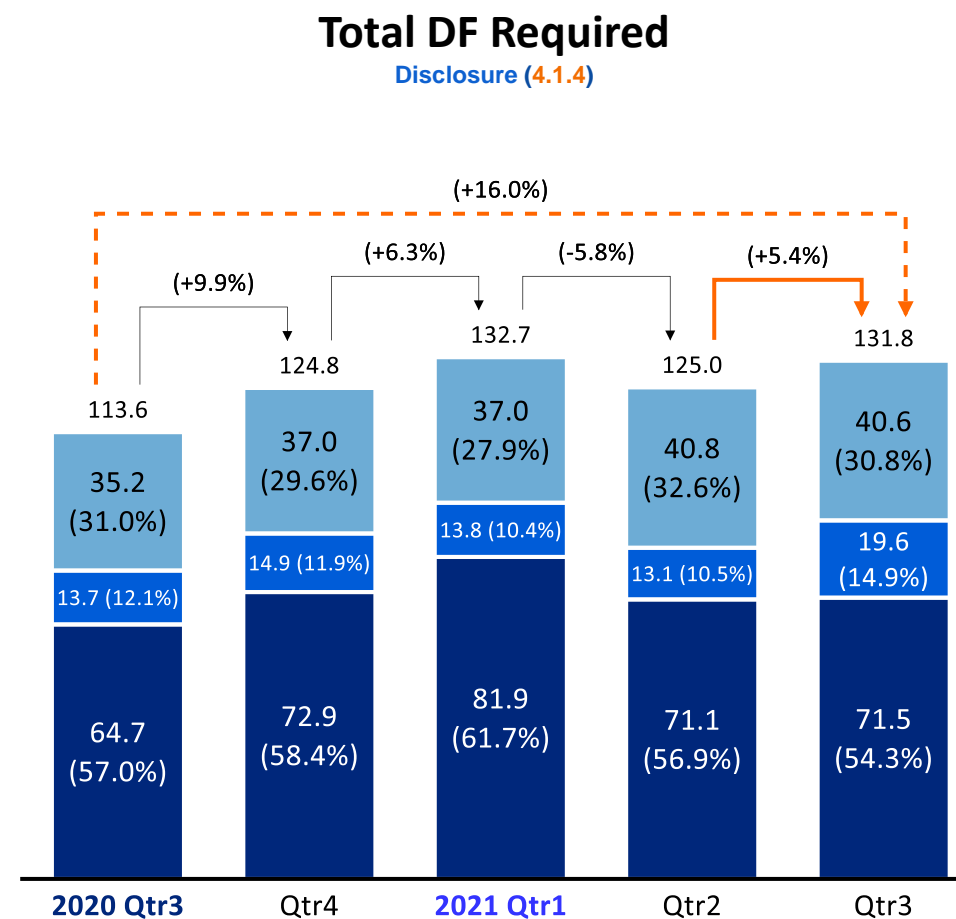
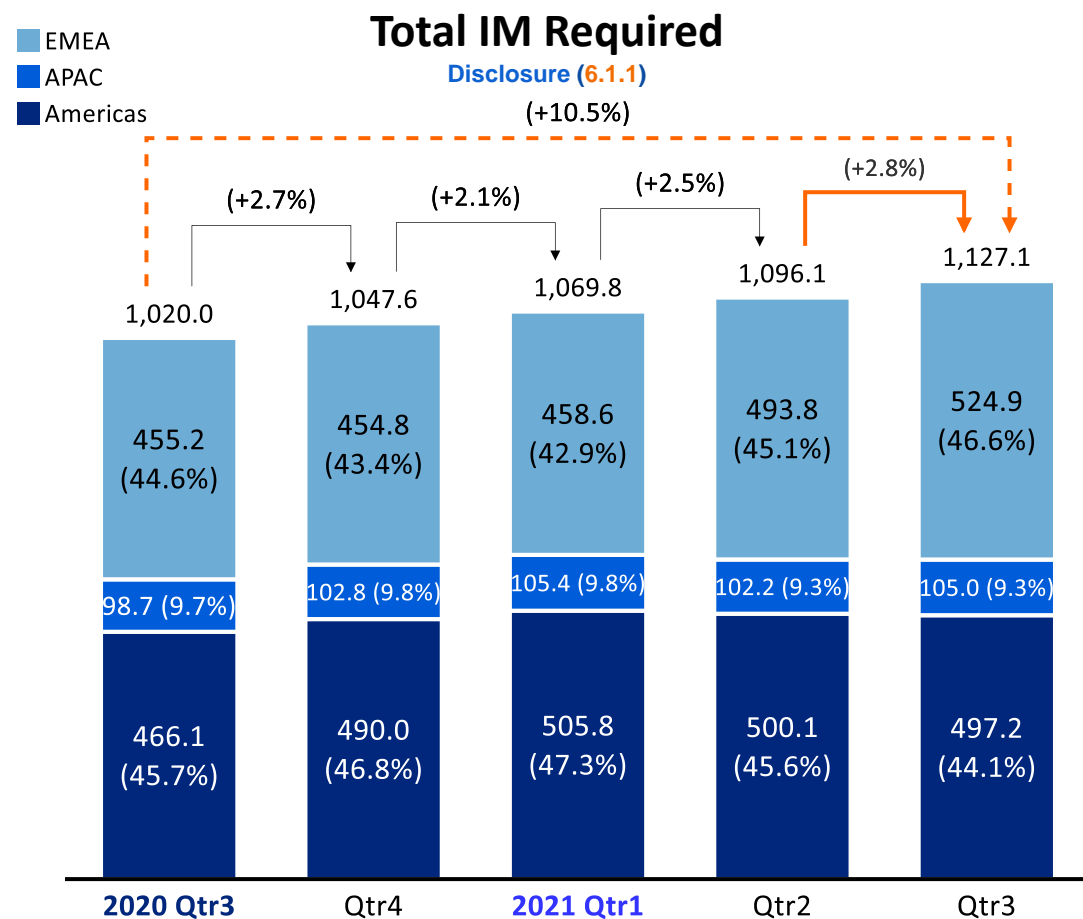
Total Global CCP Collateral (Held) in form of*:

	Disclosure	Initial Margin	Disclosure	Default Fund
Cash				
<i>At Central Bank</i>	(6.2.1 + 6.2.2)	20.5%	(4.3.1 + 4.3.2)	40.2%
<i>Secured Cash (incl. Reverse Repos) at Commercial Banks</i>	6.2.3	8.2%	4.3.3	10.5%
<i>Unsecured Cash at Commercial Banks</i>	6.2.4	4.5%	4.3.4	10.9%
Non-Cash				
<i>Sovereign Gov Bonds - Domestic</i>	6.2.5	22.6%	4.3.5	30.8%
<i>Sovereign Gov Bonds – Foreign</i>	6.2.6	17.0%	4.3.6	3.3%
<i>Agency Bonds</i>	6.2.7	1.1%	4.3.7	2.6%
<i>State/Municipal Bonds</i>	6.2.8	0.5%	4.3.8	0.2%
<i>Corporate Bonds</i>	6.2.9	5.7%	4.3.9	0.9%
<i>Equities</i>	6.2.10	5.0%	4.3.10	0.3%
<i>Commodities – Gold</i>	6.2.11	0.3%	4.3.11	0.0%
<i>Commodities – Other</i>	6.2.12	0.0%	4.3.12	0.0%
<i>Mutual Funds/UCITs</i>	6.2.13	0.3%	4.3.13	0.0%
<i>Other</i>	6.2.14	2.6%	4.3.14	0.4%

*The sum of the % in the IM column = 90% since: 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 DTCC requesting that 6.2.15 figures be equivalent to 4.3.15 figures; and 4 other CCPs providing only totals for their 6.2.15 values.
 OCC 6.2.1 – 6.2.14 House, Client and Total “PreHaircut” figures are considered “PostHaircut” values for the purpose of analysis.
 Data has been normalized to USD equivalent, based on foreign exchange rates at the quarter-end for each PQD quarterly release.

Across the CCPs, a slightly higher level of Total IM required and an increase in Total DF required collateral was observed for 2021 Q3. Figures across each region has remained steady QoQ.

Global CCP Collateral (Required) - **Grand Total**
2020 Q3 to 2021 Q3 (USD B, %)



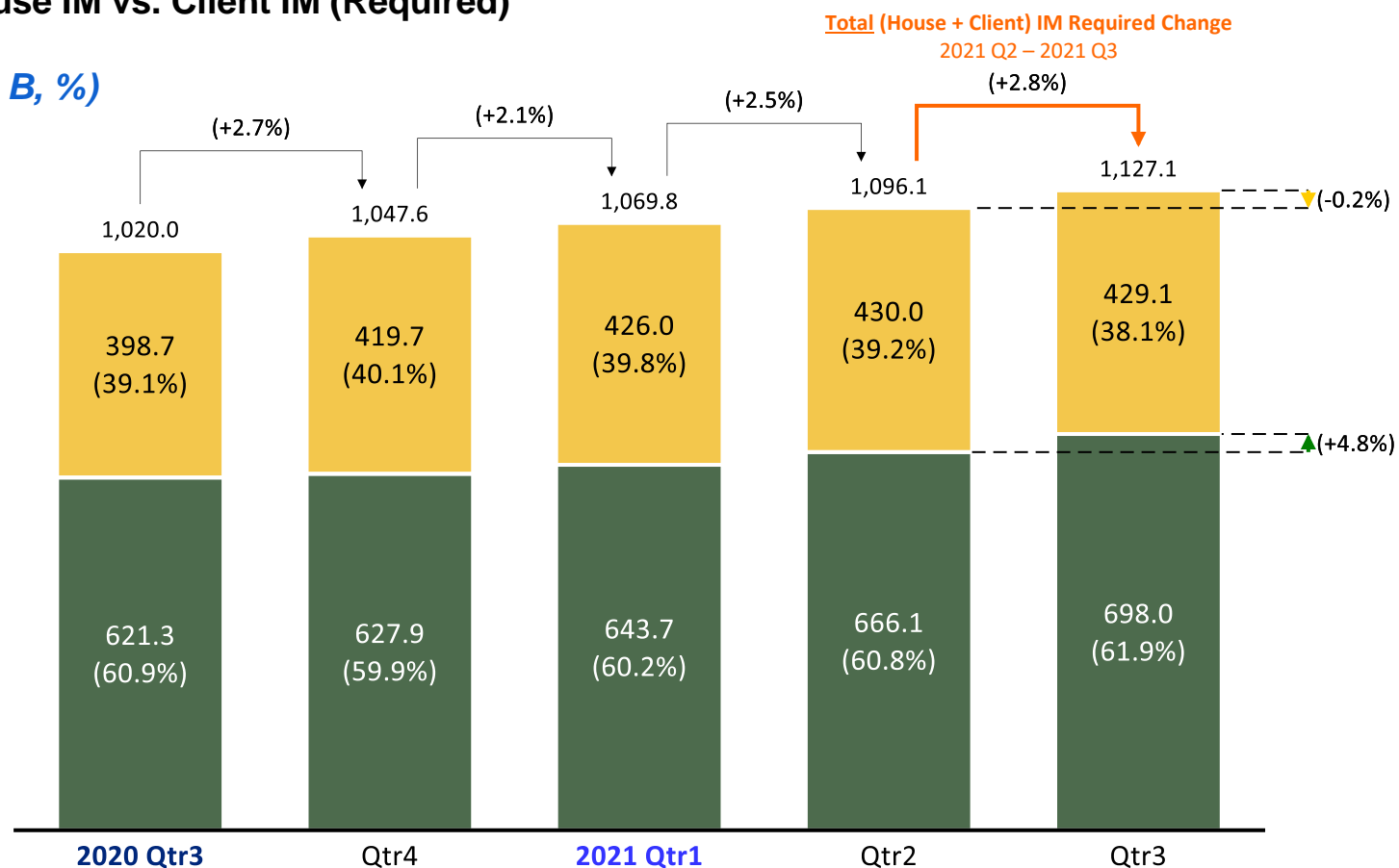
IM: Initial Margin; QoQ: Quarter-over-Quarter.

House and Client IM required remained relatively flat for 2021 Q3. House IM decreased by 0.2% and Client IM increased by 4.8%. QoQ proportion between both has remained constant, however we observe a slightly higher proportion of Client IM for 2021 Q3.

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

Disclosure (6.1.1):
2020 Q3 to 2021 Q3 (USD B, %)

House_IM
Client_IM



*Sum of IM Required is slightly lower than the Total IM Required on slide 5, due to no breakdown of House/Client IM Required for HKEX HKSCC, HKEX OTCC and NSE. As a result, these are assumed House_IM.

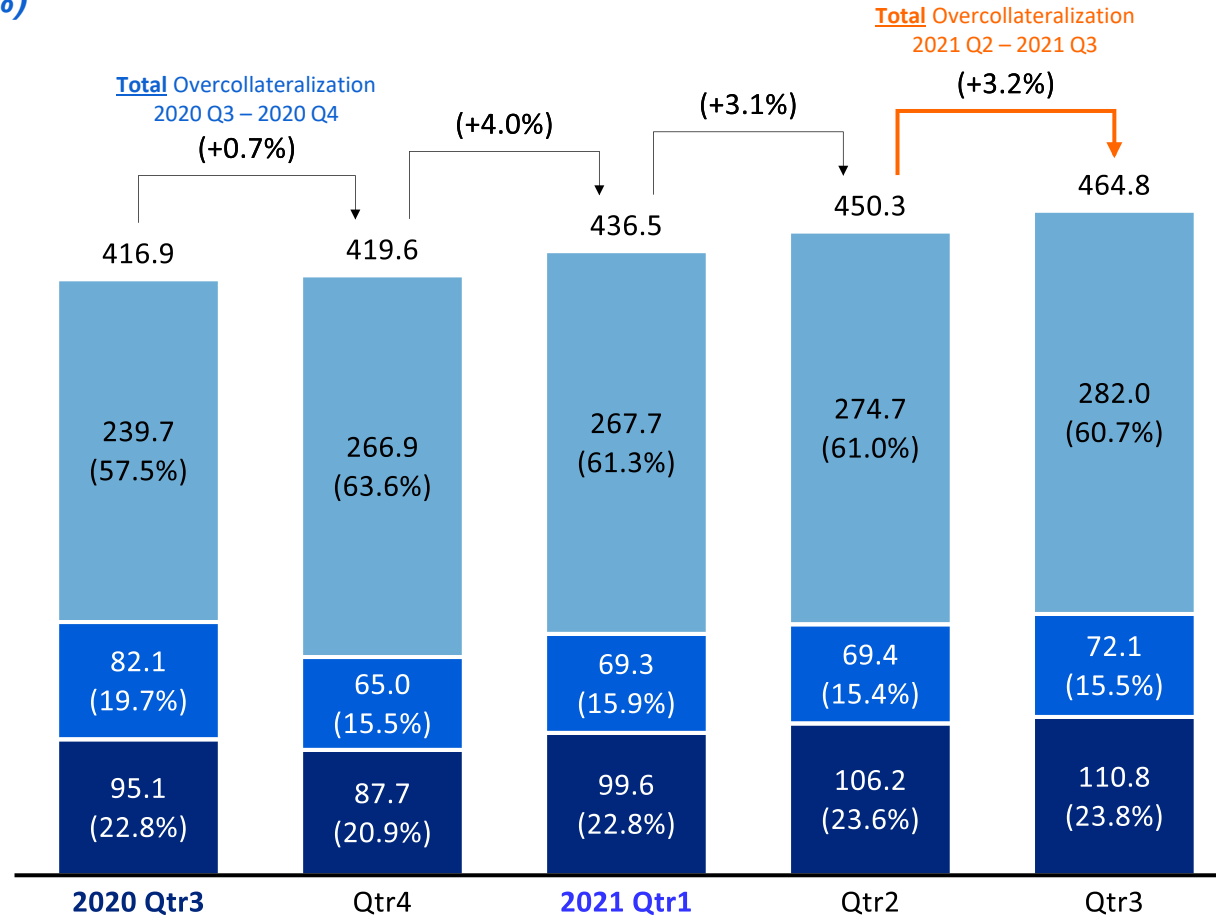
Total Overcollateralization* was USD 464.8B for 2021 Q3, representing an increase of 3.2% from 2021 Q2.

Global CCP Overcollateralization (IM and DF Held (PostHaircut) – IM and DF Required)

(6.2.15 + 4.3.15) – (6.1.1 + 4.1.4)

2020 Q3 to 2021 Q3 (USD B, %)

- EMEA
- APAC
- Americas



*Calculated as (Total IM and DF Held PostHaircut) minus (Total IM and DF Required) (Only PostHaircut values used for Held values). Disclosures (6.2.15 + 4.3.15) – (6.1.1 + 4.1.4) = Total Overcollateralization

OC: Overcollateralization

Jan-22

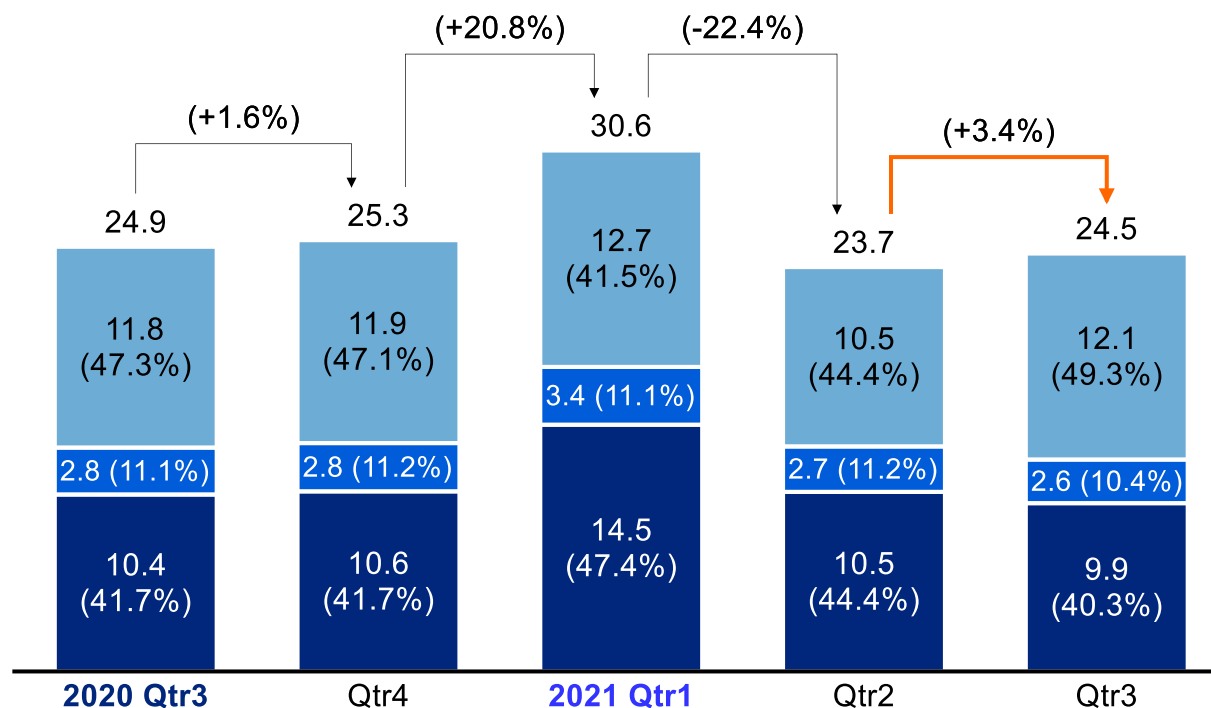
Sum of the Average Total VM Paid to the CCP by participants each business day increased 3.4% in 2021 Q3. Proportion of Average Total VM paid on a per region basis has remained constant QoQ.

Sum of the Average Total VM Paid to the CCP by participants each business day across the regions

Disclosure (6.6.1)

2020 Q3 to 2021 Q3 (USD B, %)

- EMEA
- APAC
- Americas



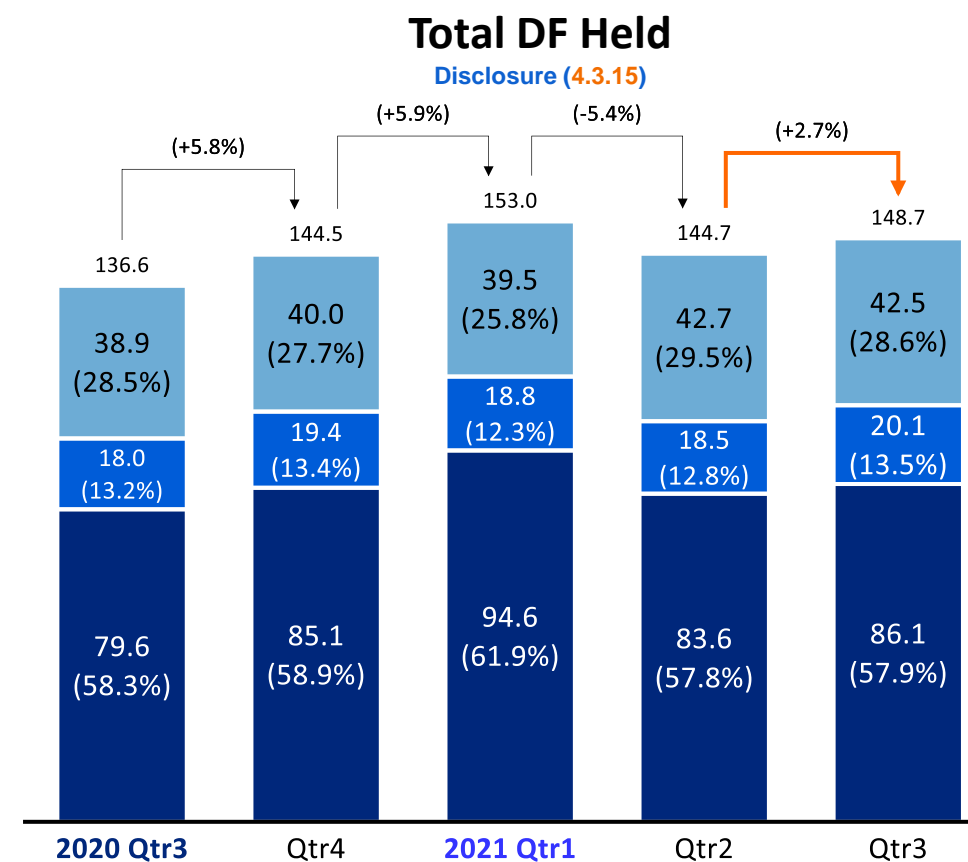
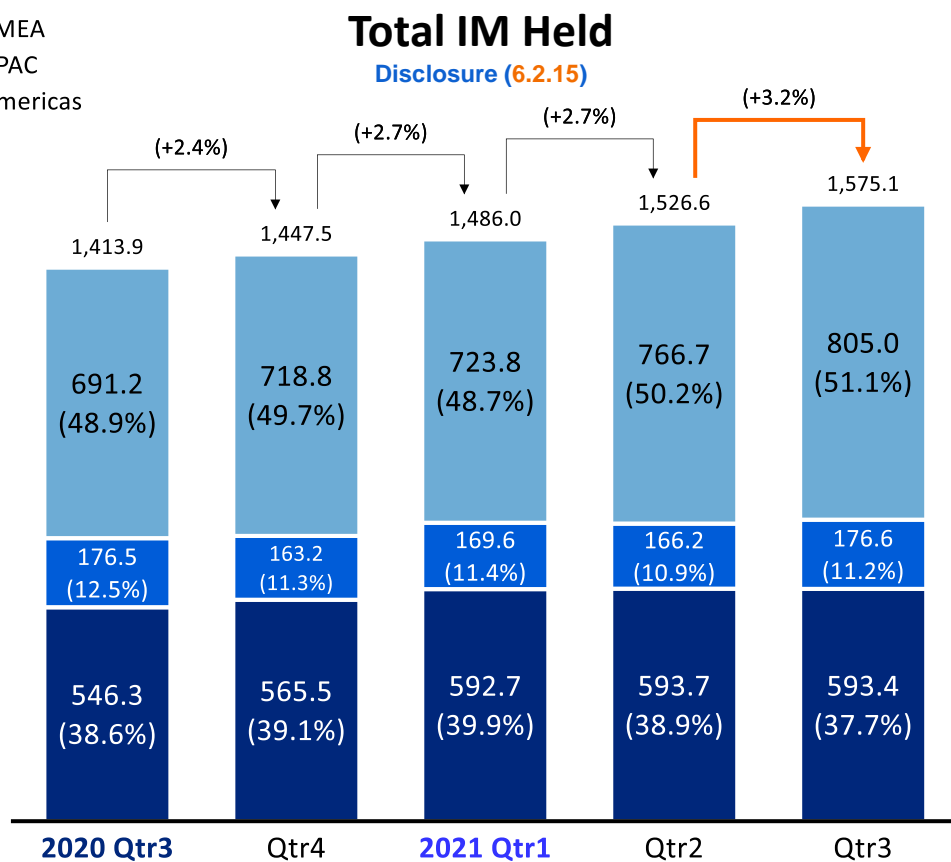
VM: Variation Margin

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

Total IM Held and DF Held exhibited a minor increase for 2021 Q3 of 3.2% and 2.7%, respectively. Distribution of IM Held is consistently the largest for EMEA, followed by Americas & APAC. Distribution of DF Held is consistently higher in the Americas, followed by EMEA & APAC.

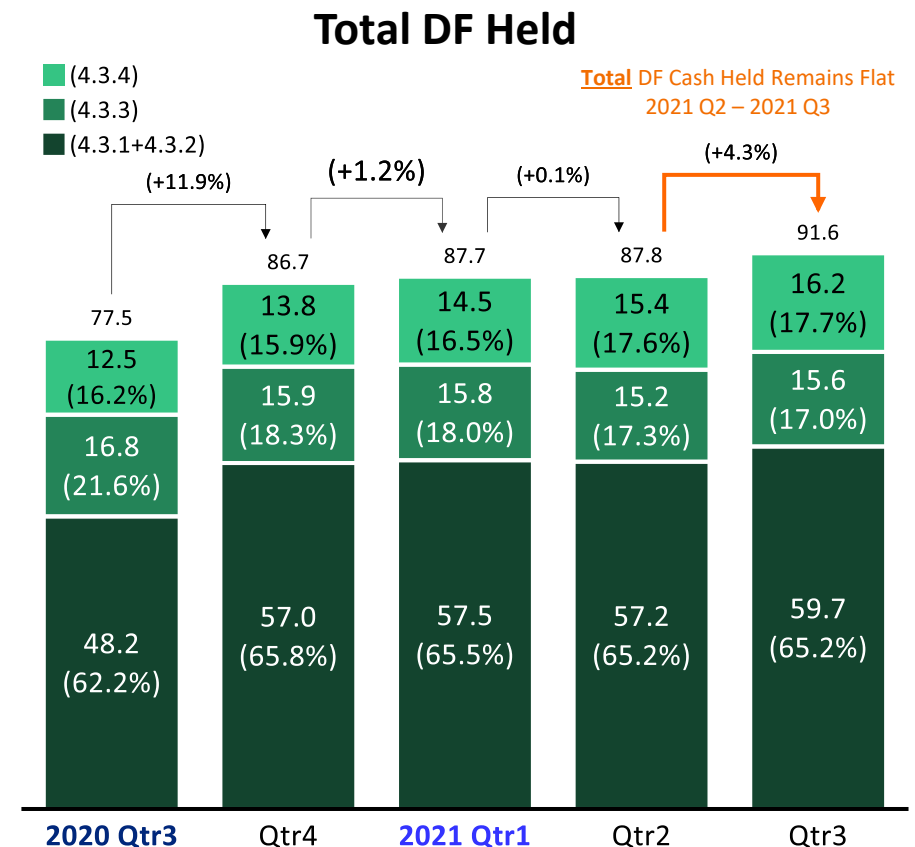
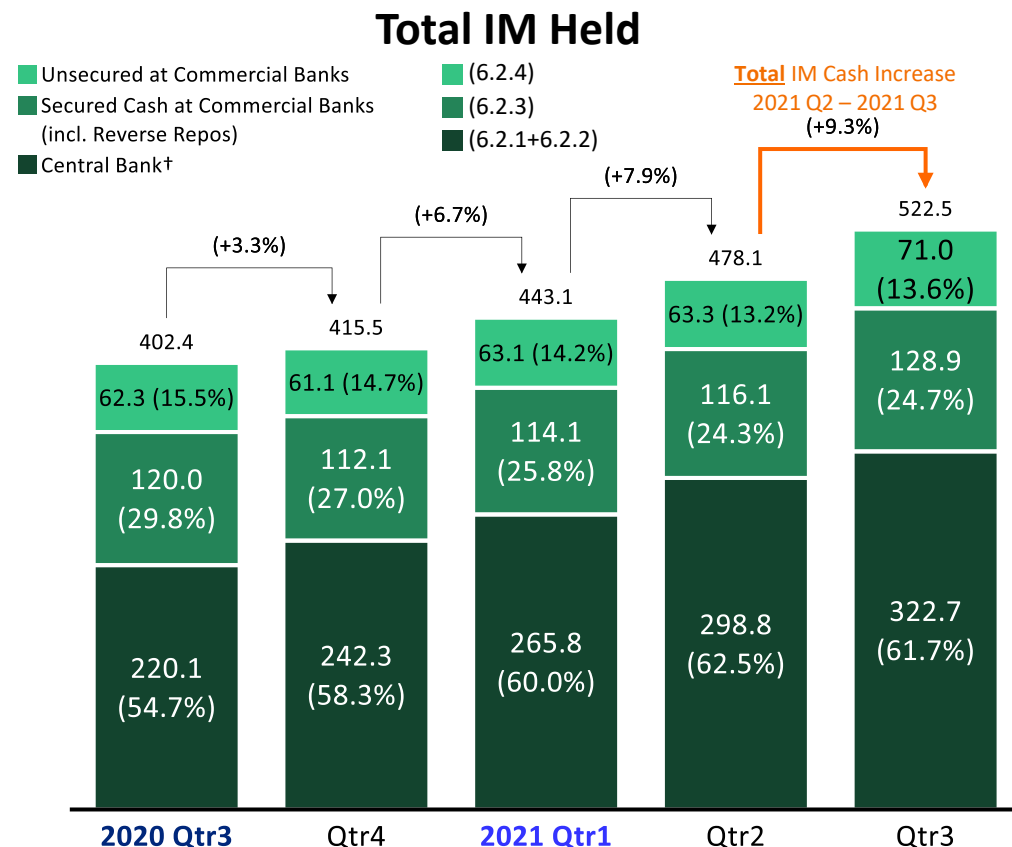
Global CCP Collateral Held (PostHaircut) - **Grand Total**
 2020 Q3 to 2021 Q3 (USD B, %)

- EMEA
- APAC
- Americas



Total Cash Held* for IM increased by **9.3%**, with a continued upwards trend since early 2020 during the onset of the CC. **DF Held** remained relatively flat with a **4.3%** increase. Majority of all cash resources has continued to be deposited at the **Central Bank†** representing a **46.6%** increase YoY.

Global CCP Collateral (Held) (PostHaircut) – Cash Total
2020 Q3 to 2021 Q3 (USD B, %)



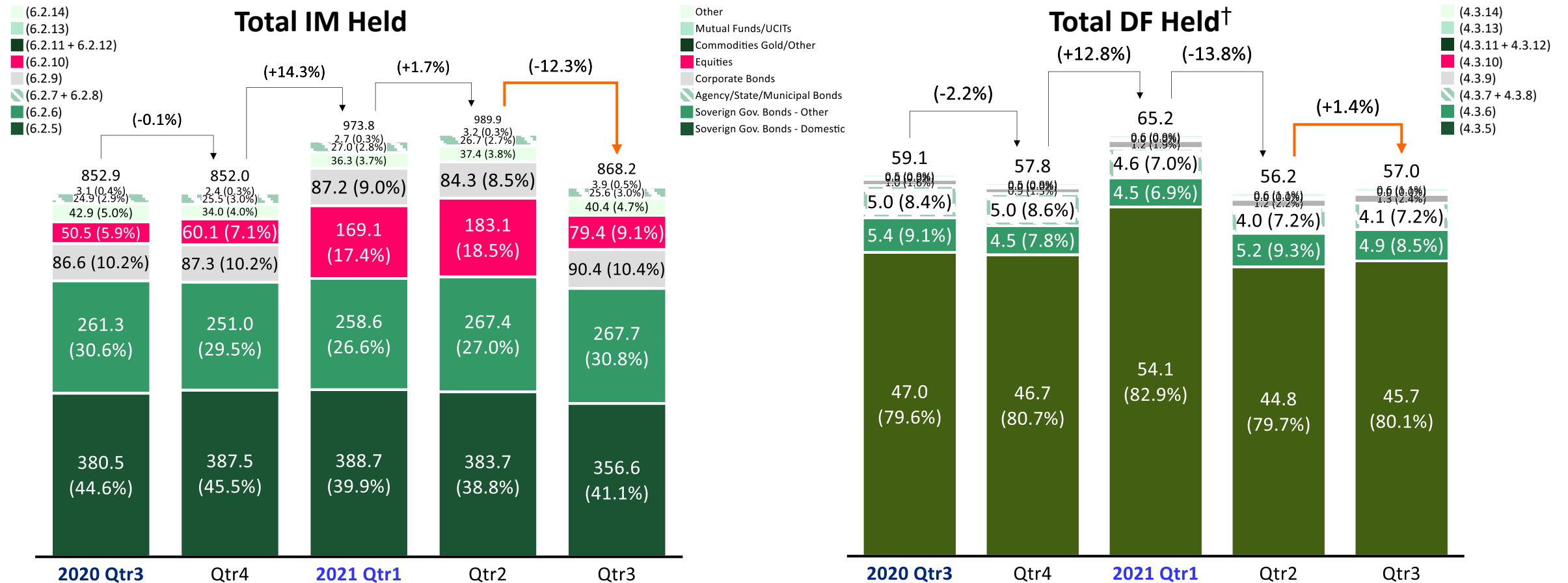
*Figures as of quarter-end. Sum of IM Held across 6.2.1 – 6.2.14 is slightly lower than the Total IM Held Values for 6.2.15, due to: (1). DTCC have requested that 6.2.15 figures be equivalent to 4.3.15 figures, and (2). For OCC 6.2.15 total > sum of 6.2.1 – 6.2.14. TCH provide the full breakdown of 6.2.15 split across 6.2.1 - 6.2.14 as of 2020 Q2.

†Cash deposited at "Other Central Bank of Issue" (IM: 6.2.2, DF: 4.3.2) makes up <0.8% of the total cash collateral for IM and <0.4% for the DF. Therefore, "Central Bank of Issue" and "Other Central Bank" Cash deposits grouped together within the charts.

CC: COVID-19 Crisis; YoY: Year-over-Year

During 2021 Q3, total global **Non-Cash Held** IM decreased by **12.3%**, mainly attributed to a decrease in equities. DF increased by **1.4%** primarily driven by a 2.0% increase across Sov' Gov' Bonds (Domestic).

Global CCP Collateral Held (PostHaircut) – Non-Cash Total
2020 Q3 to 2021 Q3 (USD B, %)



*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.

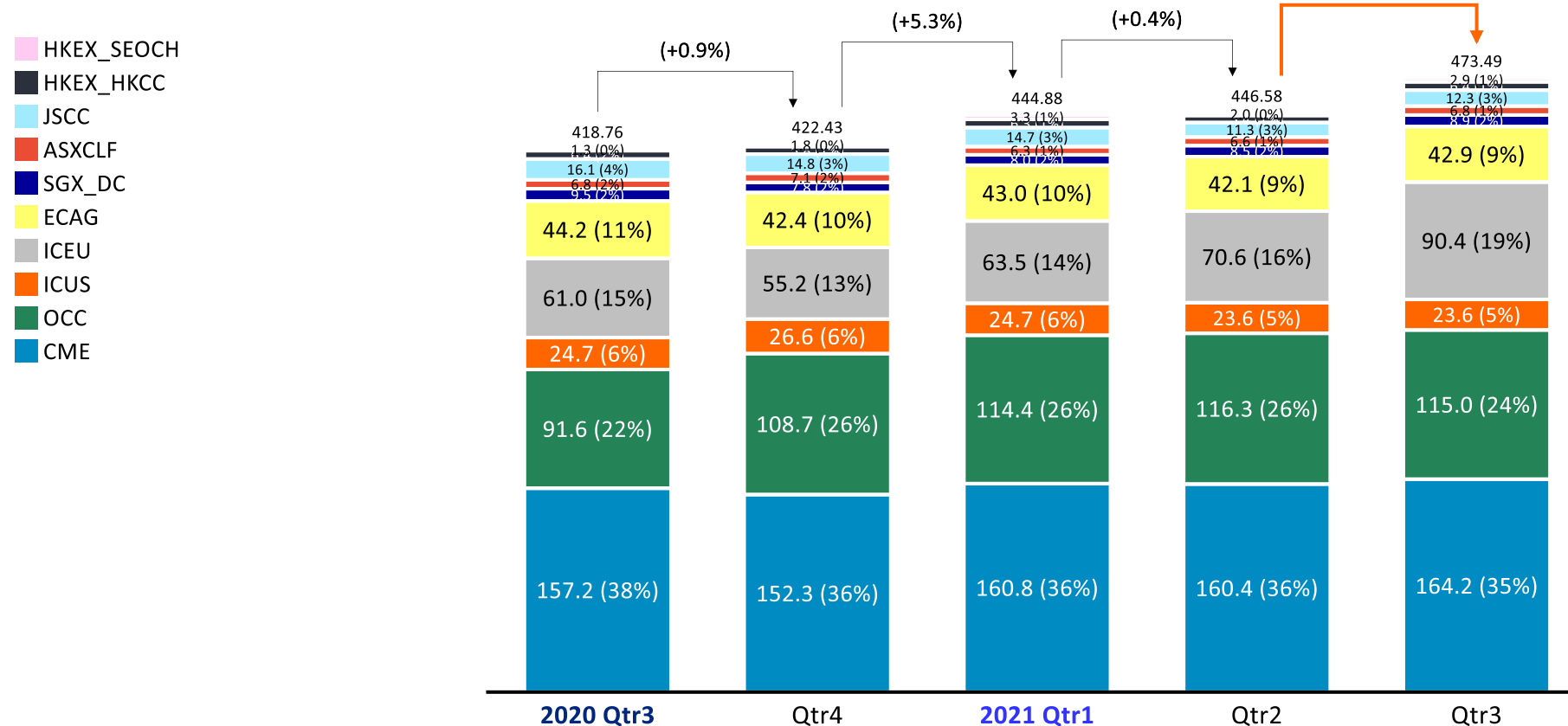
†Disclosures 4.3.8 – 4.3.14 constitute on average <1.5% of total non-cash collateral per quarter from 2020 Q2 – 2020 Q3.

For 2021 Q3 the IM required for ETDs across the following selected 10 CCPs increased by **6.0%**. Proportion of IM across each CCP has remained relatively consistent QoQ.

Global CCP IM (Required) Collateral for ETDs across selected CCPs

Disclosure (6.1.1)

2020 Q3 to 2021 Q3 (USD B, %)



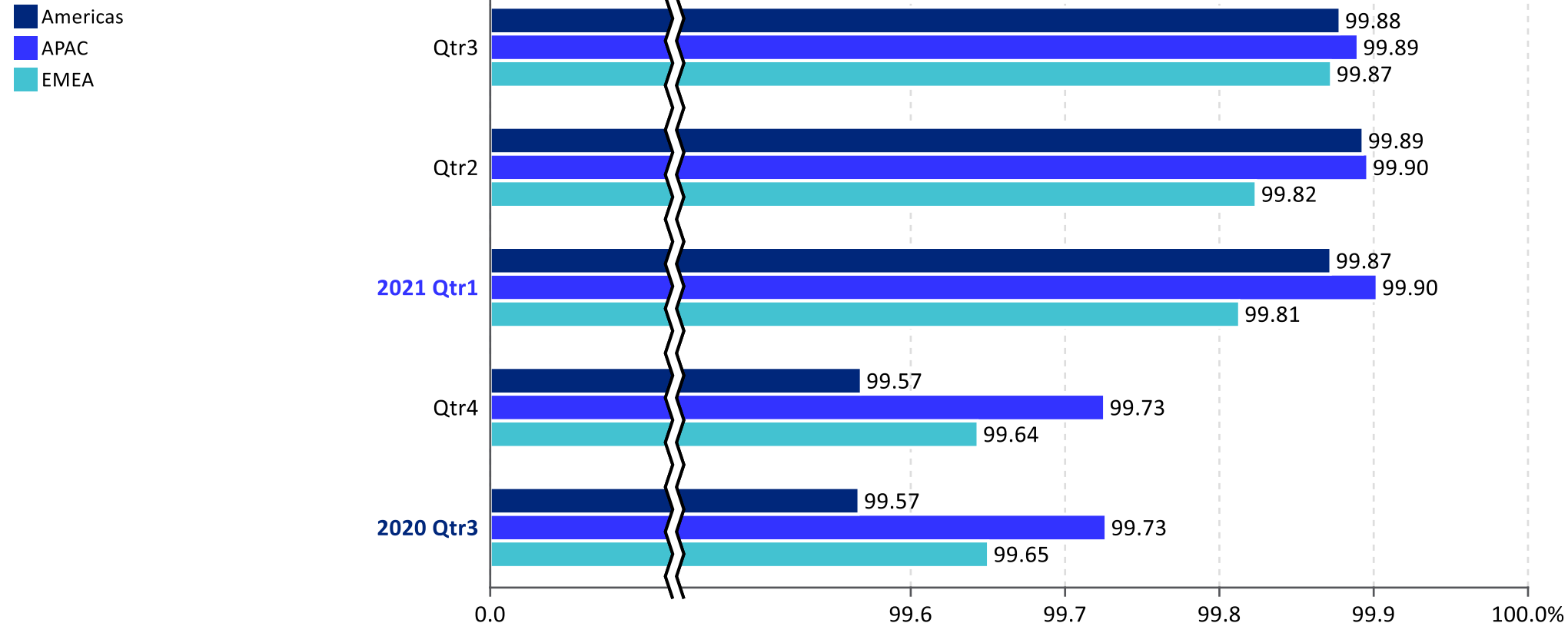
ETD: Exchange-traded derivatives; QoQ: Quarter-over-Quarter

Results of back-testing of IM (ACL - Achieved Coverage Level) increased for EMEA and remained flat for Americas and APAC. ACL has remained above 99.87% (on average) across all regions since 2021 Q1.

Results of back-testing of initial margin – ACL*

Disclosure (6.5.3)

2020 Q3 to 2021 Q3 (%)



*Average has been taken across each respective region

CCPs reported a **99.97%** availability to core clearing systems over the previous 12-month period*, the same as the previous quarter.



Availability, Failures and Recovery Time Objectives

2021 Q3

- 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 back-up 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, 2021, through December 31, 2021) across all 51 CCP PQDs was: **99.97%**

Disclosure (17.4):

Out of 51 CCP PQDs representing 33 CCP12 Members [†]	
1 CCP observes a target recovery time of within:	20 mins
2 CCPs observe a target recovery time of within:	45 mins
2 CCP observe a target recovery time of within:	1 hr
43 CCPs observe the standard target recovery time of within:	2 hrs
1 CCP observes a target recovery time of within:	3 hrs
2 CCPs observe a target recovery time of within:	4 hrs [‡]

*For 2021 Q2, the average availability of core clearing systems over the period (July 1, 2020, through June 30, 2021) across all CCPs was 99.97%.

[†]CC&G data is incorporated as a non-CCP12 member.

[‡]Based on their respective regulatory requirements

CCP12 Members



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