

Amendments to Directives  
In relation to requirements on Stress Testing for Liquidity Risk Management

<b>DIRECTIVES ON LIQUIDITY RISK MANAGEMENT FRAMEWORK ("LRM FRAMEWORK")</b>	<b>No. 13.32-001</b>
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Relevant to	: Rules <a href="#">13.32</a> <a href="#">and 13.33</a>
Introduced with effect from	: 2 May 2013
Amended	: 1 March 2018 vide R/R 3 of 2018 <a href="#">and 26 July 2018 vide R/R 10 of 2018</a>
POs' Circular No(s).	: R/R 3 of 2011
Refer also to Directive No(s).	: N/A
Refer also to Best Practice No(s).	: N/A

**1. [Rule 13.32](#) [and Rule 13.33](#)**

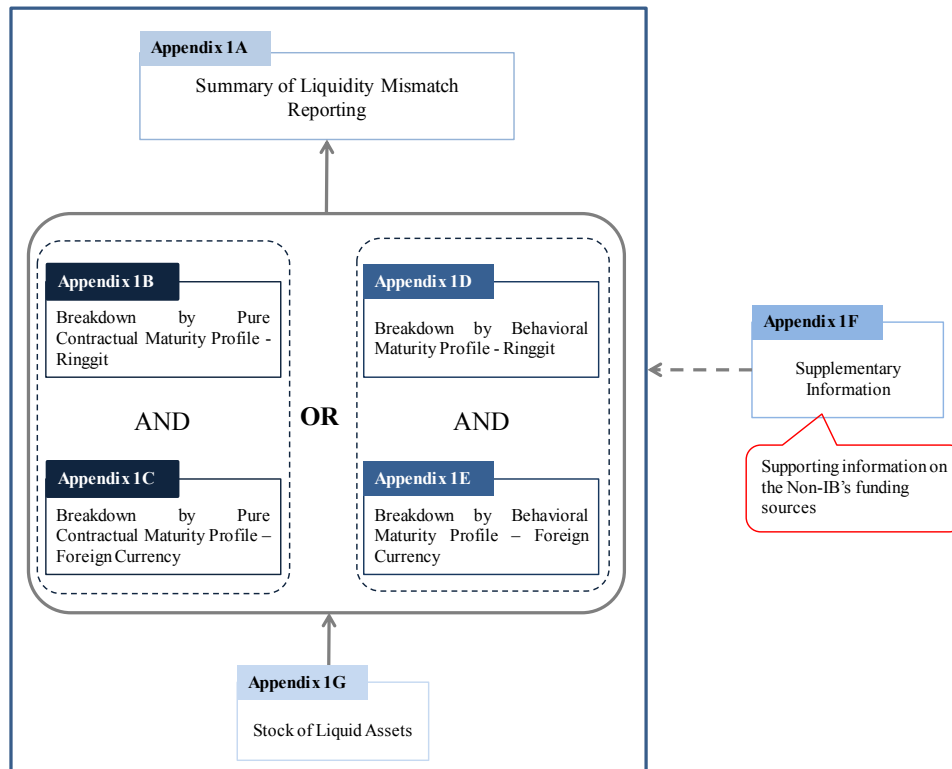
- (1) A Participating Organisation [which is not an Investment Bank](#) must at all times maintain a cumulative net liquid asset surplus at least at the minimum level(s) as prescribed by the Exchange ("Net Surplus Requirements").
- (2) In discharging the obligations under the said Rules, [such a](#) Participating Organisation must, amongst others, comply with the requirements set out below.
- (3) For the purpose of this directive, "liquid assets" has the same meaning assigned to that expression in Rule 13.06(a).

**1.1 Liquidity Reporting Requirements**

- (1) The Participating Organisation must submit the duly completed Liquidity Reporting Forms to the Exchange in the templates prescribed below. The templates and a user guide in completing the templates ("the User Guide") are set out in **Appendix 1** of this Directive.
- (2) The Liquidity Reporting Forms templates are as set out below:

Liquidity Reporting Forms	Details
Appendix 1A	Summary of Maturity Mismatch Reporting
Appendix 1B	Breakdown by Pure Contractual Maturity Profile – RM
Appendix 1C	Breakdown by Pure Contractual Maturity Profile – Foreign Currency
Appendix 1D	Breakdown by Behavioural Maturity Profile – RM
Appendix 1E	Breakdown by Behavioural Maturity Profile – Foreign Currency
Appendix 1F	Supplementary Information
Appendix 1G	Stock of Liquid Assets

- (3) The Liquidity Reporting Forms must be completed in the manner described in the User Guide. The map below provides the user with an overview of the relationships between the Liquidity Reporting Forms.



## 1.2 Approach to Completing the Liquidity Reporting Forms

- (1) The Participating Organisation must classify the components that make up their Liquid Capital according to the maturity buckets as stated in the table in paragraph 1.3(1). The Participating Organisation may begin by using Form Appendix 1G to report its proprietary positions and available credit line.
- (2) Following from the above, the Participating Organisation must choose, in accordance with established internal policies, one of the following approaches:
  - (a) Forms Appendix 1B and 1C for the breakdown of the maturity profiles based on a contractual basis; or
  - (b) Forms Appendix 1D and 1E for the breakdown of the maturity profiles based on a behavioral basis.
- (3) When choosing to complete either Forms Appendix 1B and 1C, or Forms Appendix 1D and 1E, the Participating Organisation is to be guided by the Guidelines on Managing Liquidity Risks for Participating Organisations.
- (4) For the initial stage, the Participating Organisation must rely on categorizing maturity profiles based on contractual basis. When the Participating Organisation becomes proficient in understanding the behaviour of the maturity profile of the assets and liabilities, it may embark on the more sophisticated and refined approach to categorization. The Exchange has not prescribed any specific approaches to be chosen by a Participating Organisation.
- (5) The Participating Organisation must complete Form Appendix 1F. The Participating Organisation must provide information that would enable the Exchange to assess the impact to the Participating

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Organisation's overall funding structure and liquidity risk in the scenario of a market disruption, including the following information:

- (a) Large customer cash funding;
  - (b) Interbank market (if any); and
  - (c) Offshore market (if any).
- (6) If a Participating Organisation does not have any relevant information, the Participating Organisation must submit the report as 'NIL'.
- (7) The Participating Organisation must submit the forms to the Exchange before the end of every Wednesday based on the previous business day's closing position or in any other reporting frequency as determined by the Exchange.
- (8) If the reporting day falls on a public holiday, the Participating Organisation must submit the said forms to the Exchange ~~before the end of the following~~ on the next business day. For example, if the submission day (Wednesday) falls on a public holiday, the Participating Organisation must submit the said forms to the Exchange ~~before the end of the following~~ on the next business day (Thursday).
- (9) If the day in which the reporting of the closing position is required, (for example, Tuesday) falls on a public holiday, the Participating Organisation must report based on the previous business day's (Monday) closing position.
- ~~(10) The Participating Organisation must ensure that the forms submitted to the Exchange are accurate and true. The Liquidity Reporting Forms must be submitted electronically using the prescribed templates and emailed to the Exchange at [psd@bursamalaysia.com](mailto:psd@bursamalaysia.com).~~
- ~~(11) The Head of Compliance and the Head of Operations of the Participating Organisation will be held responsible for the truthfulness and accuracy of all the information and records contained in the submissions to the Exchange.~~

### 1.3 Net Surplus Requirements Compliance

- (1) The table below stipulates the Net Surplus Requirements ("NSR") minimum levels that the Participating Organisation must comply with according to the maturity buckets:

BUCKET	MATURITY BUCKETS	NET SURPLUS REQUIREMENTS ("NSR") MINIMUM LEVELS
A	Up to three (3) market days	3%
B	Four (4) market days to seven (7) calendar days	5%
C	Eight (8) calendar days to 14 calendar days	7%
D	15 calendar days to 30 calendar days	9%

- (2) The NSR level for Bucket A has been prescribed at 3%. As the maturity progresses from Bucket A to D, the difference of NSR levels between buckets has been prescribed at +2% per bucket on cumulative basis. In this regard, the result for the cumulative NSR level for final Bucket D has been prescribed at 9% as stated in the table above.
- (3) The Exchange may adjust the NSR levels as it deems fit, according to prevailing market conditions.

- (4) The Participating Organisation must determine whether it is able to comply and maintain a minimum cumulative net liquid asset surplus according to the prescribed NSR levels. The cumulative net liquid asset surplus will be calculated automatically and will be reflected in Appendix 1A once the Participating Organisation has completed Appendix 1B (or 1D), Appendix 1C (or 1E) and Appendix 1G.
- (5) The Exchange requires the Participating Organisation’s compliance with the NSR based on the average cumulative net liquid asset surplus reported to the Exchange over a period of 1 month. In this regard, the Participating Organisation is considered to have complied with the NSR if on a daily basis the reported cumulative net liquid asset surplus does not fall more than 5% below the required NSR minimum level prescribed for each maturity bucket on any given day.

**1.4 Guidelines on managing liquidity risk**

- (1) The Exchange has set out 15 key principles that form the Exchange’s guidelines on managing liquidity risks (“the Guidelines”). POs must comply with the Guidelines, as set out in **Appendix 3** of this Directive.
- (2) *[Deleted]*

**1.5 Stress Testing and Scenario Analysis**

- (1) As required under paragraphs 1.2.4 and 2.4.1 of the Guidelines, a Participating Organisation must conduct regular stress testing and scenario analysis as a part of managing its liquidity. In conducting the stress testing, the Participating Organisation must, at the minimum, conduct the stress testing:
- (a) in accordance with the scenarios prescribed in subparagraph (2) below; and
- (b) on a quarterly basis (as at end March, June, September and December), using the NSR data as at the end of each quarter.
- (2) The scenarios for stress testing that the Participating Organisation must, at the minimum, carry out are as shown in Figure 1 below:

**Figure 1**

<u>Plausible Situations to Participants</u>	<u>Stress Testing Impact Factors</u>
<b><u>Scenario 1: Volatile Stock Markets / Illiquid Instruments</u></b>	
<p><u>i) Increase in contra loss / potential loss from liquidating non-margin clients’ outstanding positions;</u></p> <p><u>ii) Potential loss from liquidation of clients’ margin accounts / default in payment by clients; and</u></p>	<p><u>To incorporate:</u></p> <p><u>i) Increase in clients’ default by 10%; and</u></p> <p><u>ii) Decline in proprietary investments by 10%.</u></p>

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<u>Plausible Situations to Participants</u>	<u>Stress Testing Impact Factors</u>
<u>iii) Potential loss from liquidation of proprietary investments.</u>	
<b><u>Scenario 2: Local Financial Crisis / Money Market Crunch</u></b>	
<p><u>i) Increase in contra loss / potential loss from liquidating non-margin clients' outstanding positions;</u></p> <p><u>ii) Potential loss from liquidation of clients' margin accounts / default in payment by clients;</u></p> <p><u>iii) Potential loss from liquidation of proprietary investments;</u></p> <p><u>iv) A Participating Organisation's credit / banking facility be partly withdrawn or halted altogether; and</u></p> <p><u>v) Lack of adequate funding capacity / decrease in intra-group liquidity. (e.g., inability to drawdown on subordinated loan facility).</u></p>	<p>To incorporate:</p> <p><u>i) Increase in clients' default by 30%;</u></p> <p><u>ii) Decline in proprietary investments by 30%; and</u></p> <p><u>iii) Reduction of banking facilities by 30%.</u></p>
<b><u>Scenario 3: Global Financial Crisis</u></b>	
<p><u>i) Increase in contra loss / potential loss from liquidating non-margin clients' outstanding positions;</u></p> <p><u>ii) Potential loss from liquidation of clients' margin accounts / default in payment by clients;</u></p> <p><u>iii) Losses from liquidation of proprietary investments;</u></p> <p><u>iv) A Participating Organisation's credit / banking facility be partly withdrawn or halted altogether; and</u></p> <p><u>v) Lack of adequate funding capacity / decrease in intra-group liquidity (e.g., inability to drawdown on subordinated loan facility).</u></p>	<p>To incorporate:</p> <p><u>i) Increase in clients' default by 50%;</u></p> <p><u>ii) Decline in proprietary investments by 50%; and</u></p> <p><u>—Reduction of banking facilities by 50%.</u></p> <p><u>iii) _</u></p>

- (3) In addition to conducting the stress testing in accordance with subparagraph (1) above, the Participating Organisation is encouraged to conduct other stress testing beyond the scenarios prescribed above, and as often as may be necessary, in line with the magnitude and circumstances, as well as the significance of its business and the risks involved.

**Stress Test Reporting Requirements**

- (4) The results from the stress testing under the scenarios prescribed in subparagraph (2) above must not be less than the prescribed NSR minimum levels.
- (5) If the NSR levels for any of the 3 scenarios prescribed in subparagraph (2) above falls below the minimum levels that the Participating Organisation is required to comply with, the Participating Organisation must formulate appropriate action plans based on the following:

<b><u>Falling below the minimum NSR requirement</u></b>	<b><u>Action required</u></b>
<u>Scenario 1</u>	<u>Participants to formulate an immediate plan</u>
<u>Scenario 2</u>	<u>Participants to formulate a medium-term plan</u>
<u>Scenario 3</u>	<u>Participants to formulate a long - term plan.</u>

- (6) The Participating Organisation must submit a report on the stress testing to the Exchange:
- (a) in the templates prescribed in **Appendix 4** of this Directive, together with the action plan, if any; and
- (b) by the 20<sup>th</sup> calendar day of the following month, unless it is a public holiday, in which case the submission must be made on the next business day.
- (7) In addition, the Participating Organisation must report the results from the stress testing to its Risk Management Committee or Audit Committee.

**1.6 Verification and mode of submissions to the Exchange**

- (1) The Participating Organisation must ensure that the forms and report submitted to the Exchange under paragraphs 1.1 and 1.5 above are accurate and true. The forms and report must be submitted by way of electronic transmission as notified by the Exchange.
- (2) The Head of Compliance and the Head of Operations of the Participating Organisation will be held responsible for the truthfulness and accuracy of all the information and records contained in the submissions to the Exchange.

[End of Directive]

# **APPENDIX 1**

## **User Guide and Reporting Forms**

**Appendix 2**

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## Appendix 3

### GUIDELINES ON MANAGING LIQUIDITY RISKS

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## 1.0 Introduction ~~to Guidelines on Managing Liquidity Risks (“the Guidelines”)~~ and Summary

### 1.1 Introduction

An important step in managing liquidity risk effectively is to be able to identify manners in which a firm’s activities and external influences can affect its liquidity risk profile. It is also essential to establish a common definition of “liquidity” and “liquidity risk.”

Liquidity is the ability of an institution to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity risk is inherent in the financial intermediation process that transforms short-term liabilities into long-term assets. Liquidity risk appears in two forms, namely:

- I. Funding liquidity risk - the risk in which an institution will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either its daily operations or the financial condition; and
- II. Market liquidity risk - the risk that an institution cannot easily offset or eliminate a position without significantly affecting the market price due to inadequate market depth or market disruption.

As the interaction between funding and market liquidity is more critical during stressed market conditions as they are intertwined, Non-IBs should manage both funding and market liquidity in a holistic way, through established and well-thought liquidity risk measurements that prompt Non-IBs of any impending liquidity crunch.

### 1.2 Summary of Key Principles

There are 15 key principles contained in the Guidelines, which will serve as guidance to Non-IBs. Those key principles were developed based on Bursa’s regulatory principles which are aimed at achieving their regulatory goals and ensuring a consistent and cohesive approach to their actions and decisions. The relevant Bursa’s regulatory principles are:

- Value-based approach
- Risk-based approach
- Outcome focused; and
- Transparency.

In implementing sound liquidity risk management practices, all Non-IBs should adopt the key principles which are grouped into seven (7) categories as below:

- Strategy and Policy
- Organisation and Structure
- Risk Tolerance, Ratios and Limits
- Stress Testing and Scenario Analysis
- Measurement
- Monitoring and Reporting
- Contingency Planning

#### 1.2.1 Strategy and Policy

**Principle 1** - Non-IBs shall develop strategies, policies and practices to manage liquidity risk in accordance with the risk tolerance and maintain sufficient liquidity. <sup>1</sup>

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<sup>1</sup> Sufficient Liquidity means "adequate to meet current and planned business requirements (including known contingencies) while complying with Bursa's requirements".

**Principle 2** - Non-IBs shall establish and document liquidity risk management strategies and ensure that it is consistent with their funding strategy.

**Principle 3** - Non-IBs shall establish and document funding strategy that contains the overall goals and objectives for short and long term funding.

#### 1.2.2 Organisation and Structure

**Principle 4** - Non-IBs shall establish an appropriate organisational and management structure for liquidity risk. Both Non-IBs' Board of Directors ("Board") and Senior Management shall be responsible to ensure a robust and coherent oversight structure for liquidity risk management is established and communicated throughout the organisation.

**Principle 5** - Non-IBs' Board shall have the ultimate responsibility for the risks and exposures incurred and for establishing a level of tolerance for risk, including liquidity risk, though it may delegate that task to certain committees.

**Principle 6** - Non-IBs' Senior Management shall have primary responsibility to develop, establish and maintain policies and procedures that translate the goals, objectives and risk tolerances of Non-IBs into operating standards which are consistent with the liquidity risk strategy approved by the Board.

#### 1.2.3 Risk tolerance, ratios, and limits

**Principle 7** - Non-IBs shall clearly articulate liquidity risk tolerance that is suitable for the business strategy of the organisation and its role in the securities market.

**Principle 8** - Non-IBs shall establish liquidity ratios and set limits to control the nature and level of liquidity risk that the entity is capable to undertake.

#### 1.2.4 Stress Testing and Scenario Analysis

**Principle 9** - Non-IBs shall conduct regular stress testing and scenario analysis to test the liquidity risk that they may be exposed to and also to ensure that they have adequate liquidity to cope with stressed conditions. ~~Stress tests results shall then be timely reported to the Non-IBs' Board, Senior Management and relevant business line managers periodically.~~

#### 1.2.5 Measurement

**Principle 10** - Non-IBs shall establish processes for measuring liquidity risk to which they are exposed to using a robust and consistent methodology.

#### 1.2.6 Monitoring and Reporting

**Principle 11** - Non-IBs shall establish and maintain appropriate monitoring systems to examine and manage the amount of liquidity risk to which they are exposed to, based on established strategies, policies and procedures defined by the entity.

**Principle 12** - Non-IBs shall establish a proper management information system and reporting frequency in accordance with the business and the risks undertaken.

#### 1.2.7 Contingency Planning

**Principle 13** - Non-IBs shall have in place a contingency plan that will address the strategy for handling unexpected events that will severely impact the entity's liquidity, including specific procedures for raising cash in emergency situations. These "Funding Action Plans" or "Contingency Financing Plans" shall detail "key tasks" that need to be performed within certain timelines. The tasks may be dependent upon the severity of the crisis at hand as outlined in a variety of scenarios.

**Principle 14** - Non-IBs shall identify and quantify funding sources and rank them by preference in its contingency funding strategies.

**Principle 15** - Non-IBs' contingency plan shall contain the procedures which will enable the plan to be executed once a contingency arises.

## 2.0 Scope of the Guidelines

### 2.1 Strategy and Policy

#### 2.1.1 Principle 1 - Non-IBs shall develop strategies, policies and practices to manage liquidity risk in accordance with the risk tolerance and maintain sufficient liquidity.

The Board and Senior Management of the Non-IB are responsible for developing and implementing a liquidity risk management strategy in accordance with the Non-IB's risk tolerance. The strategy should include specific policies on liquidity management, for example:

- The composition of assets and liabilities;
- The diversity and stability of funding sources;
- The approach to manage liquidity in different currencies, across borders, and across business lines and legal entities;
- The approach to intraday liquidity management; and
- The assumptions on the liquidity and marketability of assets.

The strategy should take into account liquidity needs under normal conditions as well as under periods of liquidity stress, the nature of which may be institution-specific or market-wide or a combination of the two. The strategy may include various high-level quantitative and qualitative targets. The targets that may be considered are as follows:

- Guidelines or limits on the composition of assets and liabilities;
- The relative reliance on certain funding sources, both on an ongoing basis and under contingent liquidity scenarios; and
- The marketability of assets to be used as contingent sources of liquidity.

As appropriate to the nature, scale and complexity of the Non-IB's activities, the strategy shall also:

- Set the objectives for the management of both short-term and long-term funding risk;
- Set the objectives for the management of contingent liquidity risk;
- Define the basis for managing liquidity (e.g. whether the liquidity is being managed on regional or central basis);
- Set the identification of appropriate or inappropriate risk management tools;
- Set the degree of concentrations that could potentially affecting liquidity risk, that are acceptable to the firm; and
- Define ways of managing its aggregate foreign currency liquidity needs and its needs in each individual currency.

The Board should approve the strategy and critical policies and practices and review them at least annually. The Board shall ensure that Senior Management translates the strategy into clear guidance and operating standards (e.g. in the form of operational policies, controls or procedures).

The liquidity strategy, key policies for implementing the strategy, and the liquidity risk management structure shall be communicated throughout the organisation by Senior Management. All business units conducting activities that have an impact on liquidity shall be fully aware of the liquidity strategy and operate under the approved policies, procedures, limits and controls. The Non-IB's personnel responsible for liquidity risk management shall maintain close links with those monitoring market conditions, as well as with other personnel with access to critical information.

**2.1.2 Principle 2 - Non-IBs shall establish and document liquidity risk management strategies and ensure that it is consistent with the funding strategy.**

The liquidity risk management strategies shall cover the overall appetite for liquidity risk, such as tolerance that is within compliance parameter of capital adequacy frameworks for concentration and the use of approved funding instruments and markets.

The liquidity risk management strategies must complement Non-IBs' business strategies and goals and should be appropriate to the nature, scale and complexity of the institutions' activities. Other than the liquidity strategy, their liquidity risk management policy statement should include the following areas:

- Governance and organisational structure for liquidity risk;
- Risk tolerance and limits;
- Liquidity risk measurement methodology;
- Stress testing and scenario analysis;
- Reporting and monitoring policies; and
- Liquidity risk contingency plan

Details on the above areas are given in the following subsections.

**2.1.3 Principle 3 - Non-IBs shall establish and document funding strategy that contains the overall goals and objectives for short and long term funding.**

The funding strategy shall describe how funding should be maintained under various financial conditions, covering the use of liability diversification and asset realisation. Taking into consideration correlations between sources of funds and market conditions, it should contain the strategy for maintaining funding under adverse conditions, which is where contingency planning comes in. The funding strategy shall appropriately consider different currencies, sources, geographies and inter-company funding that may exist in the Non-IBs' operation.

Non-IBs must demonstrate that these strategies and policies have been established and represented in the form of operational procedures which is ready to promptly mitigate the identified risks. Hence it is not sufficient to just establish a strategy; it also has to be fortified with according policies and guidelines as well as procedure manuals where applicable.

**2.2 Organisation and Structure**

**2.2.1 Principle 4 - Non-IBs shall establish an appropriate organisational and management structure for liquidity risk. Both Non-IBs' Board of Directors ("Board") and Senior Management shall be responsible to ensure a robust and coherent oversight structure for liquidity risk management is established and communicated throughout the organisation.**

The organisational and management structure shall at least cover the following areas:

- Have clear lines of authority and proper delegation of responsibilities;
- Have adequate resources skilled for liquidity risk decisions either via Finance unit of the Non-IBs, or some other suitable function depending on size and nature of the Non-IBs which other units could also be responsible;
- Should include function which responsible for the identification, measurement and monitoring of liquidity risk;

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- Support communication network between the Non-IB's personnel responsible for the identification, measurement and monitoring of liquidity risk;
- Prompt and flexible decision making and actions; and
- Clear segregation of functions in the management of liquidity risk.

**2.2.2 Principle 5 - Non-IBs' Board shall have the ultimate responsibility for the risks and exposures incurred and for establishing a level of tolerance for risk, including liquidity risk, though it may delegate that task to certain committees.**

The Board's role shall include approving Non-IB's liquidity risk strategy in line with the expressed risk tolerance. The Board should establish a structure for the management of liquidity risk including the allocation of appropriate senior managers who have both the authority and responsibility to undertake the firm's day-to-day liquidity management.

The Board shall be ultimately responsible for:

- Approving the liquidity risk strategy, liquidity risk policy (including procedures) and risk appetite concerning liquidity risk;
- Implementing an appropriate organisation and management structure for liquidity risk;
- Monitoring the liquidity risk profile on a regular basis and at an appropriate frequency;
- Ensuring that liquidity risks are identified, measured, monitored and controlled;
- Ensuring that responsibilities are clearly and comprehensively defined;
- Ensuring that liquidity risk is managed and controlled by Senior Management within the established risk management framework;
- Reviewing contingency plans; and
- Reviewing liquidity decisions.

**2.2.3 Principle 6 - Non-IBs' Senior Management shall have primary responsibility to develop, establish and maintain policies and procedures that translate the goals, objectives and risk tolerances of Non-IBs into operating standards which are consistent with the liquidity risk strategy approved by the Board.**

The Senior Management of Non-IBs shall develop, establish and maintain policies and procedures to manage the liquidity risk. Their responsibilities shall include:

- Adhering to the lines of authority and responsibility defined by the Board;
- Implementing and maintaining appropriate policies and procedures that translate the Board's approved objectives and risk tolerances into operating standards;
- Directing the identification, measurement and monitoring of liquidity risk through the implementation of management information and other systems;
- Ensuring effective internal controls over the liquidity risk management processes are implemented; in doing so, the managers should request regular standardised reports concerning liquidity risk and conduct regular reviews of the methods and processes used; and
- Providing guidance on managing and aligning the whole organisation to be risk aware and etc. (or risk management in general), as usually liquidity risk is an after-effect of other risk, i.e. market, credit or reputation risk.

## 2.3 Risk tolerance, ratios, and limits

### 2.3.1 Principle 7 - Non-IBs shall clearly articulate liquidity risk tolerance that is suitable for the business strategy of the organisation and its role in the securities market.

The liquidity risk tolerance shall be in line with its business objectives, strategic direction and overall risk appetite. In the earlier part of this document states the applicable definition of liquidity risk.

The Board is ultimately responsible for the risks and exposures incurred by a Non-IB and for establishing a level of tolerance for risk, including liquidity risk. The tolerance shall be appropriate with the Non-IB's financial condition and funding capacity which defines the level of liquidity risk that the Non-IB is willing to assume. The tolerance shall ensure that the firm manages its liquidity appropriately at all times according to the stress levels imposed by the conditions of the overall financial environment. At the same time, it is essential that the approved risk tolerance must continue to ensure that compliance to the minimum financial requirements remains uncompromised. This is in addition to complying with the current Capital Adequacy Framework prescribed under the Rules of Bursa Securities. A Non-IB, may for example, expresses its risk tolerance by quantifying its liquidity risk tolerance in terms of the level of unmitigated funding liquidity risk the Non-IB decides to take under normal and stressed business conditions. It is the Board's responsibility to approve the Non-IB's liquidity risk strategy in line with the firm's expressed risk tolerance.

### 2.3.2 Principle 8 - Non-IBs shall establish liquidity ratios and set limits to control the nature and level of liquidity risk that they are capable to undertake.

The minimum limits shall be prescribed, but Non-IBs may set higher standards based on their own business strategies and activities, past performance, level of earnings and capital available to absorb potential losses, as well as its tolerance for risk. It should match the nature, scale and complexity of the Non-IB itself. Suggested funding liquidity ratios and limits used by Non-IBs for liquidity risk management include<sup>2</sup>:

- Target liquidity ratio;
- Maturity mismatch limits for local and foreign currencies; and
- Concentration limits and diversification.

Limits will vary depending on the nature of Non-IBs operations and circumstances. Limits can also be tied to balance sheet ratios. For example:

- Maximum projected cash flow shortfall tolerated for specified time period (for example, one week ahead, one month ahead, one quarter ahead);
- Minimum ratio of liquid assets to total assets;
- Maximum overnight borrowings to total assets; and
- Maximum ratio of total wholesale borrowings to total assets.

Non-IBs shall also consider additional ratios or indicators to measure their ability to meet their liquidity needs, in particularly under stressful market conditions. These other indicators include amongst others, for example:

- A "barometer" that measures the number of days that the firm could survive with no new sources of funding;

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<sup>2</sup> Further clarifications in Appendix 1



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- The “liquidation potential,” measuring how a firm could meet its funding needs in the first 14 days of a stress scenario; and
- A “maximum cumulative outflow” (“MCO”) standard that establishes the amount of short term unsecured funds required to fund cash outflows in a stress event.

As for market liquidity, Non-IBs should determine the level of liquidity of the market, based on certain instruments held within their portfolio. Traditional measures of market liquidity or high quality liquid assets may include trade volume (or the number of trades), market turnover, bid-ask spreads and trading velocity. Additionally, liquidity is also highly dependable on various macroeconomic and market fundamentals namely, fiscal policy, market sentiment, investor’s confidence etc. would be key factors in determining liquidity conditions or liquidity cost which in term translates into ‘Force Sale’ discount factor.

The Non-IBs shall leverage on the Volume Weighted Average Price (“VWAP”) in measuring the liquidity of the securities as it measures the cost of executing a single trade of limited size as well as the price impact of a trade. Furthermore, this approach is simple to calculate with data that are widely available on a real-time basis.

**2.4 Stress Testing and Scenario Analysis**

**2.4.1 Principle 9 - Non-IBs shall conduct regular stress testing and scenario analysis to test the liquidity risk that they may be exposed to and also to ensure that they have adequate liquidity to cope with stressed conditions. ~~Stress tests results shall then be timely reported to the Non-IBs’ Board, Senior Management and relevant business line managers periodically.~~**

Non-IBs shall simulate distress market / financial conditions and introduce hypothetical scenarios to their positions when conducting stress testing and scenario analysis, i.e., by applying various “what-ifs” scenarios on their liquidity position, in order to consider the effects both on and off balance sheet and on both assets and liabilities.

**~~Scenario Analysis: Example of the Development of Hypothetical Scenarios~~**

~~The scenarios shown in Figure 1 below shall be used as a guideline when developing hypothetical scenarios during stress testing and the spill over impact of other risk areas.~~

Description	Impact	Magnitude of Shocks
<b><del>Scenario 1: Global Financial Crisis</del></b>		
<del>To simulate stress event where there is a local liquidity issue arising from regional / global shortage of credit, such as the 2008 / 09 global financial crisis, resulting in the increase in short term interest rates.</del>	<del>Risk areas: • Market risk, Liquidity risk.</del>	<del>• Based on the maturity buckets as stipulated in the Bursa’s Net Surplus Requirements (NSR), increase of liquidity outflow: — Plausible scenario, 10%; and</del>

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Description	Impact	Magnitude of Shocks
		<p style="text-align: center;"><del>— Worst case scenario, 30%</del></p> <p style="text-align: center;"><del>* Based on the scenario above, determine the potential shortfall required as per the compliance requirement.</del></p>
<b>Scenario 2: Illiquid Instruments</b>		
<del>To simulate stress event where there are non-tradable / illiquid instruments / securities.</del>	<p>Risk areas:</p> <p style="text-align: center;"><del>* Market risk, Liquidity risk.</del></p>	<del>* Additional cost of executing the illiquid instruments.</del>
<b>Scenario 3: Money Market Crunch</b>		
<del>To simulate stress event where there is a breakdown / crunch in the money market.</del>	<p>Risk areas:</p> <p style="text-align: center;"><del>* Market risk, Liquidity risk.</del></p>	<p style="text-align: center;"><del>* Imbalances between the maturity dates on assets and liabilities</del></p> <p style="text-align: center;"><del>* Lack of adequate funding liquidity.</del></p>

**Figure 1: Guidance to Hypothetical Scenarios**

Non-IBs should construct appropriate adverse scenarios and examine the results on the liquidity needs, varying degrees of stress based on among others firm-specific elements and market wide crisis. Historical market events may provide a basis for choosing appropriate scenarios but it is unlikely that such historical event will repeat ~~again itself~~. Hence, Non-IBs are encouraged to break away from historical trends, spreads and normal market conditions when deciding on the appropriate scenarios.

Non-IBs should also consider possible changes such as effect of market's perception of the firm on its access to the markets and also market turbulence which may trigger substantial increase in the drawdown of contingent commitments.

Non-IBs should perform the following, at the minimum, to ensure that stress testing technique applied is reflective of its risk appetite and possible risk exposures:

- Verify all relevant assumptions and model parameters periodically taking into considerations their experience in any crisis;
- Review and modify existing stress scenarios and parameters periodically, if necessary reflecting the current market conditions or new experiences; and
- Review entire business profile periodically to assess the need of additional stress scenarios.

Non-IBs should be guided by a clear set of internal principles in determining whether remedial actions should be taken in response to stress-testing results. The level of authority for determining remedial actions to be taken should also

be clearly designated. Remedial actions recommended should be properly documented and implemented.

## 2.5 Measurement

### 2.5.1 Principle 10 - Non-IBs shall establish processes for measuring liquidity risk to which they are exposed to using a robust and consistent methodology.

In terms of funding liquidity, Non-IBs shall have in place a methodology for the comparison of cash inflows and outflows over future timeframes to calculate the cumulative net excess or deficit of funds at selected maturity dates (referred to as a maturity ladder or cash flow gap analysis). This should:

- Robustly measure the extent of liquidity risk;
- Be forward looking;
- Be responsive to the dynamic nature of the institution's liquidity profile, economic and market conditions;
- Appropriate level of sophistication for the nature, size and complexity according to the Non-IB's activities;
- Be able to accommodate stress and scenario analysis; and
- Be applied consistently and based on accurate data.

The maturity time bands prescribed should be reflective of the short-term nature of the equity business, where the maturity time bucket is categorised as stipulated by Bursa's NSR.

The bucketing days are made up of market / trading days and calendar days.

The basis for determining the appropriate time bands for both assets and liabilities is to reference it against the contractual cash and security flows of their residual contractual maturity or when the cash flow materialises. However, adjustments are permitted for those assets and liabilities that have distinct characteristics such as roll-in and roll-out, embedded options etc. in the contracts in order to indicate those said contracts as 'behavioural maturity' instead of contractual maturity. Non-IBs shall then adjust the cash flows on a behavioural basis, as the contractual maturities pertaining to some assets and liabilities do not bear close relation to their actual behavioural characteristics.

The assumptions to design the behavioural maturity profile should be reflective of the equity business and demonstrate consistency and reasonableness for each scenario / portfolio. The assumptions selected should be verified and supported by sufficient evidence, experience and performance rather than arbitrarily selected. As such, it is encouraged that the Non-IBs utilise at least one (1) year historical observation period to be used as the basis of the assumptions.

Non-IBs liquidity measurement methods shall consider:

- Assessing Cash Inflows against Cash Outflows;
- Determining the Liquid Value of its assets (securities or other current assets which have a ready market, or which are capable of realisation within one (1) week in relation to the Non-IBs' portfolio);
- Measuring and forecasting cash flows for:
  - Assets;
  - Liabilities;
  - Off-balance sheet commitments; and
  - Derivatives; and

In terms of market liquidity, among the factors considered to measure<sup>3</sup> liquidity include:

- Bid / ask spread;
- Quote size;
- Volume of trade in an instrument / number of trades in that instrument;
- Days of no price quotation, particularly bid price; and
- Days of no transaction.

## 2.6 Monitoring and Reporting

### 2.6.1 Principle 11 - Non-IBs shall establish and maintain appropriate monitoring systems to examine and manage the amount of liquidity risk to which they are exposed to, based on established strategies, policies and procedures defined by the entity.

Non-IBs shall have a framework of policies containing specific and detailed guidelines for day-to-day monitoring of their liquidity risk, with proper communication processes in place throughout the organisation.

Non-IBs shall use appropriate reporting measures that would include documentations, approvals, internal transfer pricing and compliance. Non-IBs should document the assumptions following the maturity buckets in measuring liquidity risk and the plan in place to mitigate any identified gaps (if any) in the internally generated behavioural maturity mismatches in the relevant policy such as liquidity management policy. This is to ensure its relevancy and applicability to the Non-IBs and their business activities. All of these should be approved by Senior Management and should be reviewed regularly.

Consistent with Rule 510.3 of the Rules of Bursa Securities, Non-IBs' internal audit should present any audit findings in this regards to the Board, including any course action and/or with any corrective measures taken in order to address any non-compliance or irregularities stated in the audit report. The Board shall be responsible for the submission of all documents referred to in Rule 510.3(2).

### 2.6.2 Principle 12 - Non-IBs shall establish a proper management information system and reporting frequency in accordance with the business and the risks undertaken.

Non-IBs shall have reporting lines and responsibilities that are clearly established and followed. Weekly reports are provided to key personnel and monthly reports are provided to the Board. Non-IBs should assign relevant personnel to hold the responsibility of compiling the relevant reports.

Non-IBs shall have a comprehensive review process including daily monitoring of funding capacity and capacity utilisation, weekly reports of the firm's balance sheet usage, and a formal quarterly review of the system conducted by an appropriate committee.

Non-IBs shall monitor their liquidity positions daily, using for example, ledger balances (supplemented with spread sheet analysis), loans and placement systems, trading systems, Cash Capital models, daily liquidity positions, and reconciliation of data and aggregate balances to the firm's financial accounting and / or regulatory reports. These are done while taking into account of the ratios being set as mentioned in the strategy section earlier.

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<sup>3</sup> More explanation in Appendix 1

## 2.7 Contingency Planning

**2.7.1 Principle 13 - Non-IBs shall have in place a contingency plan that will address the strategy for handling unexpected events that will severely impact the entity's liquidity, including specific procedures for raising cash in emergency situations. These "Funding Action Plans" or "Contingency Financing Plans" shall detail "key tasks" that need to be performed within certain timelines. The tasks may be dependent upon the severity of the crisis at hand as outlined in a variety of scenarios.**

The plans should generally focus on conserving or creating liquidity, by specifying the order in which liquidity reserves are to be accessed and any limitation or modification of trading activity. Key components of these plans include:

- Estimating the funding requirements or potential fund erosion for material legal entities;
- Determining the pledge value of firm collaterals; and
- Preparing cash projections for the company's funding chain.

Non-IBs should also include estimates of additional needs for liquidity in a crisis, such as limited repurchase of long-term debt to demonstrate that the Non-IB has sufficient liquidity sources.

The contingency plan should be documented, approved and reviewed regularly. Considerations in formulating the contingency plan include:

- Early warning indicators;
- Contingency scenarios;
- Triggers;
- Contingency funding strategies; and
- Contingency procedures.

Examples of key considerations to be used as a guideline when formulating contingency plans or identifying opportunities are:

- Revisit business strategy;
- Allocate and plan capital and liquid assets, including re-allocation and sourcing of alternative funding;
- Review of trading limits or introduction of new limits (i.e. stop-loss limits, sensitivity limits);
- Conduct supplementary stress testing;
- Closely monitor exposures in negative outlook / vulnerable risk areas;
- Source additional liquid assets to cope with potential negative impact arising from stressed conditions; and
- Conduct portfolio re-balancing to avoid concentration and diversifying exposures, while also looking identifying opportunities.

### ***Internal indicators and market indicators as warning signs***

Internal indicators are Non-IB specific, such as its assets, funding costs, concentration, and cash flows. Non-IBs should identify internal indicators that can be used to warn of a potential liquidity crisis which may be driven by internal actions. Market indicators refer to warning signals picked out from the Non-IBs interaction with the market such as the clients, credit providers or counterparties.

In either case, whether through its internal indicators or market indicators, Non-IBs should establish a system for identifying and tracking such indicators to spot potential problems even at an early stage.

***Observable and measurable characteristics trigger***

The contingency plan should define the circumstances and specific triggers will lead the institution to put any part of its contingency plan into action. Breaches of limits for the cumulative cash flow gaps are an example of a possible trigger.

**2.7.2 Principle 14 - A Non-IB shall identify and quantify funding sources and rank them by preference in its contingency funding strategies**

The contingency plan should consider funding strategies and action plans relating to the Non-IB's assets as well as liabilities.

Non-IB's shall consider the following:

- In times of liquidity crisis, even committed lines of credit may not be honoured;
- Although "excess" capital may be available to the Non-IB, the amount of the cushion may diminish substantially in a time of crisis, as the firm may have higher liquidity needs and little ability to secure new funds;
- "Downsizing the balance sheet" through the selling of assets to raise money could accelerate a Non-IB's financial deterioration by forcing sales in a weak market, thus substantially reducing proceeds; and
- The potential impacts of the scenarios arising from the institution's secondary market credit activities such as providing underwriting facilities for the issuance of bonds.

The established contingency plans should be reviewed periodically, at least yearly, in light of market events and their impact on the firm's liquidity.

**2.7.3 Principle 15 – A Non-IB's contingency plan shall contain the procedures which will enable the plan to be executed once a contingency arises.**

The corrective action plans shall include the following:

- Allocation of responsibilities during a funding crisis – reporting paths and responsibilities not only by function but also for each of Non-IBs' personnel needs to be defined;
- Procedures for internal reporting and communication to enable timely decision making and monitoring;
- Timeframes within which each action should be taken;
- Procedures for communication with external stakeholders such as customers, analysts, shareholders and regulators;
- Dealing with the press and the wider public – public disclosure is a crucial part of liquidity management, as market perceptions need to be managed especially during crisis situations; and
- Before implementing any of the contingency funding procedures, the Non-IB should assess the likely impact of particular courses of action on the market's perception of the Non-IB.

Once established, the contingency plan should also be subjected to regular review and revision to ensure it remains robust over time and continues to reflect the Non-IB's changing operating circumstances.

## APPENDIX A

### Further Clarification on Funding Liquidity Ratios, Limits, and Measurements.

**Target liquidity ratio** – Based on various liquidity ratios that have been established as a liquidity monitoring tool, Non-IBs should set a target for these ratios. The actual position of liquidity ratios should be compared with the targets and any breaches and follow-up action taken by management to restore the ratios should be properly documented.

**Maturity mismatch limits** – Will control the size of the cumulative net mismatch position (i.e. cumulative cash outflows exceeding cumulative cash inflows), and are usually set for short term time bands up to one month, i.e. next day, 7 days and 1 month.

**Concentration limits and diversification** – Diversification is a tool to spread risk such that the impact of the materialisation of the risk factor in one area is contained within reasonable limits or the damage in one area is offset by a positive effect in another area. Similarly, concentration in one area would normally be subjected to limits and controls to ensure the materialisation of the risk are contained. Among the diversification that can undertaken by Non-IBs include:

- Creditor diversification - such as limiting the amount or percentage of holding of commercial paper by one investor / issuer.
- Spreading debt maturities.
- Diversify debt instruments – secured and unsecured.
- Diversify markets or country of issuance.

**Bid / ask spread** – The difference between the bid price and the asking price of the instrument. The measurement can be based on the width of the bid / ask spread, which will indicate the likelihood of a successful transaction in the market. In addition, if this factor is monitored together with the Days of no transaction, it will provide a better definitive of the illiquidity status of the instrument.

**Quote size** – In the eyes of the public, quote size of the best bid and ask prices are visible, leaving the rest of the order book invisible to market participants. However, Bursa should be able to observe the quote size, not only at the best bid and ask prices. The quantity that can be traded at the bid and ask prices helps account for the depth of the market and complements the bid / ask spread as a measure of market liquidity

**Volume of trade in an instrument / number of trades in an instrument** – These two factors may seem similar but further analysis would demonstrate that one factor highlights a better liquidity position as compared to the other. Number of trades in an instrument demonstrates better liquidity as there is more demand in comparison to a single large transaction performed on an instrument.

**Days of no price quotation** – Measures the number of days in which a certain instrument has no demand or supply, but for the purpose of measuring illiquidity, the focus would be on bid price as it constitutes the demand for the instrument.

[End of Appendix A]

**APPENDIX 4 – LRM – STRESS TEST**

**Annexure A (Appendix 1A of LRM Template Liquidity Reporting Forms)**

Name of Institution :	XXX Securities Sdn Bhd
Reporting Date :	30-Jan-18

Maturity Time Buckets	Standard	10%	30%	50%	Standard	10%	30%	50%	Standard	10%	30%	50%	Standard	10%	30%	50%
	up to 3 days				4 days to 7 days				8 days to 14 days				15 days to 1 month			
<b>Core Activities</b>																
Total Inflow (Assets) A 1.4 Appendix 1B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Inflow (Assets) A 1.4 Appendix 1C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>ADD</b>																
<b>Treasury &amp; Capital Market Activities</b>																
Total Inflow (Assets) A 2.6 Appendix 1B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Inflow (Assets) A 2.6 Appendix 1C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>EQUALS</b>																
Total Inflow (Assets) Under Normal Circumstances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Core Activities</b>																
Total Outflow (Liabilities) A 1.12 Appendix	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Outflow (Liabilities) A 1.12 Appendix	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>ADD</b>																
<b>Treasury &amp; Capital Market Activities</b>																
Total Outflow (Liabilities) A 2.14 Appendix	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Outflow (Liabilities) A 2.14 Appendix	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>EQUALS</b>																
Total Outflow (Liabilities) Under Normal Circumstances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Convert to Cumulative Profile</b>																
Available Cumulative to Accommodate Liquidity Shocks (Inflow-Assets)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Available Cumulative to Accommodate Liquidity Shocks (Outflow - Liabilities)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Note 1</b>																
Computed NSR	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>Note 2</b>																
<b>Note 3</b>																
<b>Note 4</b>																



**Annexure B (Appendix 1B of LRM Template Liquidity Reporting Forms – Core Activities)**

Ref:	I. Core Activities	up to 3 days	10%	30%	50%	4 days to 7 days	10%	30%	50%	8 days to 14 days	10%	30%	50%	15 days to 1 month	10%	30%	50%	Total	
<b>INFLOWS (Assets)</b>																			
A.1.1	Amount Due From: Margin Clients	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A.1.2	Non Margin Clients	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																			
A.1.3	Cash and Deposits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	0.00
A.1.4	<b>Total Inflows (Assets) Core Activities</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>OUTFLOWS (Liabilities)</b>																			
<b><u>On-Balance Sheet</u></b>																			
A.1.5	Amount Due To: Margin Clients	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A.1.6	Non Margin Clients	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A.1.7	Other Creditors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A.1.8	Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A.1.9	Client Trusts and Refund Money	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
<b><u>Miscellaneous</u></b>																			
A.1.10	Short-Term Loans Liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
<b><u>Off-Balance Sheet</u></b>																			
<b><u>Credit and other commitments-with uncertain cash flows</u></b>																			
A.1.11	Contingent Liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A.1.12	<b>Total Outflows (Liabilities) Core Activities</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
A.1.13	<b>Net Maturity Mismatch</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Annexure B (Appendix 1B of LRM Template Liquidity Reporting Forms – Treasury & Capital Market Activities)**

Ref:	IL Treasury & Capital Market Activities	up to 3 days	10%	30%	50%	4 days to 7 days	10%	30%	50%	8 days to 14 days	10%	30%	50%	15 days to 1 month	10%	30%	50%	Total	
	<b>INFLOWS (Assets)</b>																		
	<u>On Balance Sheet</u>																		
A2.1	Repo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.2	Stock of Liquefiable Assets (D1.Total) Appendix IG	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00
	<u>Off-Balance Sheet</u>																		
	<u>Derivatives (Long RM Positions) - with certain cash flows</u>																		
A2.3	Foreign exchange contracts receivable (spot/forward/swap)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.4	Equity-linked derivative contracts receivable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
	<u>Derivatives (Long RM Positions) - with uncertain cash flows</u>																		
A2.5	Derivatives (Delta Equivalent) : Written (Sold) Receivable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.6	<b>Total Inflow (Assets) Treasury &amp; Capital Markets Activities</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>OUTFLOWS (Liabilities)</b>																		
	<u>On Balance Sheet</u>																		
A2.7	Interbank Repos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.8	Non-interbank Repos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.9	NIDs issued	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.10	Banker Acceptance Payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
	<u>Off-Balance Sheet</u>																		
	<u>Derivatives (Short RM Positions) with certain cash flows</u>																		
A2.11	Foreign exchange contracts payable (spot/forward/swap)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.12	Equity-linked derivative contracts payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
	<u>Derivatives (Short RM Positions) with uncertain cash flows</u>																		
A2.13	Derivatives (Delta Equivalent) : Purchase (Bought) Payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.14	Total Outflow (Liabilities) Treasury & Capital Markets Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
A2.15	<b>Net Maturity Mismatch</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Net Total Maturity Mismatch (A1.13 + A2.15)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Amendments to Directives  
In relation to requirements on Stress Testing for Liquidity Risk Management

**Annexure C (Appendix 1G of LRM Liquidity Reporting Forms - Stock of Liquid Assets)**

Liquid Securities	Market value of securities reported in books (excl. securities repoed out) (RM m)	Market value of securities received under reverse repo (excl. securities re-repoed out) (RM m)	"Forced Sale" Discount to be Applied Based on Yield Slippage (%)	Total Value of Securities After Discount (RM m) (1+2) - 3 = 4	MATURITY BUCKETS				
					up to 3 days	4 days to 7 days	8 days to 14 days	15 days to 1 month	
<b>Class 1 - Liquid assets</b>									
A1	FTSE Bursa Malaysia KLCI		3.60%	0.00					
A2	FTSE Bursa Main Market (Non KLCI)	0	5.20%	0.00		0			
A3	FTSE Bursa Malaysia ACE Index		7.30%	0.00					
A4	RM Marketeable securities/papers issued by Federal Government or BNM (including papers issued by Khazanah Malaysia)		2.00%	0.00					
A5	Danaharta bonds		3.00%	0.00					
A6	Danamodal bonds		3.00%	0.00					
A7	Cagamas bonds & notes (both conventional and Islamic issued before 4 September 2004)		4.00%	0.00					
A8	RM-denominated bonds issued by Multilateral Development Banks or Multilateral Financial Institutions		6.00%	0.00					
A9	ABF Malaysia Bond Index Fund		3.00%	0.00					
Subtotal Class 1 liquid assets				0.00					
<b>Class 2 - liquid assets &amp; available credit lines</b>									
B6	RM Marketable Securities - Unit Trusts issued by Malaysian Financial Institutions		10.00%	0.00					
B7	RM Marketable Securities - Others / Over-the-Counter (OTC)		15.00%	0.00	0				
B8	Undrawn portion of formally available committed credit lines (please provide detailed breakdown in C1 below)	0.00	0.00%	0.00	0				
Subtotal Class 2 liquid assets (restricted to 50% of Class 1 liquid assets) & available credit lines				0.00					
B9	<b>Total</b>			0.00	0.00				
<b>D1. Total</b>					0.00	0.00	0.00	0.00	0.00

**Annexure C (Appendix 1G of LRM Liquidity Reporting Forms)**

C1	<b>Formally Available Committed Credit Lines</b> <u>Name of Providers</u>	<u>Approved Bank Facility</u> (RM' Million)	<u>Undrawn Portion</u> (RM' Million)	<u>Drawn Portion (RM M)</u>
	BANK A	0	0	
	BANK B	0	0	-
	BANK C	0	0	
	XXX			
	XXX			
	XXX			
	Subtotal	-	-	-
D1	<b>Informal Available Credit Lines (Note 3)</b> <u>Name of Providers</u>			
	XXX			
	XXX			
	XXX			
	XXX			
	XXX			
	Subtotal	-	-	-
	<b>Total</b>	-	-	-