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## **Stress Testing Policy**

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**FMDQ CLEAR LIMITED**

**Version 1.0 - September 2022**

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## 1. Definition of Key Terms

The following terms and expressions shall, unless the context otherwise requires, have the following meanings in this Stress Testing Policy:

Term	Definition
<b>“Central Counterparty” or “CCP”</b>	means an entity that interposes itself between counterparties to contracts/transactions traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the performance of open contracts/transactions;
<b>“Clearing Member”</b>	means a Trading Member that is either a General Clearing Member or a Direct Clearing Member of FMDQ Clear authorised to clear and settle transactions under the conditions set forth in the FMDQ Clear Clearing Member Rules;
<b>“Client”</b>	means a Non-Trading Member or Trading Member whose transactions are cleared and settled by a Clearing Member of FMDQ Clear;
<b>“Collateral”</b>	means the securities or cash pledged by Clearing Members to secure the performance of their obligations with FMDQ Clear;
<b>“Default”</b>	means a failure by a Clearing Member to effect transfer of funds or securities according to the terms of trade or any other form of Default as contemplated in FMDQ Clear’s Default Management Policy or as prescribed by FMDQ Clear from time to time;
<b>“Default Fund”</b>	means a fund, comprising pre-funded financial resources provided by FMDQ Clear and its Clearing Members, to allocate any losses arising in the event that one or more Clearing Members Default on their obligations to FMDQ Clear and resources provided by the Defaulting Clearing Member(s) are not sufficient to cover such losses;
<b>“Defaulting Clearing Member”</b>	means a Clearing Member who is considered to be in Default;
<b>“Exchange”</b>	means any regulated market, multilateral trading facility, or other trading venue duly authorized, regulated, recognized, or licensed (to the extent necessary) under applicable laws in any jurisdiction for which FMDQ Clear provides CCP services;
<b>“FMDQ”</b>	means FMDQ Group PLC;
<b>“FMDQ Clear”</b>	means FMDQ Clear Limited or the Central Counterparty;
<b>“Initial Margin”</b>	means Collateral deposited by Clearing Members to ensure performance of potential obligations arising from future price movement on open Positions;
<b>“Skin-in-the-Game”</b>	means the CCP’s contribution to the mutualised Default Fund;
<b>“Trading Member”</b>	means a member of an Exchange authorised to execute transactions on the Exchange’s trading system

## **2. Introduction**

FMDQ Clear's Stress Testing Policy ("Policy") shall be read in conjunction with other FMDQ Clear policies, agreements, rules and any other documents as may be published by FMDQ Clear from time to time.

FMDQ Clear as a Central Counterparty shall use stress testing, as a tool to assess the effects of the CCP's credit or liquidity exposure to its Clearing Members under extreme but plausible market conditions. In line with the requirement of CPMI-IOSCO<sup>1</sup> in its recommendations in the Principles of Financial Market Infrastructure document, FMDQ Clear shall perform stress tests to quantify whether it has sufficient resources to cover the losses from the default of the Clearing Member(s) with the largest impact on the CCP.

This document describes FMDQ Clear's philosophy regarding stress testing, sets out the governance and articulates the controls FMDQ Clear has in place to ensure the adequacy of the size of its Default Fund.

## **3. Principles: Policy Statement**

There are key principles that are critical to the management of stress testing. The application of these principles will enable FMDQ Clear to assess the resilience and adequacy of the financial resources at its disposal.

- I. FMDQ Clear stress tests shall cover Credit, Collateral and Liquidity stress scenarios as applicable and subject to the availability of the required data sets.
- II. Hypothetical stress scenarios shall be developed from time to time and shall be approved by the Clearing Risk Committee.
- III. Stress testing will be carried out on a daily basis using available historical data and/or hypothetical scenarios.
- IV. The CPMI-IOSCO allows for CCPs to adequately cover potential aggregate credit exposure(s) in extreme but plausible market conditions via two approaches – Cover One<sup>2</sup> and Cover Two<sup>3</sup>. Due to the nascent nature of the FMDQ markets, FMDQ Clear shall adopt Cover One in determining its highest possible loss (post Initial Margin).
- V. The outcome of Credit and Collateral stress tests shall be used to determine the size of the Default Fund and adequacy of the haircut on Collateral respectively.
- VI. Stress tests shall be carried out in line with the documented stress testing methodologies
- VII. In addition to testing the pre-funded financial resources, as the market evolves the resilience of the CCP may also be reviewed by performing reverse stress tests which will determine the severity and combination of scenarios that will exhaust the resources of the CCP or deplete it beyond normally acceptable levels. This will inform and support the evaluation of the adequacy of the CCP's stress testing policy.

In light of the foregoing, a comprehensive stress testing regime shall be maintained in FMDQ Clear's

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<sup>1</sup> Committee on Payments and Market Infrastructures–International Organisation of Securities Commissions

<sup>2</sup> A Stress Testing approach that allows the CCP to determine its highest possible loss (post Initial Margin) by examining the single largest potential aggregate credit exposure(s) from a single Clearing Member and its Clients.

<sup>3</sup> A Stress Testing approach that allows the CCP to determine its highest possible loss (post Initial Margin) by examining the potential aggregate credit exposure(s) from two largest Clearing Members and their Clients.

risk management framework to test the levels of protection that exists. FMDQ Clear shall ensure that it has sufficient financial resources to satisfy its obligations in a wide range of extreme but plausible scenarios. This policy details the ownership and governance of the stress testing regime. It describes how “extreme but plausible” scenarios are to be determined and approved.

The results from stress testing shall be used to determine key pieces of the risk management framework, which includes the size of the Default Fund, FMDQ Clear’s Skin-in-the-Game and liquidity facilities.

Furthermore, the stress testing regime shall be dynamic and carried out in the light of the cleared and non-cleared risks within FMDQ Clear. A firm understanding of the business including the embedded guarantees and obligations is required to ensure the effectiveness of the stress testing program.

#### **4. Credit Stress Testing**

FMDQ Clear conducts Credit stress test by assessing the possible loss from a default by its largest Clearing Member under extreme but plausible stress scenario in a bid to ascertain the resilience and sufficiency of its financial resources. In conducting the Credit stress test, the portfolio of outstanding trades and initial margins segregated based on Clearing Members’ Clients groups shall be considered.

For the purpose of stress test, stress scenarios shall be developed using the historical data for a sufficiently long period. In addition, hypothetical scenarios may also be adopted. The trade portfolios and Collateral (Initial Margin) of Clearing Members shall be subjected to the above-mentioned stress scenarios. The largest loss or the largest plausible risk exposure to FMDQ Clear from a Clearing Member under these scenarios shall be the reference stress test result.

The outcome of the Credit stress test shall be used to size up the Default Fund whilst also helping to identify trade portfolios that are unusually risky as revealed by the stress test exercise.

#### **5. Stress Testing of Collateral**

All assets that are accepted as Collateral for prefunded resources by FMDQ Clear shall be stress tested as detailed in the stress test methodology to ensure the appropriateness of the applicable Collateral haircuts. The data used to generate the stress scenarios shall be in line with the above Credit stress test.

#### **6. Stress Testing Liquidity**

FMDQ Clear’s liquidity position shall be stress tested to ensure it is in a position to meet obligations even under extreme but plausible scenarios. Liquidity needs shall be regularly stressed and compared to the sources of liquidity and the assumptions used shall be validated periodically, preferably on a yearly basis. The Liquidity stress test shall be carried out after a centrally cleared product is launched.

#### **7. Frequency of Calculation**

The Credit and Collateral stress testing (sections 4 and 5 of this Policy) shall be performed daily whilst the Liquidity stress testing (section 6 of this Policy) shall be conducted monthly. Results shall be compared to existing prefunded resources in the case of Credit stress test and available sources of liquidity in the case of Liquidity stress test.

#### **8. Policy Review**

This Policy and the scenarios used in the stress testing framework shall be reviewed at least annually.