

JSE CLEAR CREDIT AND LIQUIDITY STRESS TESTING POLICY

June 2020

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VERSION CONTROL

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VERSION HISTORY

Version	Date	Summary of changes	Author
1.0	November 2012	Initial Draft of Policy	Post-trade Risk
2.0	June 2017	Corrections to reporting and formatting. Inclusion of the use of hypothetical scenarios.	Post-trade Risk
3.0	February 2019	Minor clarification and confirmation	Post-trade Risk
4.0	June 2020	Edits for clarification	JSE Clear Risk

1. Introduction

This policy details the ownership, governance and approach for credit and liquidity stress testing in JSE Clear. The purpose of stress testing is to assess the adequacy of the firm’s financial resources to sustain it in a period of severe stress, defined by “extreme but plausible” stress scenarios. JSE Clear’s financial resources consists of variation margin payments to settle daily position profits and losses, initial margin held throughout the lifetime of a position, a default fund, and JSE Clear’s own capital.

Credit stress testing results will be used, inter alia, to inform the size of the JSE Clear default fund and the large exposure margin add-on. On a daily basis, the results will be used to monitor and manage JSE Clear’s credit exposures to clearing members.

Liquidity stress testing results will be used to inform the magnitude of JSE Clear’s liquidity needs under stressed conditions.

2. JSE Clear approach to stress testing

Credit risk for JSE Clear, as a CCP, arises from its clearing and settlement obligations and processes. JSE Clear faces the risk that a clearing member/s is unable to meet a variation margin payment obligation. As such, credit risk stress testing for JSE Clear consists of calculating the value of the cleared portfolio under a stress scenario and measuring the impact of one or more clearing members defaulting on variation margin calls.

The aim of stress testing for liquidity risk is to assess whether JSE Clear has sufficient liquid resources to meet intra-day and multi-day payment obligations under stressed conditions. There are broadly two types of scenarios that could cause a liquidity stress – the default of a clearing member or an operational event impacting the CCP.

In stress testing credit and liquidity risk, the following 5 high-level steps are followed:

I. Scenario definition

Stress scenarios relevant to the type of risk being assessed are considered. Credit risk stress testing scenarios relate to market movements and can be historical, hypothetical or focused on a single risk factor (sensitivity testing).

Liquidity risk stress testing scenarios could relate to the default of a clearing member under the market stress scenarios or to operational events impacting the CCP.

Stress testing scenarios will be documented in the JSE Clear Stress Testing Scenarios document. The management team of JSE Clear will, as market conditions require, define specific hypothetical market scenarios to manage any observed market anomalies or imminent potential market events.

II. Exposure and/or cash flow assessment

For credit risk, the exposure (or stress loss) is determined through revaluing the cleared portfolio applying the stressed risk factor values or movements defined by each scenario.

For liquidity risk, the maximum potential liquidity needs under the market stress scenarios are determined. Operational events impacting the CCP are also considered.

III. Stress event definition

The stress events are defined for the purpose of assessing the potential loss or liquidity needs resulting from a stress scenario. For credit risk stress testing, this refers to the default assumptions that will be applied.

For liquidity stress testing, this relates to either the default assumptions or the operational failures that will cause a liquidity stress.

IV. Calculate resulting loss and/or liquidity needs

Given the scenario and stress event definition, calculate the loss or cash flow need and assess the adequacy of JSE Clear's financial resources to cover the stressed financial needs.

V. Management action

The JSE Clear Chief Risk Officer (CRO) and Responsible Officer (RO) will review stress testing results and in particular any breaches and take all and any actions necessary.

3. Roles and responsibilities

The RO delegates the responsibility to execute the stress testing framework in JSE Clear to the JSE Clear CRO, who then takes responsibility for JSE Clear’s stress testing methodology, calculation and reporting.

The JSE Clear Risk team is responsible for:

- Reviewing and updating scenarios on a regular basis (as set out in section 6 below)
- Reviewing the approach and methodology for stress testing on a regular basis (as set out in section 6 below)
- Ensuring that results are generated timeously and reviewing these results and reporting to management regularly (as set out in section 5 below), and for escalating concerns to management timeously.

It is the responsibility of the CRO to escalate concerns to the RO and Risk Committee.

4. Governance

The JSE Clear stress testing policy, methodologies and scenarios are reviewed and approved by JSE Clear Risk Committee.

5. Frequency of calculations

Credit risk stress tests will be run on a daily basis, and reviewed by the Risk team. A summary of results will be communicated to the RO and the JSE Clear Risk Committee on a quarterly basis. Any breaches i.e. credit losses exceeding prefunded resources, will be reported to the CRO and RO on the day that the breach arises. The defined scenarios used for the quantification of prefunded resources in the form of initial margin (large exposure add-on) and the default fund, will be reviewed and approved annually by the JSEC Risk Committee.

Liquidity stress testing calculations will be conducted on a daily basis and reviewed by the Risk team. A summary of results will be communicated to the RO and the JSE Clear Risk Committee quarterly. Breaches i.e. liquidity need exceeding available liquid resources will be reported to the CRO and RO on the day that the breach arises. .

6. Review of stress testing scenarios and methodology

Stress testing scenarios will be reviewed on an annual basis, or ad hoc if needed. The stress testing methodology will be reviewed and independently validated via the protocols set by the JSE Group Model Committee, the results of which will be presented annually to the JSE Clear Risk Committee.

7. Supporting documentation

In order to get a full understanding of stress testing in JSE Clear, this document should be read together with the following documents:

- JSE Clear Stress Testing Scenarios
- JSE Clear Stress Testing Methodology
- JSE Clear Default Fund Policy
- JSE Clear Default Management Policy
- JSE Clear Initial Margin Policy

APPENDIX 1 – GOVERNANCE COMMITTEE ACTIONS

No.	Ref	Action Item	Frequency	Applicable Governance Forum
1.	4	The Stress Testing Policy will be reviewed and approved on an annual basis by the JSE Clear Risk Committee	Annual	<ul style="list-style-type: none"> • JSE Clear Risk Committee
2.	5	A summary of credit risk stress testing and liquidity stress testing results will be communicated to the Responsible Officer and the JSE Clear Risk Committee on a quarterly basis.	quarterly	<ul style="list-style-type: none"> • JSE Clear Risk Committee
3.	6	Stress testing scenarios will be reviewed on an annual basis	Annual	<ul style="list-style-type: none"> • JSE Clear Risk Management Team
4.	6	The Stress Testing Methodology will be validated annually and results presented to the JSEC Risk Committee	Annual	<ul style="list-style-type: none"> • JSE Clear Risk Committee