

# CCP12 PUBLIC QUANTITATIVE DISCLOSURE NEWSLETTER

**EXTENDED**

**Q1 2020 PQDs During COVID-19**

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## INTRODUCTION

The Global Association of Central Counterparties (CCP12) publishes the Public Quantitative Disclosure (PQD) Newsletter to present a panorama of the CCP industry to market participants, relevant authorities and the broader public. The analysis is based on PQD reports published by central counterparties (CCPs) globally under the Principles for Financial Market Infrastructures (PFMI) requirements set by Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions (CPMI-IOSCO). For a full list of the CCPs PQD data used within this report, please see Appendix 1.

CCP12 is a global association of 37 members who operate more than 60 individual CCPs across Europe, Middle-East and Africa (EMEA), Americas, and Asia-Pacific (APAC) regions. CCP12 aims to promote effective, practical and appropriate risk management and operational standards for CCPs to ensure the safety and efficiency of the financial markets it represents. CCP12 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.

In 2015, the CPMI-IOSCO published PQD standards for CCPs<sup>1</sup> as an important component of the set of PFMI public disclosure requirements, while also encouraging CCPs to use a common PQD submission template. CCP12 supports CPMI-IOSCO's efforts to improve the level of standardization and transparency of the CCP industry; our members collaboratively worked to create a common PQD template in 2015, and officially released the CCP12 PQD Template in 2017<sup>2</sup>.

### In this collation for Q1 2020:

In this Extended Edition of the CCP12 PQD Newsletter for the quarter Q1 2020, we have aggregated PQD data across Q1 2019 – Q1 2020 PQD in order to provide a comprehensive overview and analysis of the data during the COVID-19 Crisis (CC). We seek to highlight key PQD statistics and insights observed within a number of CPMI-IOSCO Quantitative Disclosures sourced directly from our members' PQDs.

Data has been grouped by both the region (Americas, EMEA and APAC) in which the CCP is located, as well as by the underlying asset classes cleared by the CCP<sup>3</sup>. A number of CCP risk management indicators are examined, including Initial Margin (IM) Required/Held, Default Fund (DF) Required/Held, Collateral Make-Up of the IM and DF contributions, Average Daily Variation Margin, Margin Overcollateralization, an overview of the CDS and IRS Margin requirements<sup>4</sup>, and lastly, Availability, Failures and Recovery Time Objectives. Only PostHaircut values have been used, unless otherwise stated. All indicators have been normalized to US dollar (USD) equivalent<sup>5</sup> for each quarter at the time the PQD was published to ensure accurate and reliable comparisons quarter-on-quarter (QoQ).

#### Updates to the PQD Newsletter:

- 1-year lookback period of PQD data, providing analysis between Q1 2019 – Q1 2020;
- Introduction of disclosure (6.1) IM (Required) breakdown, specifically for CDS and IRS at selected CCPs;
- Introduction of section: Availability, Failures and Recovery Time Objectives.

<sup>1</sup> CPMI-IOSCO (2015). Public quantitative disclosure standards for central counterparties. [online] Available from: <https://www.bis.org/cpmi/publ/d125.htm>

<sup>2</sup> CCP12 PQD Template: <https://ccp12.org/wp-content/uploads/2020/05/The-CCP12-Template-for-Public-Quantitative-Disclosures-for-CCPs-1.xlsx>

<sup>3</sup> Asset classes have been grouped together depending on classifications within the respective CCP's PQD. Where the asset class has not been clearly defined, CCP12 have consulted with the CCP at best to identify the appropriate asset class bucket.

<sup>4</sup> Only 6.1.1 IM (Required) figures have been analysed for Credit Default Swaps (CDS) and Interest Rate Swaps (IRS) within this Q1 2020 Newsletter.

<sup>5</sup> USD equivalent based on ECB historical exchange rates: [https://www.ecb.europa.eu/stats/policy\\_and\\_exchange\\_rates/euro\\_reference\\_exchange\\_rates/html/index.en.html](https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html)

# PQD KEY INDICATORS

## 1.1 INITIAL MARGIN

### 1.1.1 INITIAL MARGIN (IM) REQUIRED TOTAL

Initial Margin<sup>6</sup> (IM) (Required) (Disclosure 6.1.1) is the collateral required by the CCP to cover potential changes in the value of each participant's position (that is, potential future exposure) over the appropriate closeout period in the event that the participant defaults (CPMI-IOSCO, 2012)<sup>7</sup>. The initial margin remains the key line of defence as a financial safeguard for CCPs. The initial margin requirements are calculated in order to cover the potential liquidation costs during adverse market movements within the expected close out period of default management.

For the CCP12 PQD data aggregation across 42 CCPs, the (Required) IM at the end of Q1 2020 totalled USD 1,099.1 billion (Chart 1a), of which 46.8% came from the Americas (USD 514.0 billion); 43.8% was from EMEA (USD 481.8 billion), while CCPs in the APAC region accounted for 9.4% (USD 103.3 billion).

Compared with Q4 2019 data, the IM (Required) within the three regions increased and the global total grew by USD 300.6 billion overall, equivalent to a +37.6% increase. The increase occurred mainly in the Americas (USD +177.8 billion, +52.9% increase) and EMEA region (USD +101.1 billion, +26.6% increase). This is highlighted in (Chart 1b) on the following page.

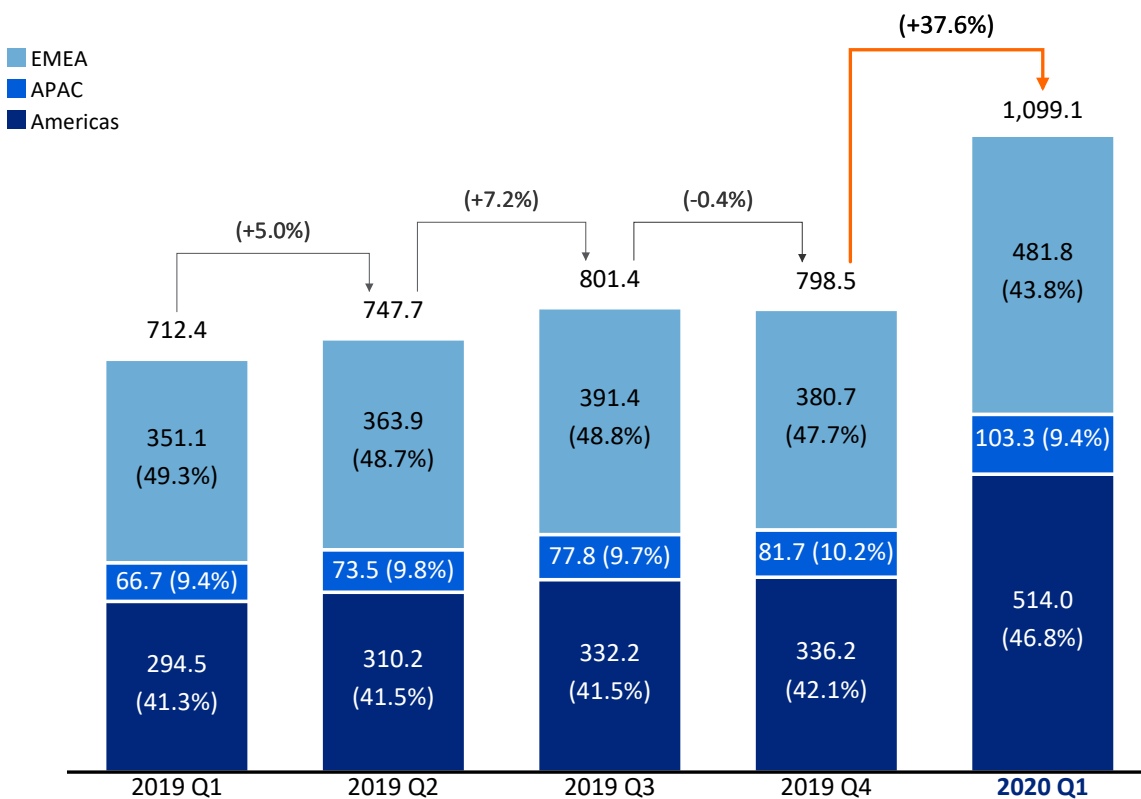


Chart 1a - Total Initial Margin (Required) Split by Region, USD B and %, Q1 2019 – Q1 2020

<sup>6</sup> Also refer to CCP12 White Paper Primer on Initial Margin. [Online] Available from: [https://ccp12.org/wp-content/uploads/2018/12/CCP12\\_White\\_Paper\\_Primer\\_on\\_Initial\\_Margin.pdf](https://ccp12.org/wp-content/uploads/2018/12/CCP12_White_Paper_Primer_on_Initial_Margin.pdf)

<sup>7</sup> CPMI-IOSCO (2012). Principles for financial market infrastructures. [Online] Available from: <https://www.bis.org/cpmi/publ/d101.htm>

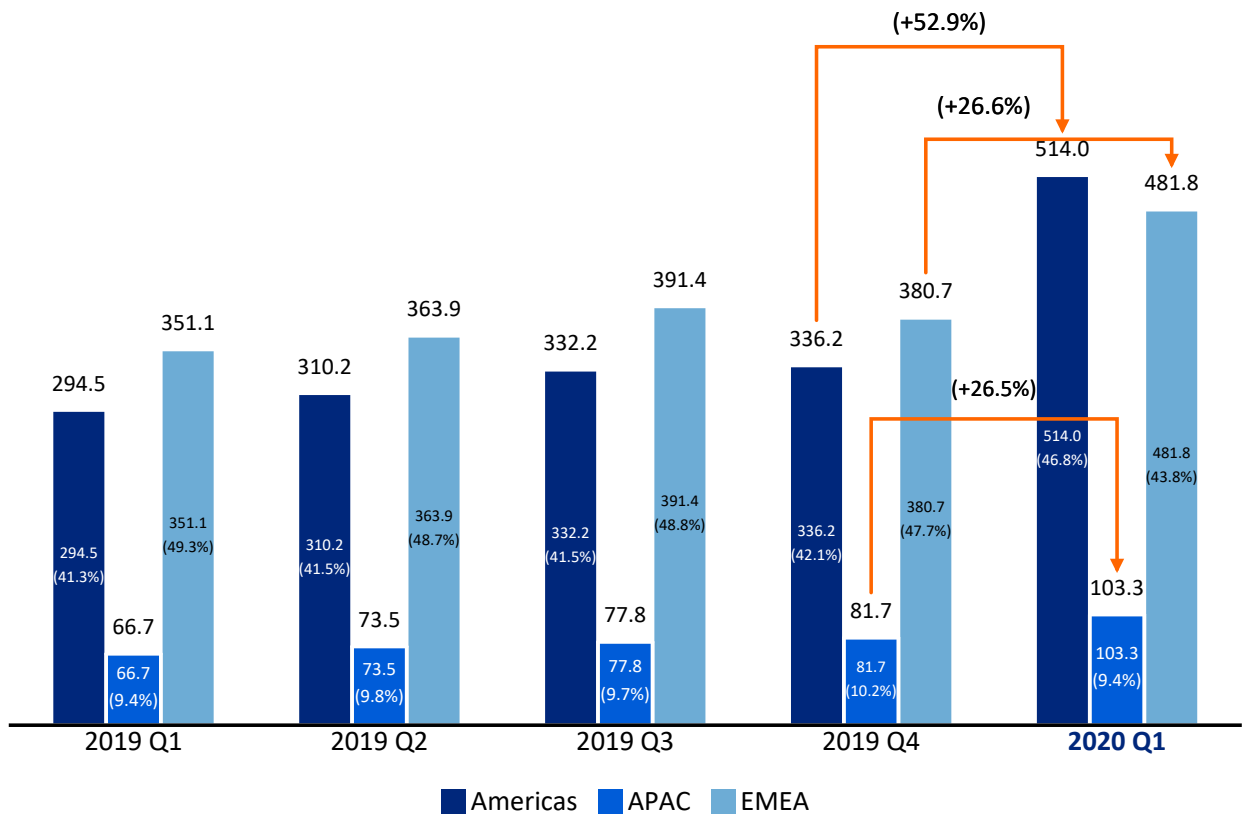


Chart 1b - Total Initial Margin (Required) Split by Region, USD B and %, Q1 2019 – Q1 2020

The financial markets experienced an unprecedented period of market volatility during the CC period. In order to manage significant market turbulence, higher levels of IM (Required) were observed across the CCPs.

IM (Required) for the Americas region surpassed EMEA for the first time year-to-date (YTD). The proportion of margin required per region remained constant QoQ, with the exception of Q1 2020 where the proportion attributable to Americas increased from approximately ~41% QoQ to approximately ~47% for Q1 2020.

### 1.1.2 IM REQUIRED TOTAL – ASSET CLASS SPLIT

In this section, in contrast to a geographical split, the IM (Required) is broken down by asset class. [Chart 2a](#) indicates the amount of IM (Required) per asset class. 30.2% (USD 331.5 billion) of the required initial margin is used to cover a Multi Asset Class (Diversified/Other) across the various CCP clearing services<sup>8</sup>. Interest Rate Derivatives (IRD) ranked second at 25.1% (USD 276.1 billion), followed by IM for Equity Derivatives at 20.2% (USD 222.4 billion).

Next in order are Bonds and Repo (9.0%; USD 99.3 billion), Shares and Equities (7.0%; USD 77.1 billion), Credit Default Swaps (CDS) (6.2%; USD 68.6 billion), Foreign Exchange (FX) (1.4%; 14.9 billion), and lastly Agricultural and Commodities (0.8%; USD 9.2 billion).

A/C	Agricultural/Commodities
B&R	Bonds & Repo
CDS	Credit Default Swaps
D/O	Diversified/Other
EqDv	Equity Derivatives
FX	Foreign Exchange
IRD	Interest Rate Derivatives
S&E	Shares & Equities

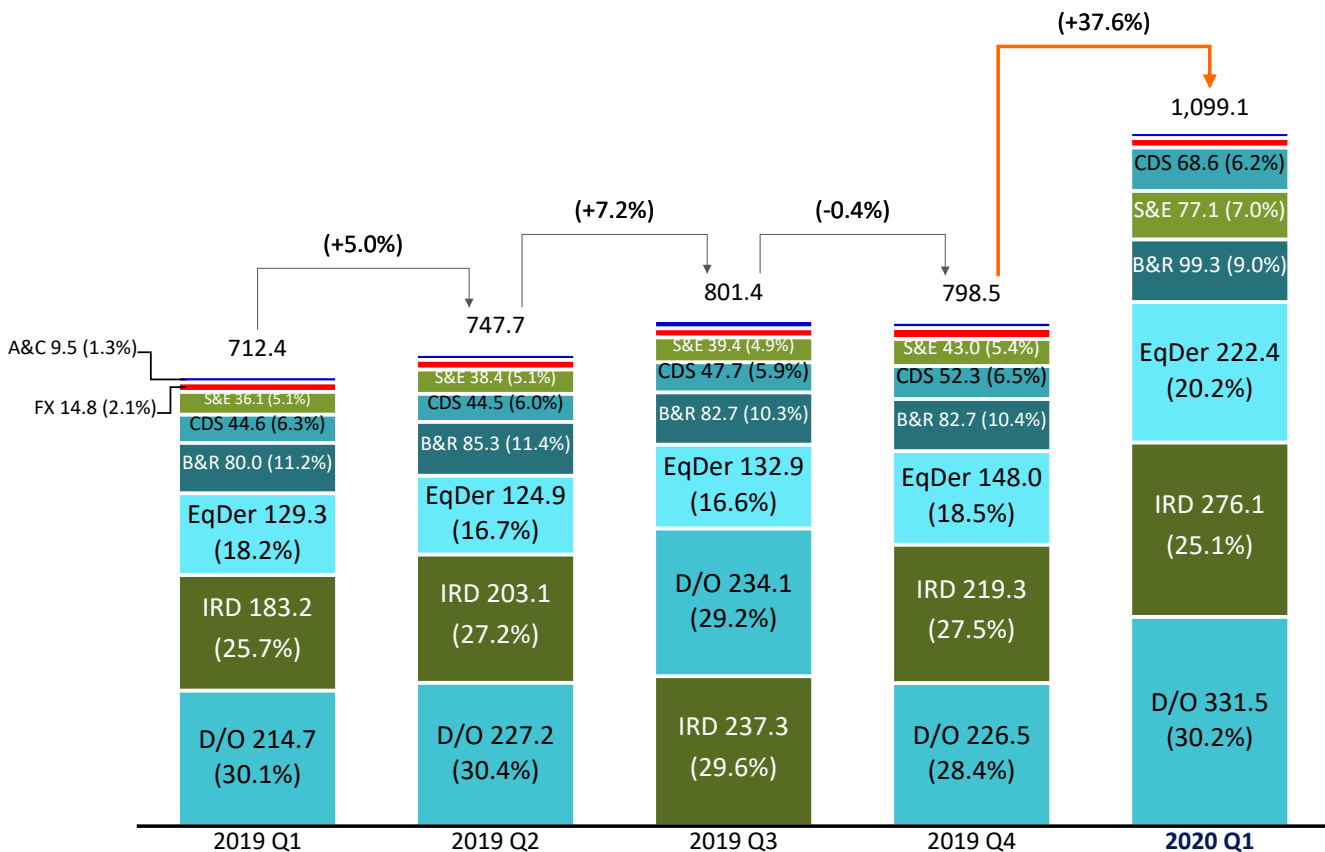


Chart 2a - Asset Class Split of Total Initial Margin (Required), USD B and %, Q1 2019 – Q1 2020

<sup>8</sup> Asset class D/O consists primarily of CME Base in addition to a number of additional products from other CCPs which are not classified under the above buckets. Other CCPs with products contained within the D/O bucket, include: ACSA, B3, DTCC NSCC, ECAG, JSCC, NSE, SGX and TMX. Further details can be obtained from the respective PQDs. Where the asset class has not been clearly defined within the PQD, CCP12 has consulted with the CCP at best to identify the appropriate asset class bucket.

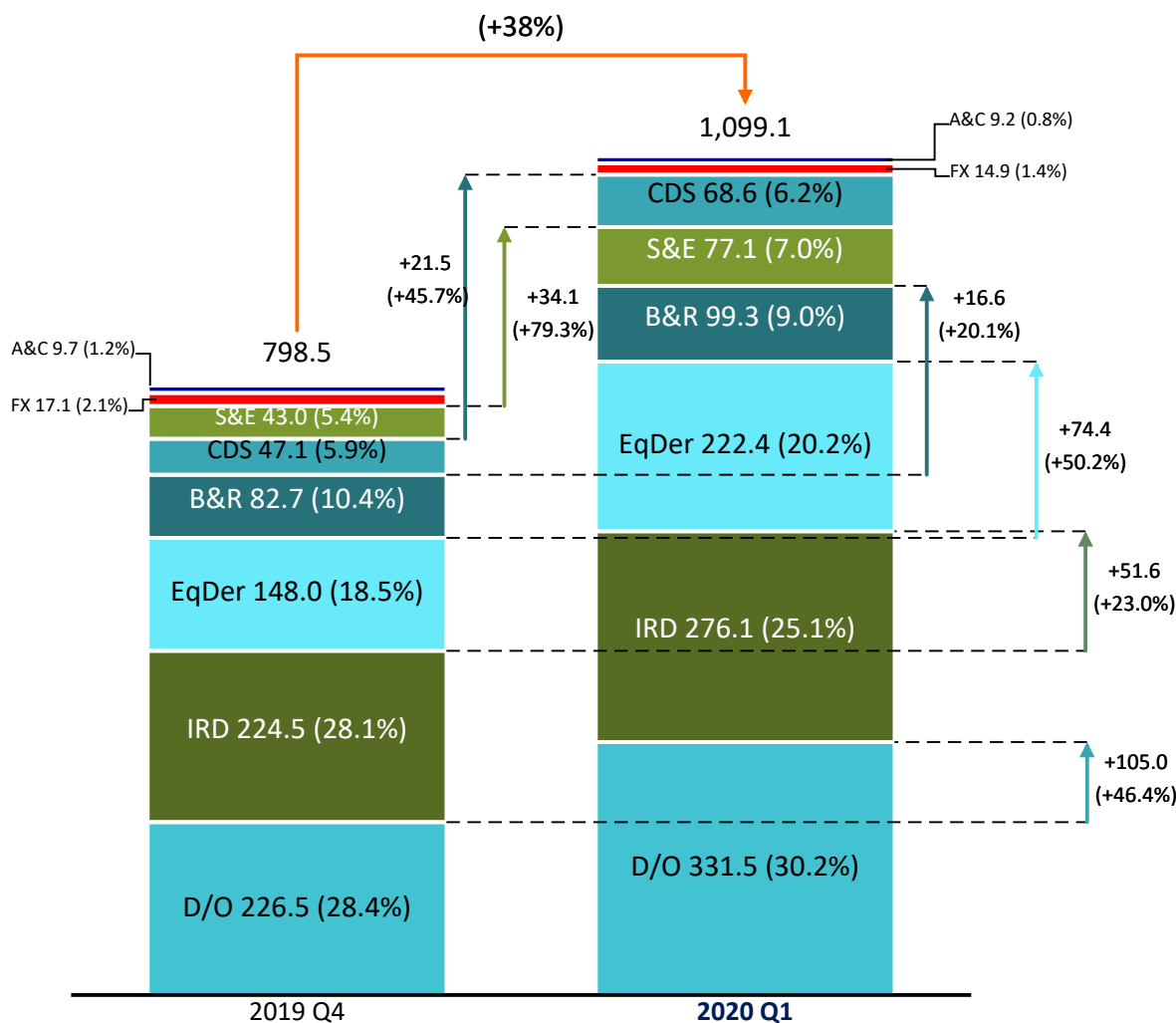


Chart 2b - Global asset Class Split Total Initial Margin (Required), USD B and %, Q4 2019 vs. Q1 2020

As shown in Chart 2b above, the main increases between Q4 2019 and Q1 2020 occurred in the asset classes Diversified/Other (+46.4%; USD +105.0 billion), IRD (+23.0 %; USD +51.6 billion) and Equity Derivatives (+50.2%; USD +74.4 Billion).

Table 1 below shows the total amount of IM (Required) per asset class over the quarters Q1 2019 – Q1 2020. IM for Agricultural and Commodities and FX have stayed almost the same for Q1 2020, albeit with slightly lower values. Between Q4 2019 – Q1 2020, B&R and CDS have both increased by (20.1%, USD +16.6 billion) and (45.7%, USD +21.5 billion), respectively. Previously, these figures remained almost constant QoQ.

6.1.1 Split By Asset Class (USD B)									
Row Labels	A&C	B&R	CDS	D/O	EqDer	FX	IRD	S&E	Grand Total
<b>2019</b>									
Qtr1	9.5	80.0	44.6	214.7	129.3	14.8	183.2	36.1	712.4
Qtr2	8.9	85.3	44.5	227.2	124.9	15.4	203.1	38.4	747.7
Qtr3	12.8	82.7	47.7	234.1	132.9	14.4	237.3	39.4	801.4
Qtr4	9.7	82.7	47.1	226.5	148.0	17.1	224.5	43.0	798.5
<b>2020</b>									
Qtr1	9.2	99.3	68.6	331.5	222.4	14.9	276.1	77.1	1,099.1

Table 1: Total IM (Required) Across Asset Classes, USD B, Q1 2019 – Q1 2020



### 1.1.3 IM HELD TOTAL

For the CCP12 PQD data aggregation across 42 CCPs, the IM (Held) (Disclosure 6.2.15) at the end of Q1 2020 totalled USD 1,458.3 billion (Chart 3), of which 47.6% came from EMEA (USD 694.6 billion); 41.0% was from the Americas (USD 597.5 billion), while CCPs in the APAC region accounted for 11.4% (USD 166.1 billion).

The global IM held had a -2.1% decrease from Q3 2019 to Q4 2019, while for Q1 2020 during the CC, the level of global IM held by CCPs increased +33.3% in total. The higher level of global IM held is aligned to the higher level of IM (Required) observed, to manage the highly turbulent global crisis. Compared with the data from Q4 2019 the IM (Held) within the three regions increased and the global total grew by USD 364.5 billion overall, whereas this occurred mainly in the Americas (+73.4% increase; USD +253.0 billion) and EMEA region (+13.1% increase; USD +80.3 billion).

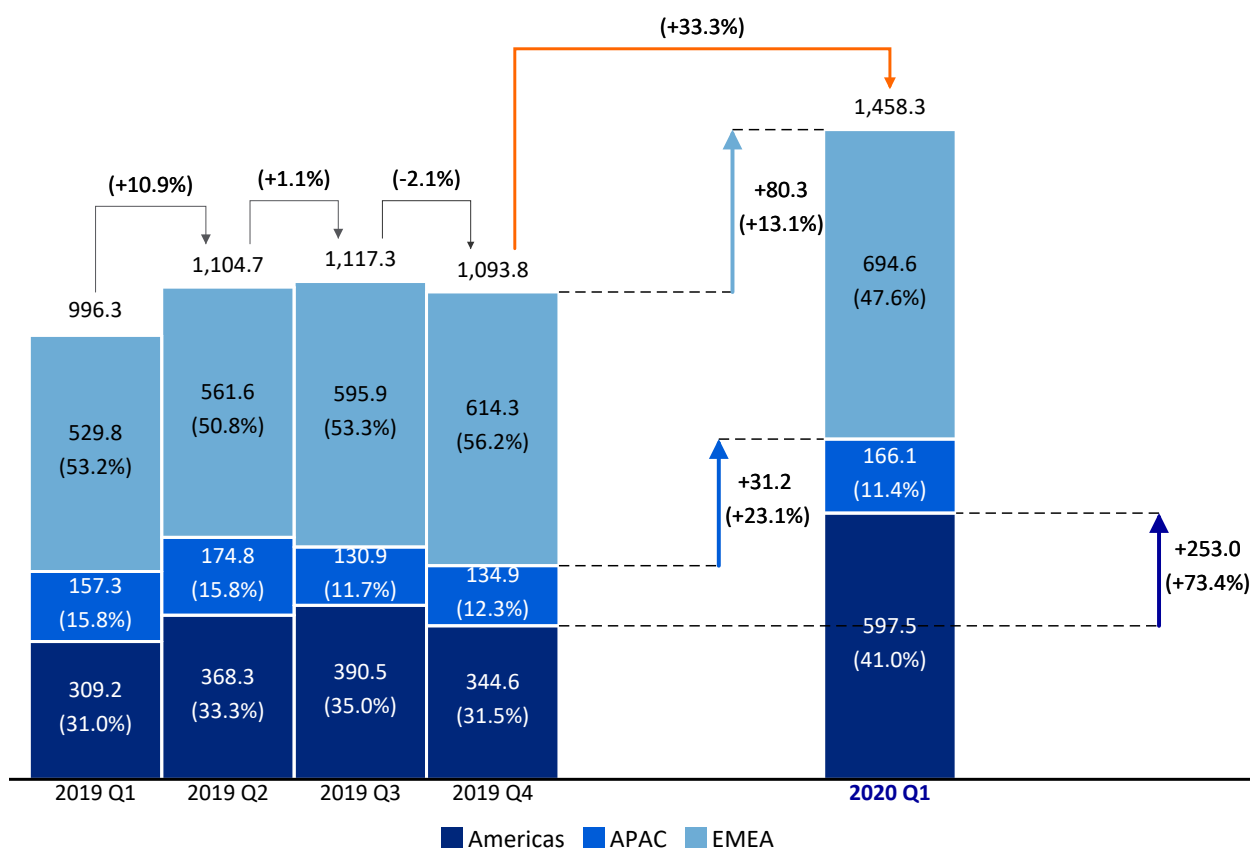


Chart 3: Total IM (Held) Split by Region, USD B and %, Q1 2019 – Q1 2020

6.2.15 Total (PostHaircut) (USD B)				
Row Labels	Americas	APAC	EMEA	Grand Total
<b>2019</b>				
Qtr1	309.2	157.3	529.8	996.3
Qtr2	368.3	174.8	561.6	1,104.7
Qtr3	390.5	130.9	595.9	1,117.3
Qtr4	344.6	134.9	614.3	1,093.8
<b>2020</b>				
Qtr1	597.5	166.1	694.6	1,458.3

Table 2: Total IM (Held), USD B, Q1 2019 – Q1 2020

## 1.1.4 IM OVERCOLLATERALIZATION<sup>9</sup>

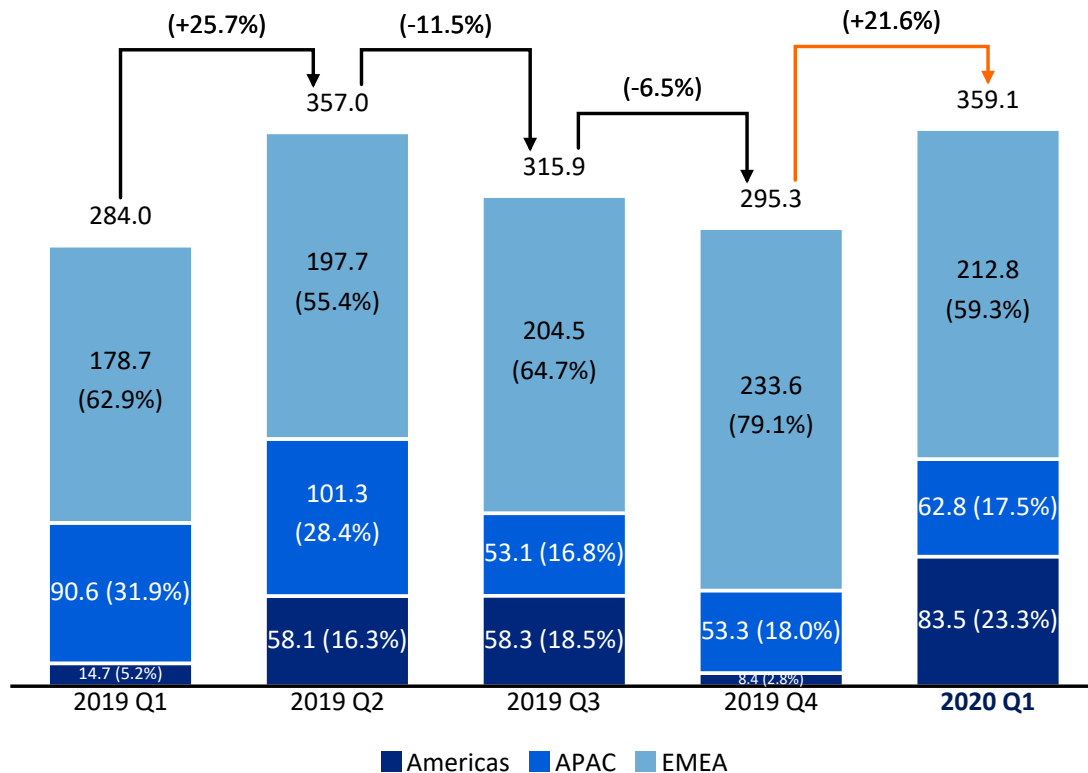


Chart 4: IM Overcollateralization split by region, USD B and %, Q1 2019 – Q1 2020

Chart 4 above highlights the Total IM overcollateralization. During the CC in Q1 2020, IM Overcollateralization is almost identical to Q2 2019 levels during peace time, despite the higher level of IM (Required) noted in Q1 2020. The level of increase in the Total IM Overcollateralization between Q1 2019 and Q2 2019 was higher in comparison to the Q4 2019 – Q1 2020 figures. Between Q4 2019 and Q1 2020, the total increase of +21.6% consists of EMEA (59.3%; USD 212.8 billion), followed by Americas (23.3%; USD 83.5 billion), and lastly APAC (17.5%; USD 62.8 billion).

Table 3 below indicates the key data for the Total IM Overcollateralization between Q1 2019 and Q1 2020.

Overcollateralization (IM)				
Row Labels	Americas	APAC	EMEA	Grand Total
<b>2019</b>				
Qtr1	14.7	90.6	178.7	392.3
Qtr2	58.1	101.3	197.7	357.0
Qtr3	58.3	53.1	204.5	315.9
Qtr4	8.4	53.3	233.6	295.3
<b>2020</b>				
Qtr1	83.5	62.8	212.8	359.1

Table 3: Data for IM Overcollateralization split by region, USD B, Q1 2019 – Q1 2020

<sup>9</sup> Calculated as (Total IM Held, CPMI-IOSCO Disclosure 6.2.15) minus (Total IM Required, CPMI-IOSCO Disclosure 6.1.1) (PostHaircut).

### 1.1.5 IM REQUIRED HOUSE/CLIENTS TOTAL<sup>10</sup>

IM requirements are split by both clearing members' own accounts (i.e. house or proprietary account), and/or those of their client(s).

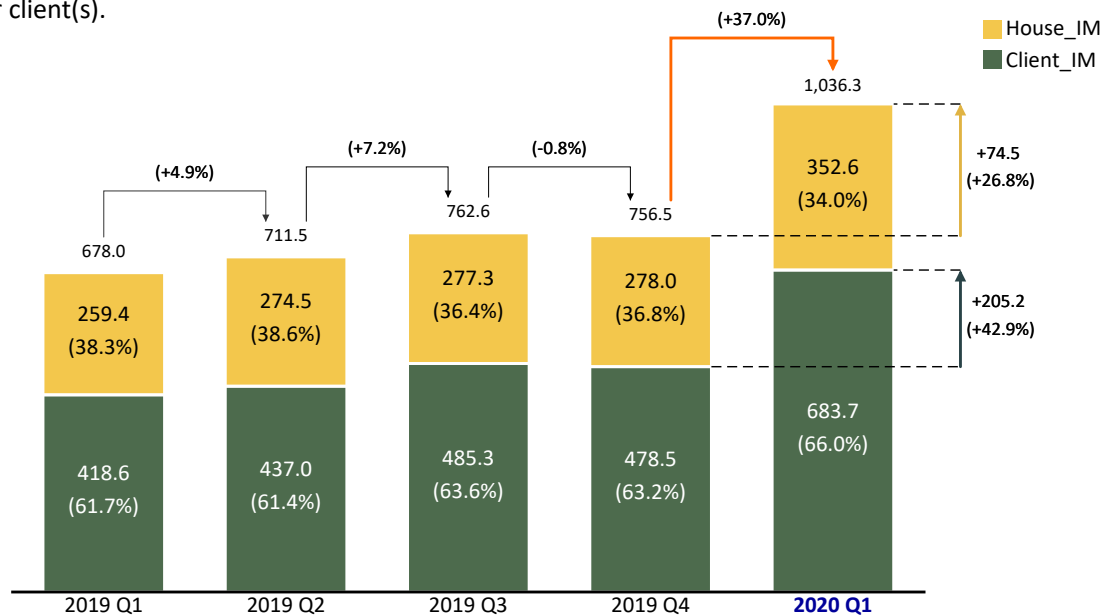


Chart 5: Total IM (Required) House vs. Client Breakdown, USD B and %, Q1 2019 – Q1 2020

Within Chart 5 above, comparing Q4 2019 and Q1 2020, we observe a 42.9% and 26.8% increase across Client and House IM, respectively. Client IM consistently accounts for the majority of IM (Required), accounting for more than 60% of the total IM QoQ. This can be seen throughout Q1 2019 to Q1 2020.

Table 4, below indicates Total Client/House IM (Required)<sup>11</sup> represented in terms of asset class. In line with the observations made under Section 1.1.2, the largest increases between Q4 2019 and Q1 2020 occurred for Diversified/Other, Equity Derivatives and Interest Rate Derivatives.

<b>(6.1.1) Total Client IM (Required) USD B</b>									
Row Labels	A&C	B&R	CDS	D/O	EqDer	FX	IRD	S&E	Grand Total
<b>2019</b>									
Qtr1	5.8	9.7	22.9	159.2	100.4	0.1	103.0	17.4	418.6
Qtr2	5.5	8.8	22.8	168.3	97.2	0.1	115.4	19.1	437.0
Qtr3	10.9	8.2	24.3	173.5	103.3	0.2	145.5	19.3	485.3
Qtr4	5.8	7.6	29.8	166.3	114.9	0.4	133.4	20.3	478.5
<b>2020</b>									
Qtr1	5.4	10.7	36.8	242.9	174.2	0.8	174.4	38.5	683.7

<b>(6.1.1) Total House IM (Required) USD B</b>									
Row Labels	A&C	B&R	CDS	D/O	EqDer	FX	IRD	S&E	Grand Total
<b>2019</b>									
Qtr1	3.7	54.7	21.7	37.4	28.9	14.8	80.2	18.0	259.4
Qtr2	3.4	57.8	21.7	41.9	27.8	15.3	87.7	18.8	274.5
Qtr3	1.9	54.5	23.3	42.3	29.5	14.2	91.9	19.7	277.3
Qtr4	3.9	50.2	22.4	43.4	33.1	16.7	85.9	22.3	278.0
<b>2020</b>									
Qtr1	3.8	55.3	31.8	59.8	48.2	14.1	101.8	37.8	352.6

Table 4: Total Client and House IM (Required) across asset classes, USD B, Q1 2019 – Q1 2020

<sup>10</sup> Figures as of quarter end, Sum of IM Required split by House/Clients (Net and Gross) is lower than Total IM required, due to no breakdown of IM Required for DTCC, HKEx OTCC, HKEx HKSCC and NSE.

<sup>11</sup> The asset class buckets have been classified on page 7 of this Newsletter.

By the end of Q1 2020, the Total Client IM (Required) accounted for (USD 683.70 billion) and the Total House IM (Required) accounted for (USD 352.56 billion), please see [Table 4](#) (Page 11) or [Chart 6](#) below.

Before the CC, the Total IM shows signs of a steady increase from Q1 2019 to Q4 2019. With higher margin levels observed during the CC, figures for both House and Client increased, albeit keeping the same proportion as previous quarters.

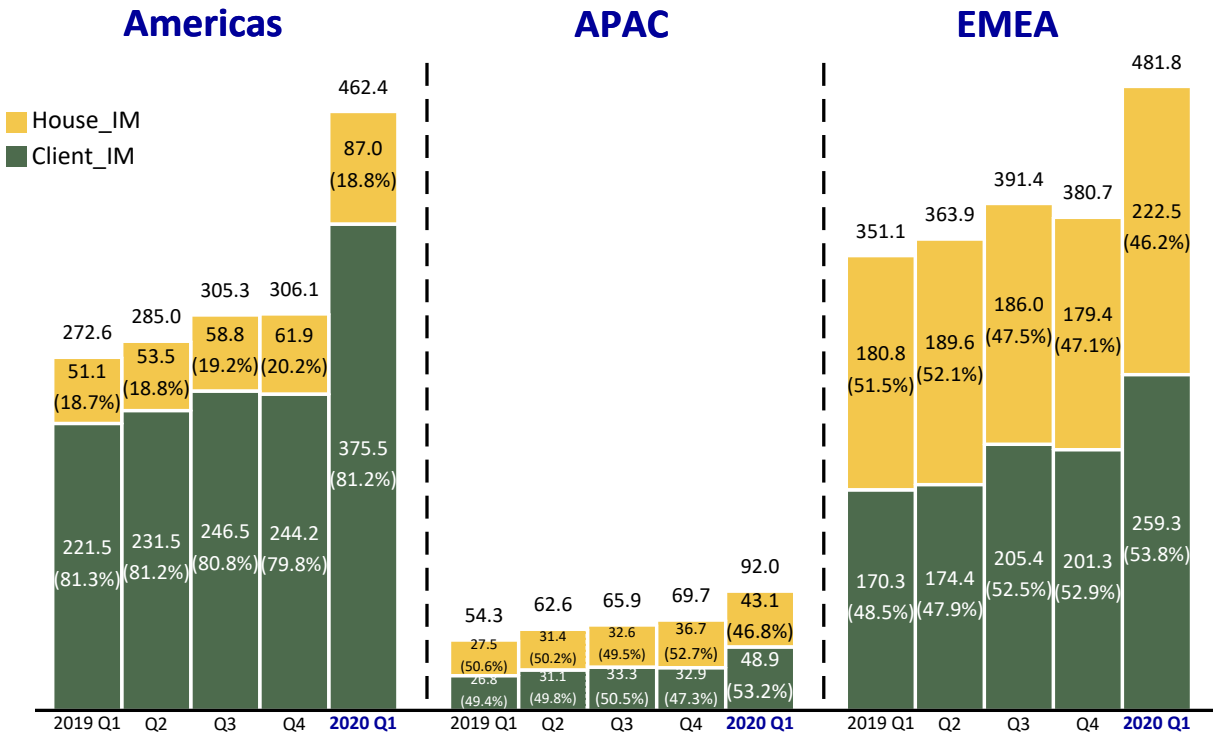


Chart 6: Total Initial Margin (Required) House vs. Client across regions, USD B and %, Q1 2019 – Q1 2020

For Americas, there is a steady proportion between Client IM and House IM with an approximate 80% - 20% split over the quarters. Q1 2020 brought the Total IM for Americas to (USD 462.4 billion), up to a similar level to that of EMEA for the same quarter (USD 481.8 billion).

EMEA has an almost 50-50 split between House and Client IM, similar to that of APAC, QoQ. EMEA consistently accounts for the largest House IM, as compared to the other regions. On the other hand, Americas accounts for the largest Client IM amounts QoQ between the regions.

APAC has a relatively low total increase QoQ, in comparison to the Americas and EMEA. There seems to be a larger growth in Client IM for Q1 2020 which stands at 53.2% of the total IM for APAC.

### 1.1.6 IM REQUIRED CLIENT NET vs. CLIENT GROSS

Under CPMI-IOSCO PQD requirements, CCPs are required to report whether initial margin for the positions of indirect participants is provided for each indirect participant’s own position (i.e. Required Client Gross), or for the Net position of a group of indirect participants (i.e. Required Client Net) (CPMI-IOSCO, 2015).

Overall, as shown within [Chart 7](#) below, the majority of Client IM (Required) as reported by CCPs was collected on a Gross basis. As of the end of Q1 2020, the comparison between Gross and Net basis in Americas was USD 303.1 billion vs. USD 72.3 billion; in EMEA, USD 178.8 billion (Gross) vs. USD 80.5 billion (Net); and in APAC, USD 41.1 billion (Gross) vs. USD 7.8 billion (Net). Total IM for Client Gross and Net combined increased by (42.9%; USD 205.2 billion), see [Chart 8](#) below.

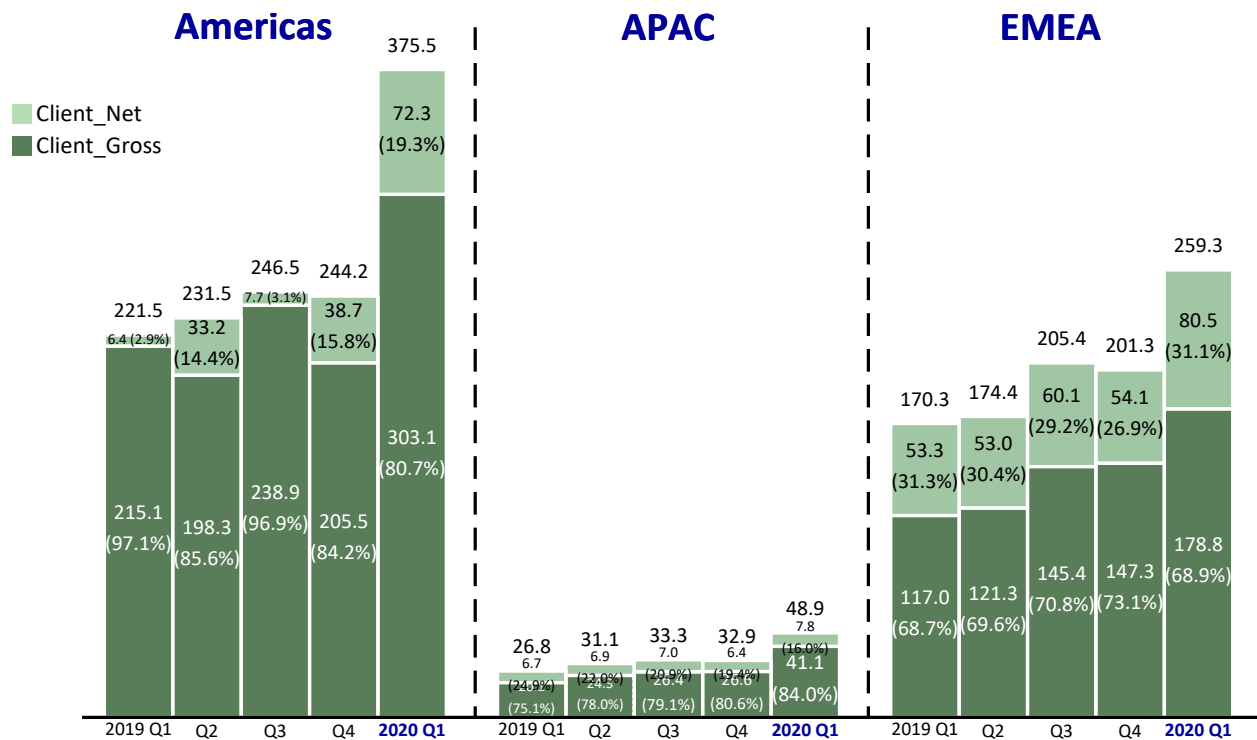


Chart 7: Total IM (Required) Client Net vs. Gross across regions, USD B and %, Q1 2019 – Q1 2020

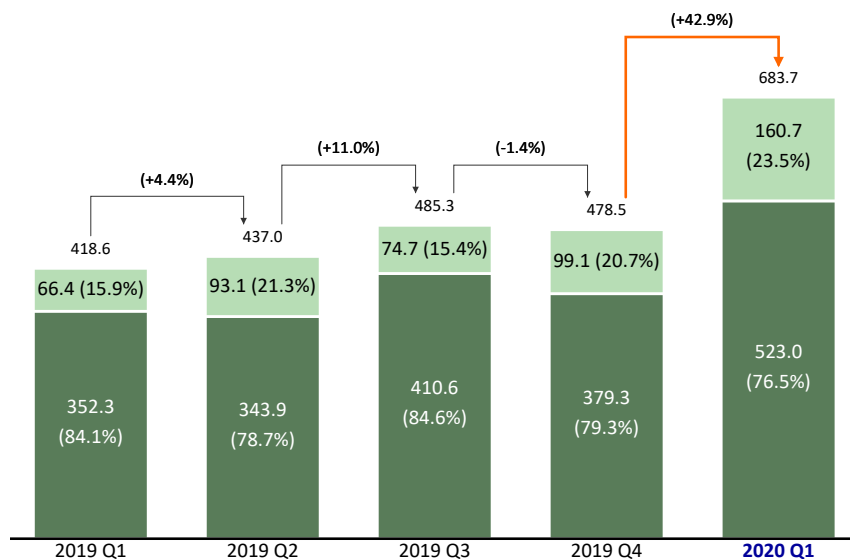


Chart 8: Grand Total IM (Required) Client Net vs. Gross, USD B and %, Q1 2019 – Q1 2020

## 2.1 DEFAULT FUND

### 2.1.1 DEFAULT FUND REQUIRED

Default fund (DF) (Required) (Disclosure 4.1.4) is one of the components of the pre-funded financial resources provided by participants, used to allocate any losses arising in the event that one or more participants default on their obligations to the FMI and the resources provided by the defaulted party (or parties) are not sufficient to cover such losses (CPMI-IOSCO, 2015).

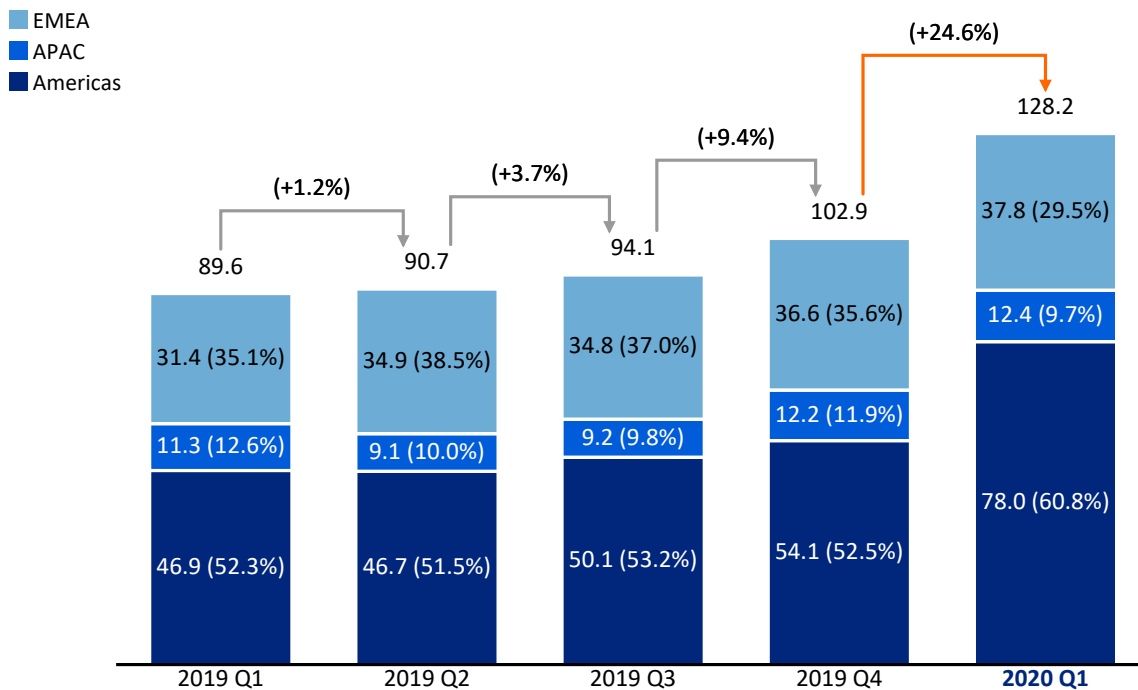


Chart 9: Total DF (Required), USD B and %, Q1 2019 – Q1 2020

The Total DF (Required) (Chart 9, above) for Q1 2020 was USD 128.2 billion, representing a +24.6% increase from Q4 2019. The Americas, which made up 60.8% of the total figure, had the largest default fund requirement at the end of Q1 2020, totalling USD 78.0 billion; EMEA was next with 29.5% (USD 37.8 billion), followed by APAC with 9.7% (USD 12.4 billion).

## 2.1.2 DEFAULT FUND HELD

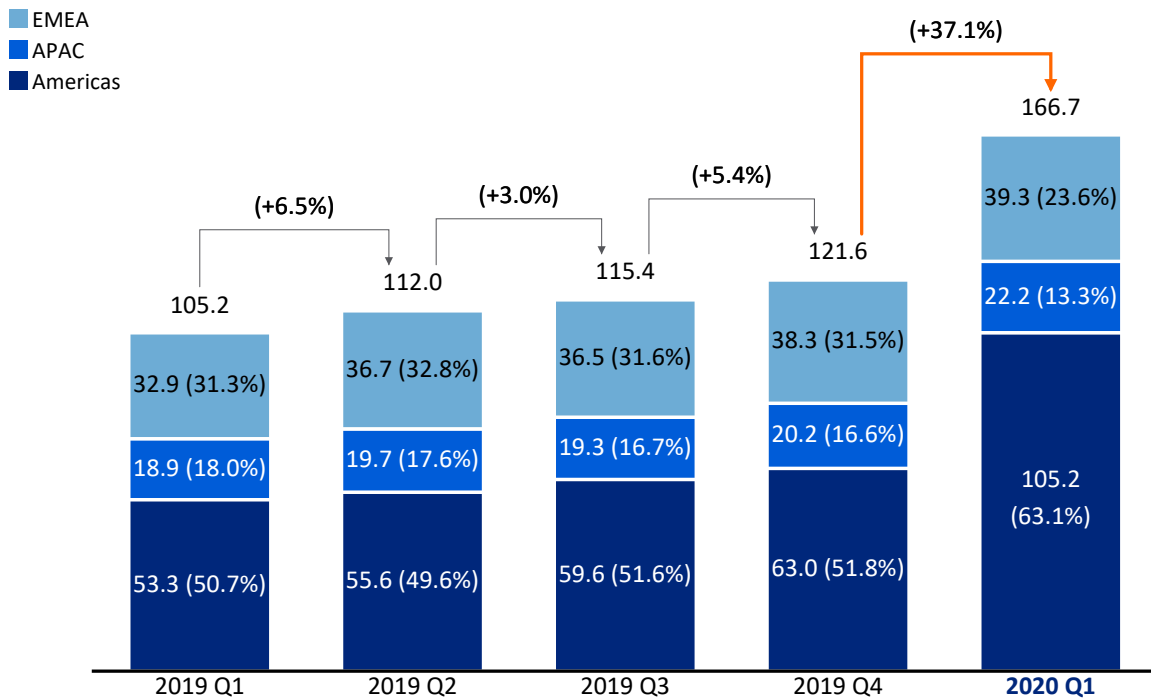


Chart 10: Total DF (Held), USD B and %, Q1 2019 – Q1 2020

The total DF (Held) (Disclosure 4.3.15) (Chart 10) for Q1 2020 was (USD 166.7 billion), representing a +37.1% increase from Q4 2019. A similar trend is noted in the proportion of DF (Held) across the regions with Americas consistently accounting for more than 50% of the DF (Held) in comparison to EMEA and APAC. Americas made up 63.1% (USD 105.2 billion) of the total DF (Held); EMEA next at 23.6% (USD 39.3 billion), followed by APAC with 13.3% (USD 22.2 billion).

## 2.1.3 DF OVERCOLLATERALIZATION<sup>12</sup>

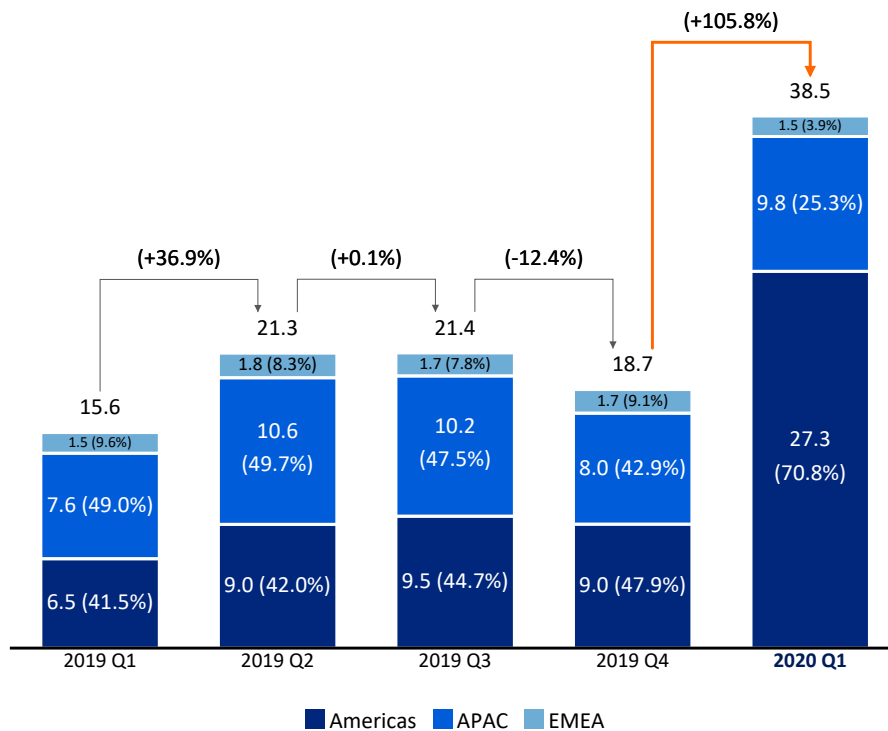


Chart 11: DF Overcollateralization split by region, USD B and %, Q1 2019 – Q1 2020

For the DF Overcollateralization, within Chart 11 above, a 105.8% increase was observed from Q4 2019 to Q1 2020. Pre-COVID-19 levels between Q1 2019 – Q4 2019 accounted for an average of USD 19.25 billion for a quarter. Although the DF Overcollateralization doubled for the Q1 2020 quarter-end as covered under section 1.2.3 (next page) (Chart 12), it is noted that the Grand Total (IM and DF) Overcollateralization figures for Q1 2020 were at similar levels one year prior, before the CC.

Comparing Q4 2019 to Q1 2020, the proportion of DF Overcollateralization for Americas has increased the most, followed by APAC, and a relatively small decrease for EMEA.

Table 5 below indicates the key data for the Total DF overcollateralization between Q1 2019 – Q1 2020.

Overcollateralization (DF)				
Row Labels	Americas	APAC	EMEA	Grand Total
<b>2019</b>				
Qtr1	6.5	7.6	1.5	15.6
Qtr2	9.0	10.6	1.8	21.3
Qtr3	9.5	10.2	1.7	21.4
Qtr4	9.0	8.0	1.7	18.7
<b>2020</b>				
Qtr1	27.3	9.8	1.5	38.5

Table 5: Data for DF Overcollateralization split by region, USD B, Q1 2019 – Q1 2020

<sup>12</sup> Calculated as (Total DF Held, CPMI-IOSCO Disclosure 4.3.15) minus (Total DF Required, CPMI-IOSCO Disclosure 4.1.4) (PostHaircut).



### 3.1 TOTAL (IM AND DF) OVERCOLLATERALIZATION<sup>13</sup>

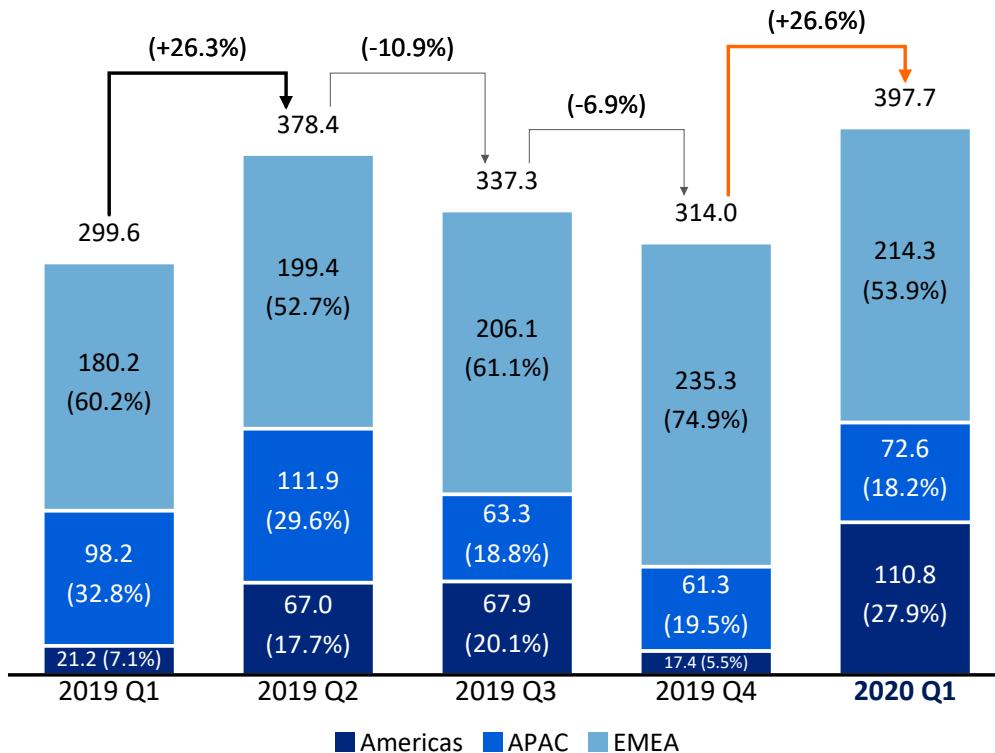


Chart 12: Grand Total (IM and DF) Overcollateralization split by region, USD B and %, Q1 2019 – Q1 2020

The **Total IM and DF Overcollateralization** figures provide us with a good overview of the pre-CC and post-CC levels. It is observed from the data that the Q4 2019 - Q1 2020 percentage increase (+26.6%) is almost identical to Q1 2019 - Q2 2019 increase (+26.3%). Given that the levels of overcollateralization are identical during peace time and the CC period, this demonstrates that the level of overcollateralization is not affected by the CC.

EMEA accounts for the largest proportion of the combined IM and DF Overcollateralization for Q1 2020, with USD 214.3 billion, +53.9%, followed by Americas USD 110.8 billion, +27.9%, and APAC with USD 72.6 billion, +18.2%.

<sup>13</sup> Calculated as (Total IM and DF Held, CPMI-IOSCO Disclosure 6.2.15 and 4.3.15) minus (Total IM and DF Required, CPMI-IOSCO Disclosure 6.1.1 and 4.1.4) (PostHaircut).

## 4.1 COLLATERAL MAKEUP OF IM / DF

While members are required to post a set amount of initial margin and default fund contributions, the composition of the collateral posted may have flexibility subject to the acceptable collateral allowable by each individual CCP.

The collateral can be made up of a combination of Cash and Non-Cash collateral, held in different forms at a variety of locations. The global total (percentages) for Q1 2020 can be seen below in [Table 5](#):

Collateral Posted in the Form of:	IM Disclosures	IM Held (%)	DF Disclosures	DF Held (%)
<b>At Central Bank of Issue</b>	6.2.1	13.1%	4.3.1	41.6%
<b>At Other Central Bank</b>	6.2.2	0.6%	4.3.2	0.0%
<b>Commercial Bank, Secured Cash (Incl. Reverse Repo)</b>	6.2.3	10.1%	4.3.3	13.0%
<b>Commercial Bank, Unsecured Cash</b>	6.2.4	9.6%	4.3.4	6.1%
<b>Sovereign Government Bonds - Domestic</b>	6.2.5	25.1%	4.3.5	31.9%
<b>Sovereign Government Bonds - Foreign</b>	6.2.6	17.0%	4.3.6	3.1%
<b>Agency Bonds</b>	6.2.7	1.5%	4.3.7	3.0%
<b>State/Municipal Bonds</b>	6.2.8	0.5%	4.3.8	0.2%
<b>Corporate Bonds</b>	6.2.9	4.9%	4.3.9	0.5%
<b>Equities</b>	6.2.10	2.5%	4.3.10	0.2%
<b>Mutual Funds/UCITS</b>	6.2.11	0.1%	4.3.11	0.0%
<b>Commodities - Gold</b>	6.2.12	0.0%	4.3.12	0.0%
<b>Commodities - Other</b>	6.2.13	0.1%	4.3.13	0.0%
<b>Other</b>	6.2.14	2.3%	4.3.14	0.4%

**Table 6: Collateral Breakdown of IM and DF (Held)**

As noted in [Table 5](#), the majority of IM Held for (Cash) deposits were primarily within Central Bank of Issue (13.1%), followed by Commercial Banks as Secured and Unsecured Cash (10.1% and 9.6%, respectively). With regards to Non-Cash, the overwhelming majority is deposited as Sovereign Government Bonds (Domestic), followed by Sovereign Government Bonds (Foreign).

DF Held (Cash) deposits were mainly deposited at the Central Bank of Issue (41.6%), followed by Commercial Banks as Secured and Unsecured Cash (13.0% and 6.1%, respectively). Non-Cash deposits were primarily within Sovereign Government Bonds (Domestic).

[Charts 13 to 16](#) on the following pages, provide a comprehensive and in-depth analysis of the Cash vs. Non-Cash breakdown of collateral Held for both the IM and DF.

## 4.1.1 IM HELD TOTAL – COLLATERAL MAKEUP OF CASH/NON-CASH

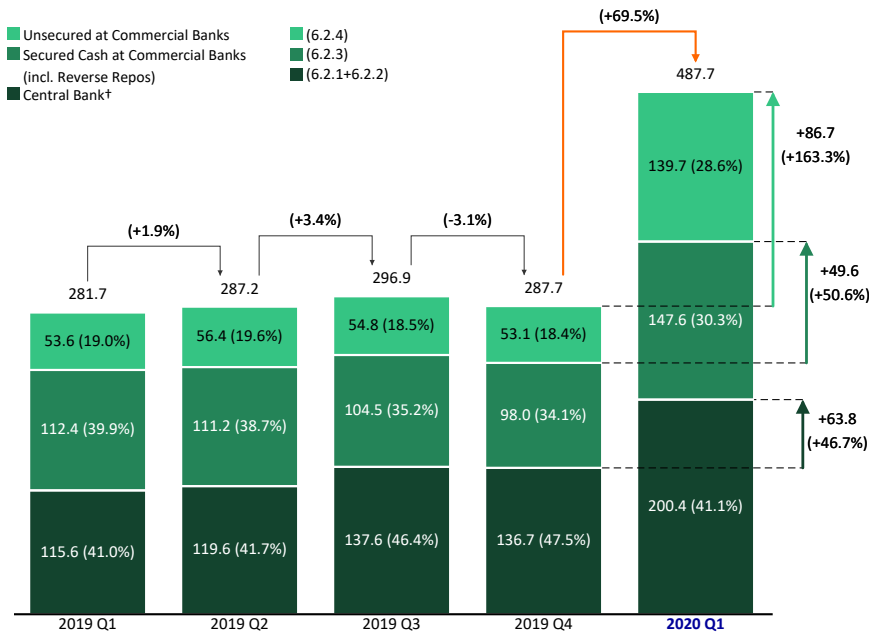


Chart 13: Cash Deposits, Total IM (Held) across all CCPs, USD B and %, Q1 2019 – Q1 2020

### Cash

The increases in Cash deposits are mirrored by a passive increase in non-cash, as CCPs shift their resources to the safety of Central Bank and Commercial Bank deposits during the CC.

Total Cash deposits for IM (Held) increased **+69.5%** between Q4 2019 and Q1 2020.

We see a USD +86.7 billion increase in Unsecured Commercial Bank Deposits, followed by USD +63.8 billion in Central Bank Deposits and USD +49.56 billion for Secured Cash at Commercial Banks (incl. Reverse Repos).

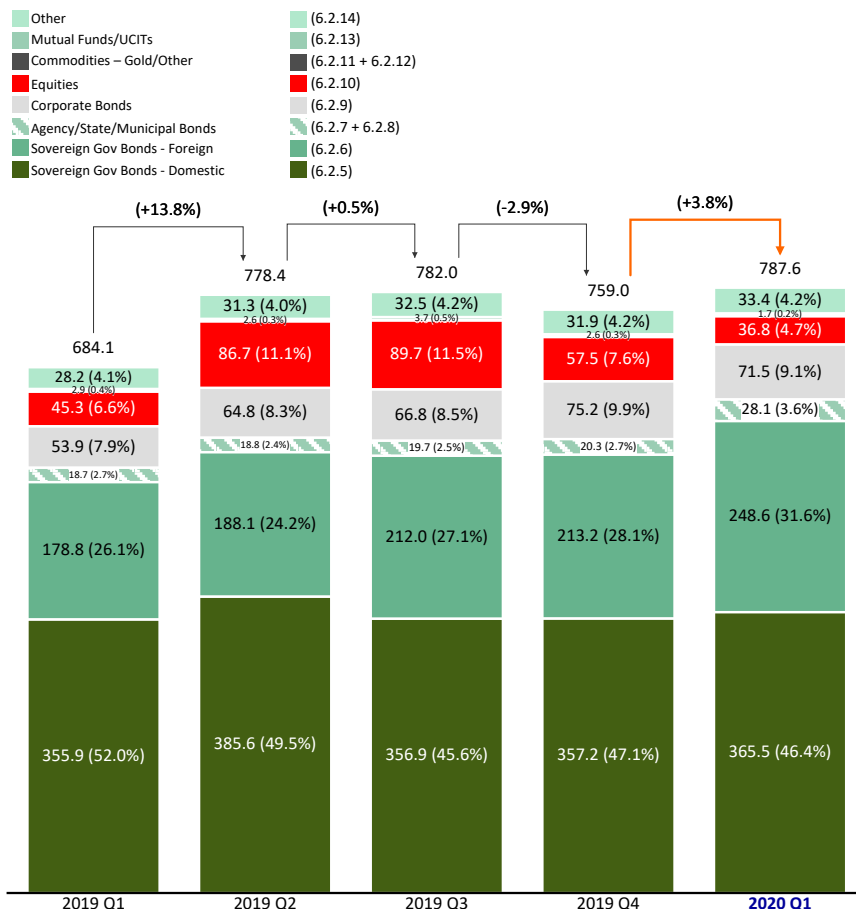


Chart 14: Non-Cash Deposits, Total IM (Held) across all CCPs, USD B and %, Q1 2019 – Q1 2020

### Non-Cash

Total Non-Cash deposits for IM (Held) increased **+3.8%** between Q4 2019 and Q1 2020.

The highest increase between quarters for the YTD was between Q1 2019 and Q2 2019 with +13.8%.

Domestic and Foreign Sovereign Government Bonds consistently account for more than 70% of all Non-Cash deposits QoQ.

Equities have been steadily declining since Q2 2019, for which they made up only 5% of the Non-Cash resources across all 42 CCPs in Q1 2020.

†Cash deposited at “Other Central Bank of Issue” (IM: CPMI-IOSCO Disclosure 6.2.2, DF: CPMI-IOSCO Disclosure 4.3.2) makes up <1.9% of the total cash collateral for IM and negligible for the DF. Therefore, “Central Bank of Issue” and “Other Central Bank” Cash deposits grouped together within charts.

## 4.1.2 DF HELD TOTAL – COLLATERAL MAKEUP OF CASH/NON-CASH

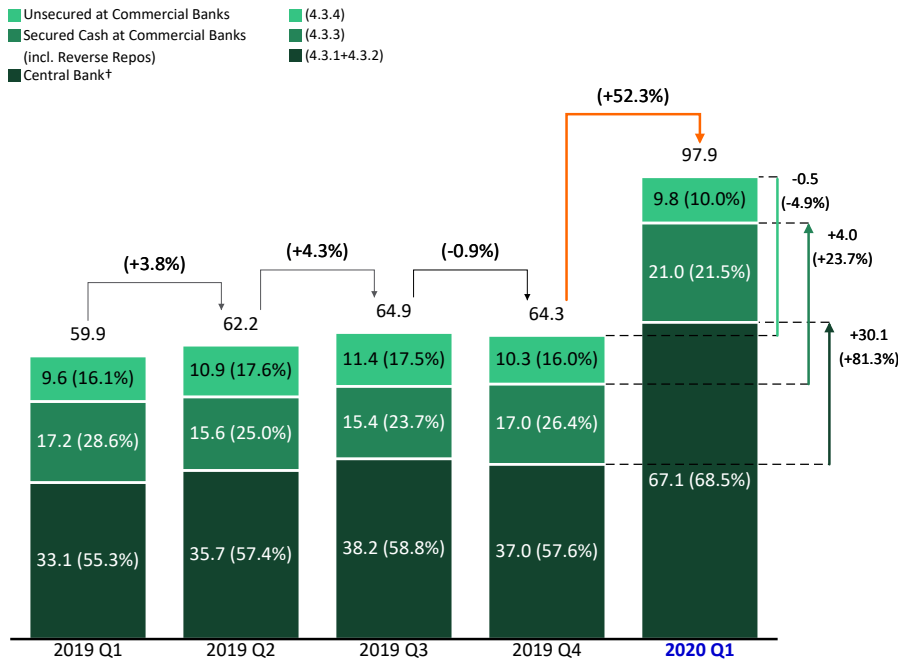


Chart 15: Cash Deposits, Total DF (Held) across all CCPs, USD B and %, Q1 2019 – Q1 2020

### Cash

During the CC, Total DF (Held) Cash deposits increased (USD 33.6 billion, +52.3%) from Q4 2019, indicating a larger shift to more secure deposits.

A +81.3% increase within Central Bank Deposits is a significant increase. Prior to the CC, Central Bank deposits only made up ~55-58% of Cash deposits for the quarter. For Q1 2020, this reached 68.5% of the total Cash deposits held.

Unsecured Cash at Commercial banks decreased 4.9%, but remains the same proportion QoQ.

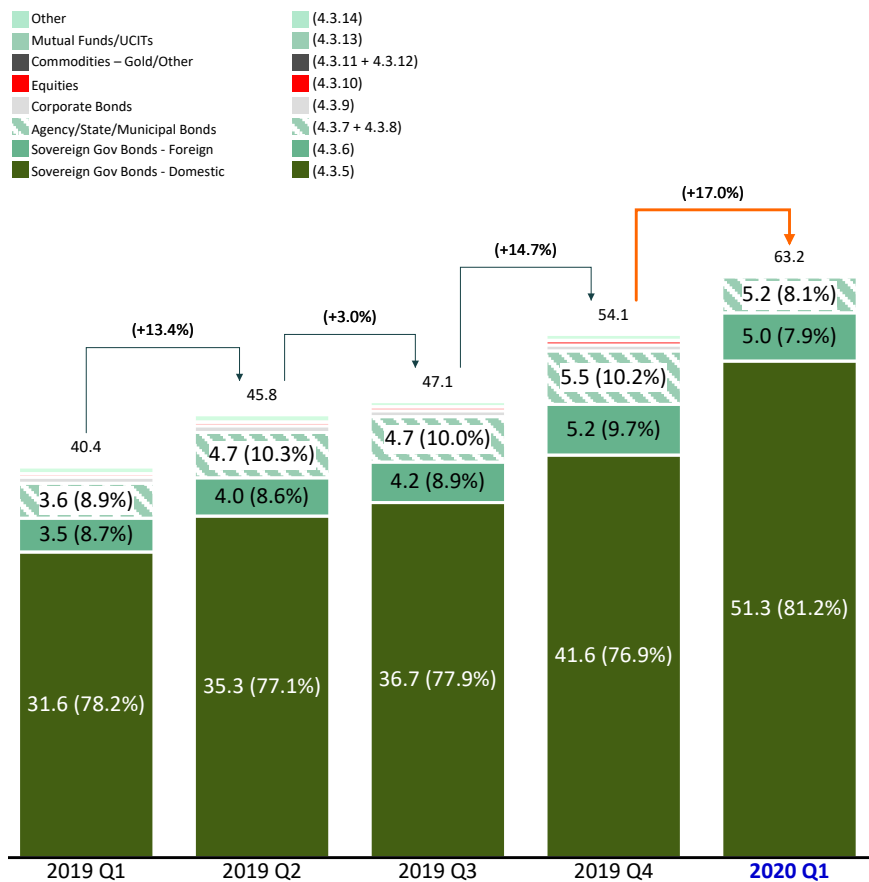


Chart 16: Non-Cash Deposits, Total IM (Held) across all CCPs, USD B and %, Q1 2019 – Q1 2020

### Non-Cash

Non-Cash DF (Held) resources are primarily deposited within Sovereign Government Bonds (Domestic), accounting for USD 51 billion or 81% of the Total Non-Cash deposits (Held).

This is followed by Sovereign Government Bonds (Foreign), accounting for USD 5 billion, 8% and lastly, Agency/State/Municipal Bonds which account for USD 5 billion, 8%.

The remaining Non-Cash deposits across Corporate Bonds, Equities, Commodities (Gold/Other), Mutual Funds/UCITs and Other, account for the remaining 3% of Non-Cash DF (Held) Resources.

†Please see footnote on the previous page, 19.

## 5.1 MARK-TO-MARKET

### 5.1.1 AVERAGE TOTAL DAILY VARIATION MARGIN PAID

Average total variation margin (VM) paid to the CCP by participants each business day (Disclosure 6.6.1) (Chart 17) can be defined as funds that are collected and paid out to reflect current exposures resulting from actual changes in market prices (CPMI-IOSCO, 2012).

In the CCP12 PQD data set, the total average VM paid through the CCP by participants on each business day during the first quarter of 2020 increased significantly (+65.2%) in comparison to the previous quarter. The Average daily VM in Q1 2020 was primarily generated by the Americas (44.6%; USD 18.2 billion) and EMEA (44.4%; USD 18.1 billion). In APAC however, Average daily VM for Q1 2020 accounted for (11.0%; USD 4.5 billion).

The quarterly regional increase between Q4 2019 – Q1 2020 was:

**Americas:** +98.7% increase; USD +9.1 billion;

**EMEA:** +51.1% increase; USD +6.1 billion;

**APAC:** +26.0% increase; USD +0.9 billion.

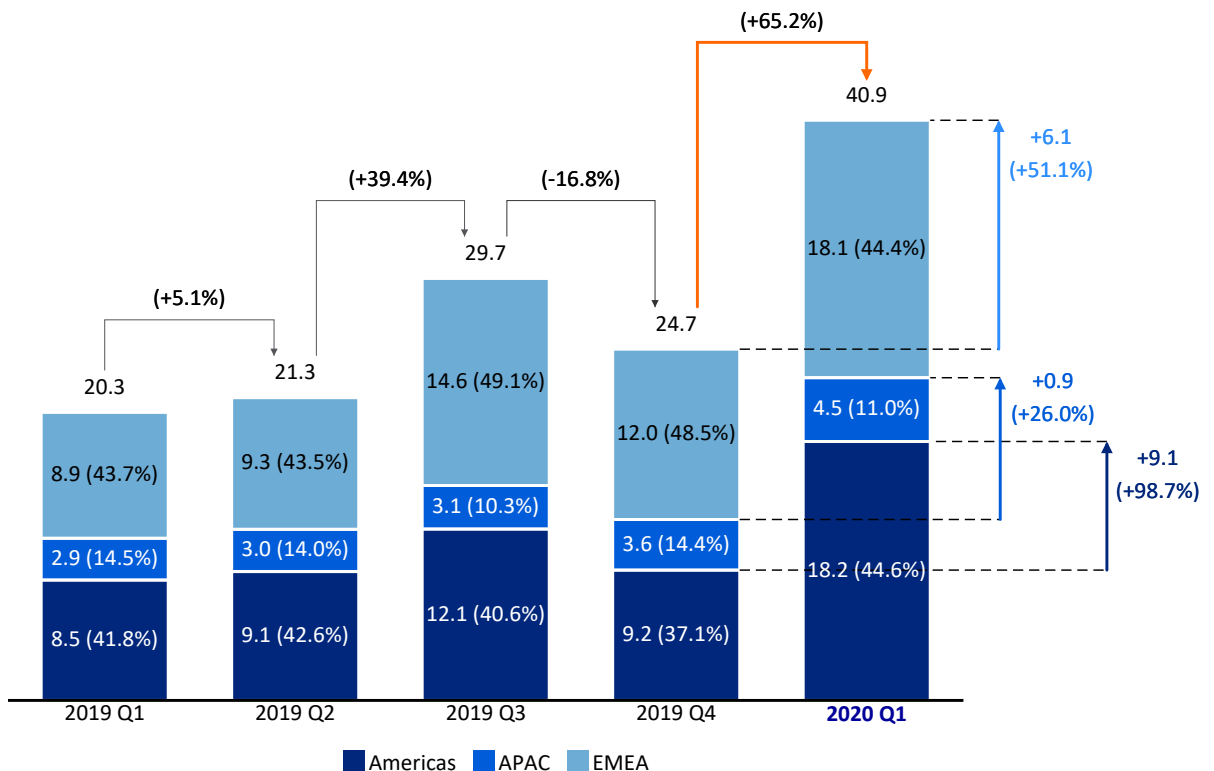


Chart 17: Average Total VM Paid to the CCP by participants each business day, USD B – Q1 2019 – Q1 2020

## 6.1 TOTAL IM (REQUIRED) ACROSS CDS/IRS

Charts 18 to 19, as well as Table 6 and 7, provide key insights into the total IM (Required) across CDS and IRS.

### 6.1.1 CDS

#### 6.1.1

Total IM required for CDS across 3 CCPs (USD B and %)

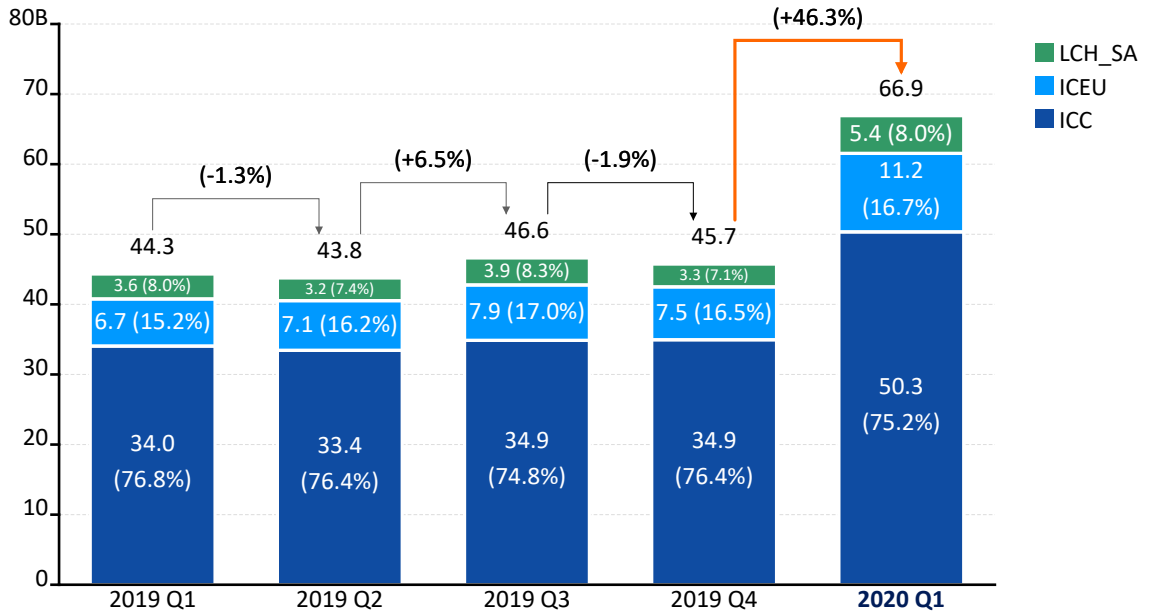


Chart 18: Total IM (Required) for CDS across 3 CCPs, USD B and %, Q1 2019 – Q1 2020

(6.1.1) Total IM (Required) for CDS across three CCPs (USD B)				
Row Labels	ICC	ICEU	LCH_SA	Grand Total
<b>2019</b>				
Qtr1	34.0	6.7	3.6	44.3
Qtr2	33.4	7.1	3.2	43.8
Qtr3	34.9	7.9	3.9	46.6
Qtr4	34.9	7.5	3.3	45.7
<b>2020</b>				
Qtr1	50.3	11.2	5.4	66.9

Table 7: Total IM (Required) for CDS across three CCPs (USD, B)

### CDS

- IM (Required) for CDS increased +46.3% for the three CCPs (ICE Clear Credit, ICE Clear Europe and LCH SA (CDS Clear) between Q4 2019 – Q1 2020;
- ICC accounts for the largest portion of IM (Required) from the three, with a total of USD 50.3 billion for Q1 2020;
- Proportion of IM (Required) for 3 CDS CCPs remains constant QoQ;
- LCH SA (CDS Clear) represents the largest increase from Q4 2019 with +65.2%, albeit with the smallest portion of IM (Required) for CDS in comparison;
- This is followed by ICEU (+48.5%), and ICC (+44.0%) increase from Q4 2019.

## 6.1.2 IRS

### 6.1.1

Total IM required for top 4 Largest IRS CCPs (USD B and %)

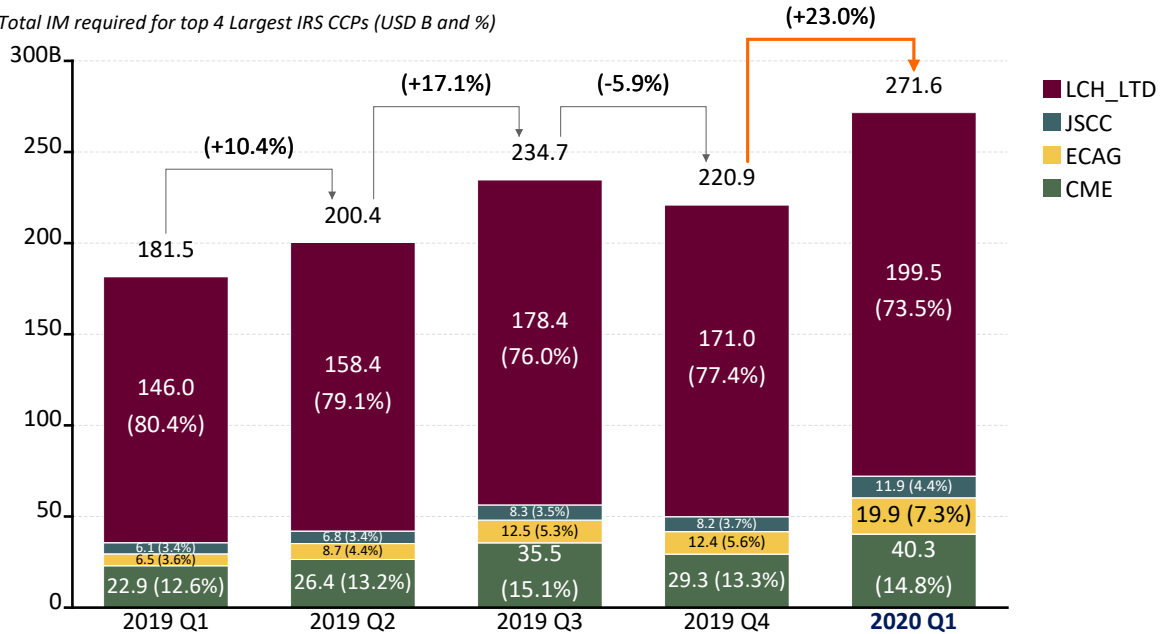


Chart 19: Total IM (Required) for Top 4 Largest IRS CCPs, USD B and %, Q1 2019 – Q1 2020

(6.1.1) Total IM (Required) for Top 4 Largest IRS CCPs (USD B)					
Row Labels	CME	ECAG	JSCC	LCH_LTD	Grand Total
<b>2019</b>					
Qtr1	22.9	6.5	6.1	146.0	181.5
Qtr2	26.4	8.7	6.8	158.4	200.4
Qtr3	35.5	12.5	8.3	178.4	234.7
Qtr4	29.3	12.4	8.2	171.0	220.9
<b>2020</b>					
Qtr1	40.3	19.9	11.9	199.5	271.6

Table 8: Total IM (Required) for Top 4 Largest IRS CCPs (USD, B)

## IRS

- IM (Required) for top 4 IRS CCPs increases by +23.0% between Q4 2019 – Q1 2020;
- LCH LTD (SwapClear) represents the largest portion of IM (Required) at USD 199.5 billion, 73.5% for Q1 2020.
- Proportion of IM (Required) for top four IRS CCPs remains fairly constant QoQ;
- Between Q4 2019 and Q1 2020, the IRS IM (Required) increases are:
  - CME: 37.5% increase, from USD 29.3 billion to USD 40.3 billion;
  - ECAG: 61.2% increase, from USD 12.4 billion to USD 19.9 billion;
  - JSCC: 45.4% increase, from USD 8.2 billion to USD 11.9 billion;
  - LCH\_LTD: 16.7% increase, from USD 171.0 billion to 199.5 billion.

## 7.1 AVAILABILITY, FAILURES AND RECOVERY TIME OBJECTIVES

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):

For Q1 2020, CCPs reported higher availability to core clearing systems over the previous 12-month period<sup>14</sup> compared to the previous reporting period.

The average actual core clearing system availability over the previous twelve-month period (March 31, 2019 through March 31, 2020) across all 42 CCPs was 99.97%

### Disclosure (17.4):

- 37 out of 42 CCPs observe the standard target recovery time of 2 hours;
- 2 out of 42 CCPs observe a 1-hour target recovery time, and
- 3 out of 42 CCPs observe a 4-hour target recovery time<sup>15</sup>.

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<sup>14</sup> For Q4 2019, the average availability of core clearing systems over the period January 1, 2019 through to December 31, 2019 across all CCPs was 99.96%.

<sup>15</sup> Based on their respective regulatory requirements.



## APPENDIX 1 – THE LIST OF CCPS AND REGIONS

Organisation	Region	Website for PQD Reports
Argentina Clearing	Americas	<a href="http://www.argentinaclearing.com.ar/compliance/mejores_practicas/">http://www.argentinaclearing.com.ar/compliance/mejores_practicas/</a>
B3 - Brasil Bolsa Balcao	Americas	<a href="http://www.b3.com.br/en_us/products-and-services/clearing-and-settlement/clearing/">http://www.b3.com.br/en_us/products-and-services/clearing-and-settlement/clearing/</a>
Cámara de Riesgo Central de Contraparte de Colombia (CRCC)	Americas	<a href="https://www.camaraderiesgo.com/public-quantitative-disclosures-pqd/">https://www.camaraderiesgo.com/public-quantitative-disclosures-pqd/</a>
Chicago Mercantile Exchange Group	Americas	<a href="http://www.cmegroup.com/clearing/cpmi-iosco-reporting.html">http://www.cmegroup.com/clearing/cpmi-iosco-reporting.html</a>
Depository Trust & Clearing Corporation	Americas	<a href="http://www.dtcc.com/en/legal/policy-and-compliance">http://www.dtcc.com/en/legal/policy-and-compliance</a>
Intercontinental Exchange (Credit)	Americas	<a href="https://www.theice.com/clear-credit/regulation">https://www.theice.com/clear-credit/regulation</a>
Intercontinental Exchange (NGX)	Americas	<a href="https://www.theice.com/ngx/documents">https://www.theice.com/ngx/documents</a>
Intercontinental Exchange (US)	Americas	<a href="https://www.theice.com/clear-us/regulation#quantitative-disclosures">https://www.theice.com/clear-us/regulation#quantitative-disclosures</a>
Minneapolis Grain Exchange	Americas	<a href="http://www.mgex.com/regulation.html">http://www.mgex.com/regulation.html</a>
The Options Clearing Corporation	Americas	<a href="https://www.theocc.com/about/corporate-information/pfmi-disclosures.jsp">https://www.theocc.com/about/corporate-information/pfmi-disclosures.jsp</a>
TMX Group	Americas	<a href="http://www.cdcc.ca/publications_qtdFiles_en">http://www.cdcc.ca/publications_qtdFiles_en</a>
ASX Limited (Clear)	APAC	<a href="http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm">http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm</a>
ASX Limited (Futures)	APAC	<a href="https://www.asx.com.au/regulation/regulatory-compliance/asx-clear-futures.htm">https://www.asx.com.au/regulation/regulatory-compliance/asx-clear-futures.htm</a>
Hong Kong Exchanges & Clearing Ltd (HKCC)	APAC	<a href="https://www.hkex.com.hk/eng/market/clr/SpecialTopics/IOSCO.htm">https://www.hkex.com.hk/eng/market/clr/SpecialTopics/IOSCO.htm</a>
Hong Kong Exchanges & Clearing Ltd (HKSCC)	APAC	<a href="https://www.hkex.com.hk/Services/Clearing/Securities/PFMI?sc_lang=en">https://www.hkex.com.hk/Services/Clearing/Securities/PFMI?sc_lang=en</a>
Hong Kong Exchanges & Clearing Ltd (OTCC)	APAC	<a href="https://www.hkex.com.hk/Services/Clearing/OTC-Clear/PFMI?sc_lang=en">https://www.hkex.com.hk/Services/Clearing/OTC-Clear/PFMI?sc_lang=en</a>
Hong Kong Exchanges & Clearing Ltd (SEOCH)	APAC	<a href="https://www.hkex.com.hk/eng/market/clr/SpecialTopics/IOSCO.htm">https://www.hkex.com.hk/eng/market/clr/SpecialTopics/IOSCO.htm</a>
Intercontinental Exchange (Singapore)	APAC	<a href="https://www.theice.com/clear-singapore/regulation#quantitative-disclosures">https://www.theice.com/clear-singapore/regulation#quantitative-disclosures</a>
Japan Securities Clearing Corporation	APAC	<a href="https://www.jpx.co.jp/jsccl/en/company/fmi-pdf2.html">https://www.jpx.co.jp/jsccl/en/company/fmi-pdf2.html</a>
Korea Exchange	APAC	<a href="https://global.krx.co.kr/contents/GLB/02/0202/0202020203/GLB0202020203.jsp">https://global.krx.co.kr/contents/GLB/02/0202/0202020203/GLB0202020203.jsp</a>
NSE Clearing Limited	APAC	<a href="https://www.nscclindia.com/NSCCL/disclosures/nscl_dis_pfmi.htm">https://www.nscclindia.com/NSCCL/disclosures/nscl_dis_pfmi.htm</a>
Shanghai Clearing House	APAC	<a href="http://www.shclearing.com/zcyvi/jgvzl/pfmi/">http://www.shclearing.com/zcyvi/jgvzl/pfmi/</a>
Singapore Exchange Ltd (CDP)	APAC	<a href="https://www2.sgx.com/regulation/principles-financial-market-infrastructures-disclosure">https://www2.sgx.com/regulation/principles-financial-market-infrastructures-disclosure</a>
Singapore Exchange Ltd (DC)	APAC	<a href="https://www2.sgx.com/regulation/principles-financial-market-infrastructures-disclosure">https://www2.sgx.com/regulation/principles-financial-market-infrastructures-disclosure</a>
Taifex	APAC	<a href="https://www.taifex.com.tw/en/eng5/qDFiles">https://www.taifex.com.tw/en/eng5/qDFiles</a>
Thailand Clearing House Co. Ltd.	APAC	<a href="https://www.set.or.th/tch/en/pfmi/pfmi_disclosure.html">https://www.set.or.th/tch/en/pfmi/pfmi_disclosure.html</a>
The Clearing Corporation of India Ltd	APAC	<a href="https://www.ccilindia.com/RiskManagement/Pages/PFMI Disclosures.aspx">https://www.ccilindia.com/RiskManagement/Pages/PFMI Disclosures.aspx</a>
Dubai Commodities Clearing Corporation	EMEA	<a href="http://www.dccc.co.ae/">http://www.dccc.co.ae/</a>
Eurex Clearing	EMEA	<a href="http://www.eurexclearing.com/clearing-en/about-us/regulatory-standards">http://www.eurexclearing.com/clearing-en/about-us/regulatory-standards</a>

Organisation	Region	Website for PQD Reports
Intercontinental Exchange (Europe)	EMEA	<a href="https://www.theice.com/clear-europe/regulation#quantitative-disclosures">https://www.theice.com/clear-europe/regulation#quantitative-disclosures</a>
Intercontinental Exchange (Netherlands)	EMEA	<a href="https://www.theice.com/clear-netherlands/regulation#quantitative-disclosures">https://www.theice.com/clear-netherlands/regulation#quantitative-disclosures</a>
Johannesburg Stock Exchange	EMEA	<a href="https://www.jse.co.za/services/post-trade-services/risk-management/quantitative-disclosures">https://www.jse.co.za/services/post-trade-services/risk-management/quantitative-disclosures</a>
KDPW_CCP S.A.	EMEA	<a href="http://www.kdpwccp.pl/en/Members/Transparency/Pages/Terms_of_Use.aspx">http://www.kdpwccp.pl/en/Members/Transparency/Pages/Terms_of_Use.aspx</a>
London Stock Exchange Group Ltd (CC&G)	EMEA	<a href="https://www.lseg.com/markets-products-and-services/post-trade-services/ccp-services/ccg-english-version/products-and-services/statistics/iosco-quantitative-disclosure">https://www.lseg.com/markets-products-and-services/post-trade-services/ccp-services/ccg-english-version/products-and-services/statistics/iosco-quantitative-disclosure</a>
London Stock Exchange Group Ltd (LCH LTD)	EMEA	<a href="https://www.lch.com/resources/rules-and-regulations/ccp-disclosures">https://www.lch.com/resources/rules-and-regulations/ccp-disclosures</a>
London Stock Exchange Group Ltd (LCH SA)	EMEA	<a href="https://www.lch.com/resources/rules-and-regulations/ccp-disclosures">https://www.lch.com/resources/rules-and-regulations/ccp-disclosures</a>
Nasdaq Clearing	EMEA	<a href="https://business.nasdaq.com/trade/clearing/nasdaq-clearing/about-nasdaq-clearing/index.html">https://business.nasdaq.com/trade/clearing/nasdaq-clearing/about-nasdaq-clearing/index.html</a>
National Clearing Centre (Moscow Exchange Group)	EMEA	<a href="https://www.nationalclearingcentre.com/catalog/5112">https://www.nationalclearingcentre.com/catalog/5112</a>
Takasbank	EMEA	<a href="https://www.takasbank.com.tr/en/services/services-provided/central-counterparty-ccp/takasbank-cpmi-iosco-quantitative-disclosure">https://www.takasbank.com.tr/en/services/services-provided/central-counterparty-ccp/takasbank-cpmi-iosco-quantitative-disclosure</a>

## APPENDIX 2 – INDICATORS

Section	Indicator	Definition
1.1	Initial Margin (IM)	Collateral that is collected to cover potential changes in the value of each participant's position (that is, potential future exposure) over the appropriate closeout period in the event a participant defaults. (CPMI-IOSCO, 2012) <sup>16</sup> .
1.1.1, 1.1.2	IM Required Total	The term IM Required Total indicates all the initial margin required by CCPs.
1.1.3	IM Held Total	This term indicates all the initial margin held by CCPs.
1.1.4	IM Overcollateralization	This term indicates the difference between the IM Required and Held. Calculated as (Total IM <u>Held</u> , CPMI-IOSCO Disclosure 6.2.15) minus (Total IM <u>Required</u> , CPMI-IOSCO Disclosure 6.1.1) (PostHaircut)
1.1.5	IM Required House	This term indicates the total Initial Margin Requirements of a CCP for clearing members (i.e. excluding their clients).
1.1.6	IM Required Client Net/Client Gross	Collecting margin on a gross basis means that the amount of margin a participant must post to the CCP on behalf of its customers is the sum of the amounts of margin required for each such customer. Collecting margin on a net basis means that the participant may, in calculating the amount of margin it must post to the CCP on behalf of its customers, offset the amounts of margin associated with the portfolios of different customers (CPMI-IOSCO, 2012).  Under PQD requirements, CCPs should clarify whether Initial Margin Requirements for their clients are under client gross structure, or client net structure, or both.
2.1	Default Fund (DF)	A fund, comprising pre-funded financial resources provided by participants, to allocate any losses arising in the event that one or more participants default on their obligations to the FMI and resources provided by the defaulting party (or parties) are not sufficient to cover such losses (CPMI-IOSCO, 2015).
2.1.1	DF Required	The total prefunded default fund contributions from clearing members required by CCPs.
2.1.2	DF Held	The total prefunded default fund contributions from clearing members actually held by CCPs.
2.1.3	DF Overcollateralization	This term indicates the difference between the DF Required and Held. Calculated as (Total DF <u>Held</u> , CPMI-IOSCO Disclosure 4.3.15) minus (Total DF <u>Required</u> , CPMI-IOSCO Disclosure 4.1.4) (PostHaircut)
3.1	Total (IM & DF) Overcollateralization	This term indicates the difference between the total IM and DF Required, compared the the Held figures. Calculated as (Total IM and DF <u>Held</u> , CPMI-IOSCO Disclosure 6.2.15 and 4.3.15) minus (Total IM and DF <u>Required</u> , CPMI-IOSCO Disclosure 6.1.1 and 4.1.4) (PostHaircut)
4.1	Collateral makeup of IM / DF	<b>Initial Margin and Default Fund contributions can be made up of:</b>  <b>Cash:</b> (1) Cash at a central bank, (2) secured cash at a commercial bank i.e. reverse repo, (3) Unsecured cash at a commercial bank;  <b>Non-Cash:</b> (4) Domestic and (5) Foreign sovereign government bonds, (6) Agency bonds, (7) State/municipal bonds, (8) Corporate bonds, (9) Equities, (10) Commodities - Gold or (11) Commodities - Other, (12) Mutual Funds/UCITS, and (13) Other.
5.1	Mark-to-Market enforced by CCP	This value is the Average Total Variation Margin paid to the CCP by participants on each business day over the period multiplied by the number of business days during that period. Variation Margin can be defined as funds that are collected and paid out to reflect current exposures resulting from actual changes in market prices (CPMI-IOSCO, 2012). The higher amount of Mark-to-Market enforced by CCP indicates the more liquidity requirement for clearing members to cover mark-to-market losses.
6.1	Availability, Failures and Recovery Time Objectives	Actual availability of the core system(s) over the previous twelve-month period (CPMI-IOSCO Disclosure 17.2.1)  Recovery time objective(s) (e.g. within two hours) (CPMI-IOSCO Disclosure 17.4.1)

<sup>16</sup> CPSS-IOSCO (2012). *Principles for financial market infrastructures*. Available from: [https://www.bis.org/cpmi/info\\_pfm.htm](https://www.bis.org/cpmi/info_pfm.htm)

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## ABOUT CCP12

CCP12 is a global association of 37 members who operate more than 60 individual CCPs globally across Europe, the Middle East, and Africa (EMEA), the Americas, and the Asia-Pacific (APAC) regions.

CCP12's mission is to promote effective, practical and appropriate risk management and operational standards for CCPs to ensure the safety and efficiency of the financial markets it represents. CCP12 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@ccp12global.com](mailto:office@ccp12global.com) or through our website by visiting [www.ccp12.org](http://www.ccp12.org)

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