

JSE CLEAR STRESS TESTING POLICY

Post-Trade Services

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1. Introduction

This policy details the ownership and governance for stress testing in JSE Clear, as it relates to stress testing of credit and liquidity risk. 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. CCP's financial resources consist in general of variation margin payments to settle daily position profits and losses, initial margin held throughout the lifetime of a position, a default fund, the CCP's own capital and possibly a guarantee fund.

Credit stress testing results will be used, inter alia, to inform the size of the JSE Clear default fund. 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 payment, clearing and settlement processes, with JSE Clear facing the risk of clearing member/s being unable to make variation margin payment due to intra-day price movements. 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/more clearing member defaulting on all 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.

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. For credit risk stress testing, scenarios relate to market movements and can be historical, hypothetical or focused on a single risk factor (sensitivity testing). For liquidity risk stress testing, scenarios could relate to the default of a clearing member or to operational events.

II. Exposure and/or cash flow assessment

For credit risk, this involves revaluing the cleared portfolio by calculating a stressed mark-to-market, using the stressed risk factor values/movements defined by each scenario. For liquidity risk, this involves the investigation of peak historic liquidity needs.

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 speaks 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 arising from the event and assess the adequacy of JSE Clear's financial resources to cover the stressed financial needs.

V. Management action

The process for handling a default will be in line with the JSE Clear Default Process and Procedures and JSE Clear Default Fund Policy. The Responsible Officer (RO) will take all and any actions necessary prompted by the results of the stress testing process.

3. Roles and responsibilities

The RO for stress testing in JSE Clear delegates it to the Head of Risk Management. JSE Clear stress testing methodology, calculation and reporting is the responsibility of the Risk Management function. This is as it relates to credit risk and liquidity risk stress testing.

The Risk Management 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 generating timeously (as set out in section 5 below), reviewing these results and reporting to management regularly.

Regarding liquidity risk, the management of financial resources and the investment policies relating to the respective funds available to JSE Clear is the responsibility of the JSE Finance Division. Liquidity risk stress testing processes require input from the JSE Finance Division regarding said investment policies and fund balances.

4. Governance

JSE Clear stress testing policy, methodologies and scenarios are reviewed and approved by the Head of Risk Management and the Director: Post Trade Services. Any significant changes to policy, methodology or scenarios will be approved by the JSE Clear Advisory Committee, the JSE Clear Risk Committee and/or the JSE Clear Board. Where applicable, these topics will also be tabled for noting at the JSE Risk Committee, JSE Executive Committee and JSE Board.

5. Frequency of calculations

Credit risk stress tests are run on a daily basis, and the results sent to the Risk Management team and the Operational team. A summary of results will be communicated to the Director: Post Trade Services and the JSE Clear Risk Committee on a regular basis.

Liquidity stress testing calculations will be conducted on a quarterly basis and reported to the Director of Post Trade Services and the JSE Clear Risk Committee.

6. Review of stress testing scenarios and methodology

Stress testing scenarios will be reviewed regularly on an annual basis (or on an ad hoc basis if needed). The stress testing methodology will be reviewed internally on an annual basis, and validated by external parties every 2 years.

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 Process and Procedures