Stress Testing the Securities Market

The advent and adverse effects of the Coronavirus disease (COVID-19), cements the importance of organisations implementing appropriate risk mitigation strategies within the securities market of Trinidad and Tobago. Trinidad and Tobago Securities and Exchange Commission (TTSEC) is mandated under Section 6(l) of the Securities Act, 2012 (SA 2012) to assess, measure and evaluate risk exposure in the securities industry. This includes conducting periodic stress testing of the market.

In financial terminology, stress testing refers to the use of data driven analysis to gauge vulnerabilities of financial intermediaries to hypothetical, but plausible, unfavorable scenarios. It is used to assess a company's or sector's resilience in the face of adverse financial conditions. Special emphasis was placed on stress testing to be used as a pre-emptive risk management tool for the financial services industry as a consequence of the 2008 Global Financial Crisis. Although originally used for the banking sector, securities regulators around the globe have started incorporating the use of this test, as a useful tool to improve their regulatory oversight.

In keeping with the aforementioned, the use of a stress-testing framework is paramount to the continued growth of the securities market in Trinidad and Tobago. **Diagram 1** briefly illustrates the TTSEC's Stress Testing process.

Step 1: Defining the institutional capture

Selecting which entities are included in the stress test depends primarily on their size, complexity of activities and market interconnectedness. As such, the TTSEC's tests are conducted on Collective Investment Schemes and on all registrants registered under Sections 36 and 51(1) of the SA 2012 i.e. Self-Regulatory Organisations, Broker-Dealers, Investment Advisers and Underwriters.

Step 2: Identifying the key trigger events

A trigger is an event that causes circumstances to alter, such as to make it difficult for registrants to continue their normal operations. However, in order for an event to qualify as a trigger and not a transmission channel, they need to be directly related to a specific stress and be independent of others in the industry. Examples include: currency devaluation, interest rate changes or changes in regulatory requirements.

Step 3: Translating the key trigger events into tangible impacts

After triggers for each event are identified, they are simplified into direct impacts that can be experienced by each registrant. During this stage, probable outcomes from events are identified, as well as the time period for the impacts; whether short term (up to a month) or long term (a year or more).

Step 4: Identifying all relevant transmission channels and linkages

Although a registrant may withstand the direct stresses of a particular scenario, they may feel acutely, albeit indirectly, the effects created by the impacts of those stresses on other registrants. These indirect stresses can be transmitted through various channels and may be passed on (and even potentially amplified) to other participants. While conducting a stress test for the securities industry, it is important to consider the potential for rapid transmission of stresses.

Step 5: Defining and quantifying the stress test scenarios

From the list of potential triggers, impacts and transmission channels, the stress scenarios are formulated consistent with plausible situations that markets might face. The Commission utilises both single factor and multivariable tests in its initial suite of scenarios, which evolve over time.

Step 6: Obtaining relevant data

The data currently received from the Micro and Macro Prudential Reporting Framework (MMRF) which captures financial and statistical data from registrants are used to conduct stress tests. The data informs key indicators for all segments of the securities market (securities, mutual funds, repos, etc.).

Step 7: Performing the stress test (First Round)

Upon specification of scenarios and after triggers, impacts and transmission channels are identified and quantified, stress tests are performed. Stresses are applied on individual firms and are subsequently aggregated to show segment-wide or market-wide results.

Step 8: Assessing the results of the stress test and reviewing assumptions

The objective of the stress tests is to assess whether firms are able to continue to operate under the specific conditions of the test scenarios. If not, the scale of the capital and liquidity shortfall must be understood. The stresses are felt in two main ways – through pressures on the adequacy of capital (solvency test) and determining whether registrants have access to sufficient liquid assets to be able to meet their obligations (liquidity test).

Step 9: Performing the stress test (Second Round)

If the stress test scenario includes the need for a second round, the results of the first round are considered before the outcomes for the second round are analysed. Adjusted financial statements as a result of the first round of scenarios are tested with a new set of scenarios to see if ultimately firms fail or pass the test.

Step 10: Communicating the stress test results

The Commission determines to whom and how the results are communicated to ensure that proper risk mitigation strategies are implemented. Results may be communicated to internal and external stakeholders and are tailored to ensure that triggers and scenarios are not viewed as forecasts and predictions.

Step 11: Following up

Once the stress tests are consolidated, the Commission decides on what actions to take. This typically includes micro-prudential actions, at the firm level or at the regulatory level and macro-prudential actions.

Step 12: Institutionalising the tests

The Commission does not consider stress testing to be a one-off exercise. Continuous refinement and practice encourage increased utilisation, relevance and application by the Commission and Registrants. Continuous testing creates a culture of risk management within the industry, which strengthens the financial sector.

Through Stress Testing the TTSEC conducts a sector wide analysis of risks, vulnerabilities and dependencies. This therefore plays an important role in our supervisory effort by identifying weaknesses in the firm’s health and operations and providing an opportunity to formulate appropriate firm-level responses.

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