

Annexure 4

BURSA MALAYSIA BONDS SDN BHD

PRINCIPLES FOR FINANCIAL MARKET INFRASTRUCTURES DISCLOSURE FRAMEWORK

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Responding Institution:

Bursa Malaysia Bonds Sdn Bhd

Jurisdiction(s) in which the FMI operates:

Malaysia

Authority regulating, supervising, or overseeing the FMI:

Securities Commission Malaysia

The date of this disclosure is 30 June 2022

This disclosure can also be found at:

https://www.bursamalaysia.com/trade/risk_and_compliance/pfmi_disclosure

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Abbreviations:

AC Audit Committee
APC Appeals Committee
BCP Business Continuity Plan

BCM Business Continuity Management

BIDS Bond Information and Dissemination System

BM Bonds Bursa Malaysia Bonds Sdn Bhd

BNM Bank Negara Malaysia (the central bank of Malaysia)

Board Bursa Malaysia Board of Directors

Bursa Malaysia Berhad (the exchange holding company)

CEO Chief Executive Officer

CMSA Capital Market and Services Act 2007

Constitution Constitution of the Company

CPSS-IOSCO Committee on Payment and Settlement Systems and the Technical Committee of

the IOSCO

CPU Central Processing Unit
DR Disaster Recovery
ED Executive Director

EHC Exchange Holding Company

EOD End of day

EPM Executing Participating Members
ERM Enterprise Risk Management

ERMF Enterprise Risk Management and Framework

ERMPG Enterprise Risk Management Process & Guidelines

ETP Electronic Trading Platform

FAST Fully Automated System for Issuance and Tendering

FMI Financial Market Infrastructure
GPM General Participating Members

Group Bursa Malaysia and its subsidiaries and/or associated companies

GT Group Technology

INED Independent Non-Executive Director

ISO International Organization for Standardization

IT Information & Technology
ITIL IT Infrastructure Library
KPI Key Performance Indicator

LC Listing Committee

Management Management team of Bursa Malaysia
MGS Malaysian Government Securities
MMLR Main Market Listing Requirements

MOF Ministry of Finance

MPC Market Participants Committee

MYR Malaysian Ringgit

NRC Nomination and Remuneration Committee

OTC Over-the-counter

PFMI CPSS-IOSCO Principle for Financial Markets Infrastructures

PID Public Interest Director
PLC Public Listed Company

RACC Regulatory and Conflict Committee

RENTAS Real-time Electronic Transfer of Funds and Securities System

RMC Risk Management Committee

RMPF Risk Management Principles & Framework RMPG Risk Management Process & Guidelines

RTO Recovery Time Objective

SC Securities Commission Malaysia

SDC Sustainability & Development Committee
TCC Technology & Cybersecurity Committee

TPM Trading Participating Members

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I. Executive Summary

BM Bonds is a wholly-owned subsidiary of Bursa Malaysia and is registered with the SC under section 34 of the CMSA as a recognised market operator (previously known as a registered electronic facility) on 15 September 2015.

BM Bonds was incorporated in Malaysia on 11 October 1994 to provide the facility for the reporting of OTC trades in Malaysia, pursuant to Malaysian laws. The participants who report OTC trades to BM Bonds are locally incorporated and are subject to Malaysian laws.

This document aims to provide an overview of the relevant disclosure and explain how BM Bonds operates, is aligned with and observes the following:-

- 1. PFMI developed by the CPMI-IOSCO; and
- 2. SC's Guidelines on Financial Market Infrastructures.

II. Summary of Major Changes Since the Last Update of the Disclosure

This document is an update to the version dated June 2021, published as recommended under the PFMI to continuously assist the market in understanding BM Bonds' profile as well as risk management practices, among others. There were no major changes to BM Bonds' organisation, services, design, rules, markets served and regulatory environment since the last disclosure.

III. BM Bonds Background Information

General Description of the FMI and the Market it Serves

BM Bonds is registered with the SC to provide, through an ETP, a facility for the secondary market trading of debt securities. The ETP operates side by side with the OTC market. In addition to its facility for trading, BM Bonds is also registered to provide, through the ETP, a facility for the reporting of the OTC trades. BM Bonds took over the functions of the BIDS established and operated by BNM. In taking over the operations of BIDS, BM Bonds is deemed to be operating a facility where the Financial Services Act 2013 and BNM guidelines would apply.

BM Bonds is also deemed a trade repository and financial market infrastructure under the SC's Guidelines on Financial Market Infrastructures, by virtue of its OTC trade reporting facility.

Please refer to the daily market statistic for the basic data and performance statistic on BM Bonds at http://www.bursamalaysia.com/market/securities/bonds/market-statistics/

General Organisation of the FMI

As a wholly-owned subsidiary of Bursa Malaysia, BM Bonds adopts the Governance Model of Bursa Malaysia and the Group's Corporate Authority Manual. BM Bonds has a nominal Board where its Board size has been reduced to the minimum size of 2 Directors comprising members of the management, since all major decisions are to be made at the holding company level. Information regarding the governance, ownership and board and management structure of Bursa Malaysia, including that of BM Bonds is publicly available at the website of Bursa Malaysia: www.bursamalaysia.com.

The Governance Model sets out the clear and direct lines of responsibility and accountability of the Board of Bursa Malaysia, Bursa Malaysia CEO and Board Governance Committees for the Group (i.e. AC, RMC and NRC); the Board Regulatory Committees for the Group (i.e. RACC, LC, MPC and APC); and the Board Development Committees for the Group (i.e. SDC and TCC). The terms of reference of the Board committees are available at Bursa Malaysia website at https://www.bursamalaysia.com/sites/5d809dcf39fba22790cad230/assets/61fc83d95b711a6d70c482 e1/GMD-Bursa Malaysia Berhad-1 January 2022.pdf.

Legal and Regulatory Framework

The legal basis for BM Bonds' activities is derived from the CMSA, the SC's Guidelines on Financial Market Infrastructures, the SC's Guidelines on Recognised Markets, the Rules of BM Bonds and the contractual agreement between BM Bonds and its participants.

The Rules of BM Bonds set forth sufficient information on the requirements and qualification criteria for its participants and the provisions governing the reporting of OTC transactions.

The participants of BM Bonds are subject to the rules and directives issued by BM Bonds by virtue of them having signed a Letter of Undertaking on Compliance with BM Bonds.

The Rules of BM Bonds are publicly available at the Bursa Malaysia website: www.bursamalaysia.com. To promote greater inclusivity and accessibility among market participants and investors, the Rules of BM Bonds were made available in Bahasa Malaysia on the Bursa Malaysia website from 30 November 2021.

System Design and Operations

The ETP for bond market was successfully launched on 10 March 2008. The ETP is the centralised price and bond information repository and dissemination for the primary and secondary bond market.

This platform was implemented to boost transparency and liquidity as well as to increase efficiency in bond trading, in line with recommendations made in the SC's Capital Market Masterplan, Recommendation 44 and Financial Market Masterplan. Additionally, the ETP also facilitates effective market control system for surveillance by BM Bonds as well as the regulators to monitor bond trading activities.

The ETP offers trade reporting function for OTC trades, order matching, trade negotiation, advertisement, announcement and market surveillance functionalities. The ETP also provides members with the viewing facility on market information. Details of these functionalities are as follows:

- Trade Reporting a module for ETP members to report OTC trades on ETP;
- Order Matching an automated trading module for ETP members to place order on the ETP for matching the orders according to trading algorithms;
- Trade Negotiation a module for ETP members to place orders with a selected counterparty and the counterparty has the right to accept or reject the offer;
- Advertisement a module for ETP members to post an indicative bid or ask quotes which can be withdrawn or modified;
- Announcement a module where ETP members may post announcement relating to the bond market; and
- Market Information a module where ETP members may view primary market information, turnover, highest and lowest price for stock and volume traded.

The two (2) features on Order Matching and Trade Negotiation are not used currently.

The ETP system depends on the FAST for primary stock information for instruments available for trading on ETP. FAST is operated by BNM. The ETP system also has interfaces with other systems operated by BNM, information vendors (e.g. Reuters, Bloomberg and Bond Pricing Agency (BondWeb)).

There are three (3) categories of participantship available on the ETP:

- TPM;
- EPM; and
- GPM.

The TPM are mainly commercial banks, investment banks, Islamic banks and BNM. The EPM are money brokers and the GPM include the regulators and bond pricing agency.

IV. Disclosure of 24 Principles for BM Bonds

Principle-by-principle summary narrative disclosure

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Summary narrative

BM Bonds is a recognised market operator under Section 34 of the CMSA and is subject to the SC's Guidelines on Financial Market Infrastructures.

The legal basis for BM Bonds' activities is derived from the CMSA, the SC's Guidelines on Financial Market Infrastructures, the SC's Guidelines on Recognised Markets, the Rules of BM Bonds and the contractual agreement between BM Bonds and its participants.

BM Bonds is incorporated in Malaysia and provides the facility for the reporting of OTC trades in Malaysia, pursuant to Malaysian laws. The participants who report OTC trades to BM Bonds are locally incorporated and are subject to Malaysian laws.

The Rules of BM Bonds sets out sufficient information on the requirements and qualification criteria for its participants and the provisions governing the reporting of OTC transactions, including reporting pursuant to non-routine events.

The participants of BM Bonds are subject to the rules and directives issued by BM Bonds by virtue of them having signed a letter of undertaking on compliance with BM Bonds.

The Rules of BM Bonds are clear and formulated based on a multi-tiered internal process and procedures which include internal consultation with relevant internal stakeholders and review of the proposed rule amendments by qualified staff and the management regulatory committee prior to the approval of the chief regulatory officer.

Major rule amendments would require the review and approval of a Board regulatory and conflicts committee, comprising 4 members who are external independent individuals and 3 members who are PIDs of Bursa Malaysia, all of whom are professionals and market experts from the various related fields of the capital market.

The Rules of BM Bonds including any amendments to it will have to go through the process of approval by the SC, except for rule changes that have been specifically exempted from the SC's approval such as rule amendments which are editorial or consequential in nature

or pursuant to changes made to other relevant rules approved by the SC, before the same can be issued to the participants and public.

The Rules of BM Bonds are publicly available at the Bursa Malaysia website: www.bursamalaysia.com. In addition, all participants of BM Bonds are notified of any amendments to the rules by way of circulars sent via email and made available at the Bursa Malaysia's website. Participants are also notified via announcements on the ETP system when rule amendments are issued.

The Rules of BM Bonds are also made available in Bahasa Malaysia on the Bursa Malaysia website from 30 November 2021 to enhance the clarity and transparency of the Rules of BM Bonds for market participants and investors.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Summary narrative

BM Bonds is a wholly owned subsidiary of Bursa Malaysia which is an approved EHC under Section 15 of the CMSA. Bursa Malaysia is also a PLC on the Stock Exchange and as a PLC, it is required to comply with the corporate governance practices as stipulated under the MMLR of the Stock Exchange. As an EHC, Bursa Malaysia's objectives are reflective of its duties and responsibilities under the CMSA. The CMSA also requires Bursa Malaysia as an EHC to ensure prudent risk management of its business and operations, and it shall prioritise public interest over its commercial business interests.

The objectives of BM Bonds are documented in the constitution.

The Governance Model of Bursa Malaysia sets out the clear and direct lines of responsibility and accountability of the Board of Bursa Malaysia, Bursa Malaysia CEO, the Board Governance Committees for the Group (i.e. AC, RMC and NRC); the Board Regulatory Committees for the Group (i.e. RACC, LC, MPC and APC); and the Board Development Committees for the Group (i.e. SDC and TCC).

Section 21 of the CMSA provides that in performing its duties, the EHC shall act in the public interest, having particular regard to the need for the protection of investors. Further, the EHC shall ensure that where its own interest conflicts with the public interest, the latter shall prevail.

Bursa is also a company listed on the Main Board of the Stock Exchange since 2005 and hence, it has dual objectives i.e. commercial and regulatory.

To further strengthen Bursa's governance structure and the framework for handling conflicts of interest (COI) and to address the potential or perceived COI arising from Bursa's dual roles as a business entity and as a frontline regulator, the Regulatory and Conflicts Committee (RACC) was established on 1 August 2013. The RACC is given the mandate to oversee the regulatory function of Bursa Group, and in the performance of its regulatory duties, it shall exercise its judgement independently of Bursa's business functions.

The RACC comprises 4 members who are external independent individuals and 3 members who are Public Interest Directors of Bursa. The independent individuals were appointed by Bursa Board in consultation with the Securities Commission, and one of them is designated as the RACC Chairman. Bursa Chief Regulatory Officer reports directly to the RACC in relation to the performance of the regulatory function of Bursa Group. This direct line of reporting further strengthens the independence of the RACC.

As the wholly-owned subsidiary of Bursa Malaysia, BM Bonds adopted the Group Governance Model. The administration and operations of BM Bonds are carried out at the Group level.

In this respect, BM Bonds functionally falls under the purview of the Market Operations Division of Bursa Malaysia. All heads of divisions in Bursa Malaysia including the Director of Market Operations of Bursa Malaysia participate in monthly meetings with the Bursa Malaysia CEO. This meeting is used for discussion on all business, strategic and operational issues.

BM Bonds has a nominal Board (Board with minimum number of directors i.e. two (2) only) as most of the functions of BM Bonds are discharged / carried out at holding company level. The Board of Bursa Malaysia has primary responsibility for the governance and management of this wholly-owned subsidiary. In addition, the Board of Bursa Malaysia oversees the functioning of the Board Governance and Regulatory Committees of the Group.

Information regarding the governance, ownership and board and management structure of Bursa Malaysia, including that of BM Bonds is publicly available at the website of Bursa Malaysia: www.bursamalaysia.com.

Currently, the Board of Bursa Malaysia consists of nine (9) directors, of which four (4) directors are PIDs and INEDs, four (4) Directors are INEDs and one (1) Executive Director, who is also the CEO. The four (4) PIDs are appointed by the MOF in line with the requirements under the CMSA for Bursa Malaysia to act in the public interest, having particular regard to the need for the protection of investors in performing its duties as EHC. The Chairman of the Board is also a PID.

In addition, section 10 (1) (b) of the CMSA states that no person other than a PID shall accept appointment, re-appointment, election and re-election as a director of Bursa Malaysia unless the concurrence of the SC is obtained.

The composition of the Board is governed by the provisions in the CMSA, the constitution of Bursa Malaysia and the MMLR of the Stock Exchange. Except for the PIDs, all the directors of Bursa Malaysia are appointed by the Board (or shareholders of the Company at general meeting) with the SC's concurrence. The nomination process is undertaken by the NRC.

The Board through the NRC ensures that its composition is refreshed from time to time with new directors having the right mix of skills / experience and diversity. The Board has in place the Board Charter and the "Protocol for Appointment of Directors and Committee members" which sets out a clear and transparent process for Directors' recruitment. The NRC has been tasked with the responsibility to ensure the incoming INEDs have the requisite expertise, knowledge, integrity and professionalism. Based on the annual Board composition review, the NRC would determine any possible gaps having regard to the objectives and strategic direction of the company. These gaps would be reviewed and may be translated into possible "selection criteria" for new directors in a Board refreshment exercise.

The ongoing training needs of the board members are assessed as part of the annual review of the board performance. In general, the programmes are focused on the relevant areas for examples; corporate governance, risk and compliance, the trends in global exchanges and capital markets development, cyber threats.

The directors continued independence is assessed as part of the annual board performance evaluation, which includes a peer review by other board members.

The recruitment process for all senior positions includes interviews with the senior management, the CEO and HOGAN & Virtual assessment. In addition, detailed reference checks are conducted. The CMSA requires Bursa Malaysia to ensure that the staff has the requisite knowledge. Bursa Malaysia has incorporated this into its Human Resources policies and ensures that all the senior management staff has all the requisite skills. Bursa Malaysia also attempts to maintain a pool of internal successors in the ratio of 1:2 for all senior and critical positions. There is a well-established performance evaluation process against KPIs for all employees. The performance of the CEO is assessed by the Board and that of the senior management by the NRC in consultation with the CEO. The performance evaluation process is used to guide the career growth and if need be any termination.

A clear and documented ERMF at the Group level is used to identify and monitor the specific business risk for each business entity. The Risk & Compliance division ensures that Bursa Malaysia has an effective framework and ability to manage all risks as a fully integrated part of the organisation including its subsidiaries. The Risk & Compliance division reports to the RMC. Internal Audit division is independent from all other functions within the Group and reports directly to the AC.

A default management framework is in place to manage the default of the Clearing Participants (CP) of BMSC and BMDC. It serves as a comprehensive guide when reviewing and updating the Default Management Procedures (DMPs) of both BMSC and BMDC in order to effectively operationalize the DMPs and manage the CP's defaults.

Bursa Malaysia adopts a consultative and inclusive approach to take into account the interest of its participants and other relevant stakeholders in its decision making in relation to its design, rules, overall strategy and major decisions. Prior to initiating changes to its system, services, operations and rules, Bursa Malaysia conducts consultation with its participants and other related users of the system and services. Further, any proposed amendments to rules are subject to the SC's approval. In practice, all major rules amendment submission to the SC for approval requires Bursa Malaysia to obtain feedback from the industry and other relevant users via a consultation process. All rules and amendments are publicly available at the Bursa Malaysia's website. Operational procedures for clearing participants are disseminated to all clearing and depository participants via circulars.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Summary narrative

The Group has put in place an established risk management framework for managing risks affecting its business and operations which are aligned with the ISO 31000:2018 Risk Management –Guidelines and the PFMI.

The Group's risk management framework is embedded in the ERMF document which is applicable to all the business entities within the Group such as BM Bonds. With the establishment of the ERMF, the accountability, authority and responsibilities of the relevant parties in the Group for managing risk, including implementing and maintaining the risk management process as well as ensuring the adequacy, effectiveness and efficiency of any controls have been clearly outlined. Within the framework, there is an established and structured process for the identification, assessment, communication, monitoring as well as continual review of risks and effectiveness of risk mitigation strategies and controls at the divisional and enterprise levels. The analysis and evaluation of Bursa Malaysia's risks are guided by the approved risk criteria.

At the Group level, the Risk & Compliance division is comprised of three (3) key departments namely Enterprise Risk Management, Business Continuity Management and Compliance Management. The objective of the set up was to consolidate the risk management and compliance functions across the Group to provide a holistic and integrated view of risk management and compliance at the enterprise wide level. The Enterprise Risk Management department covers four risk management units namely Operational Risk, Financial Risk (including credit and liquidity risk), Strategic Risk and Legal & Regulatory Risk.

The RMC reviews the risk management aspects every quarter and tables all important developments and plans to the Board. In addition, the Internal Audit team reviews the adequacy of the risk management measures periodically. The Risk & Compliance division also conducts continual review of the risk management framework and process for improvement and ensure that they remain relevant to the Group.

Bursa Malaysia has a Business Continuity Management (BCM) Framework in place, that has identified four broad components within BCM, i.e. governance, policy and process, tools and methodology and effective practices. There are various recovery strategies in place to minimise business disruption during crisis or disaster and are periodically tested

through regular Business Continuity Plan (BCP) tests. The BCM Guidelines and BCP are reviewed regularly based on new developments and BCP test findings.

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

Summary	
narrative	

Not Applicable

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Summary
narrative

Not Applicable

Principle 6: Margin

A CCP should cover its exposure to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Summary	
narrative	

Not Applicable

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Summary
narrative

Not Applicable

	le 8: Settlement finality
	should provide clear and certain final settlement, at a minimum by the end of the value
	Where necessary or preferable, an FMI should provide final settlement intraday or in
real tin	16.
Summary	Not Applicable
narrative	
Princip	le 9: Money settlements
An FM	I should conduct its money settlements in central bank money where practical and
availak	le. If central bank money is not used, an FMI should minimise and strictly control the
credit a	and liquidity risks arising from the use of commercial bank money.
Summary	Not Applicable
narrative	
Princip	le 10: Physical deliveries
An FM	should clearly state its obligations with respect to the delivery of physical instruments
or con	modities and should identify, monitor, and manage the risks associated with such
physic	al deliveries.
Summary	Not Applicable
narrative	
Princip	le 11: Central securities depositories
A CSD	should have appropriate rules and procedures to help ensure the integrity of securities
issues	and minimise and manage the risks associated with the safekeeping and transfer of
securit	ies. A CSD should maintain securities in an immobilised or dematerialised form for
their tr	ansfer by book entry.
Summary	Not applicable
narrative	
Princip	le 12: Exchange-of-value settlement systems
	Il settles transactions that involve the settlement of two linked obligations (for example
securit	ies or foreign exchange transactions) it should eliminate principal risk by conditioning
	al settlement of one obligation upon the final settlement of the other.
Summary	Not Applicable
narrative	
Princip	le 13: Participant-default rules and procedures
	Il should have effective and clearly defined rules and procedures to manage a
	pant default. These rules and procedures should be designed to ensure that the FMI
	ke timely action to contain losses and liquidity pressures and continue to meet its

obligations.

Not Applicable

Summary

narrative

Principle 14: Segregation and portability

A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.

Summary narrative

Not Applicable

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Summary narrative

Bursa Malaysia is guided by the ERMF and risk related guidelines to identify, assess, control, monitor and report key risks under the ERM framework which also cover General Business Risks. The oversight, responsibilities and accountability of the risk management process are defined by Bursa Malaysia's risk governance structure where key risks are managed by the three lines of defence comprising the line managers, risk management and internal audit. These risks are regularly reported to the senior management of Bursa Malaysia, the , the RMC and the Board.

Amongst others, the review of the annual business plan which include financial forecast and strategic planning plays a significant role in the management of both internal and external general business risks of Bursa Malaysia. The risk areas relating to general business risks under the ERM framework include:-

- (a) Administration and operation of the Group as a business enterprise which could impair the business of Bursa Malaysia;
- (b) Potential risks which can cause the decline in Bursa Malaysia's revenue, growth in expenses or loss charges against capital;
- (c) Business impairment resulting in adverse reputational effects;
- (d) Poor execution of business strategy;
- (e) Ineffective response to competition;
- (f) Fluctuations in macroeconomic and market activities;
- (g) Ineffective talent management;
- (h) Lack of technology and product innovation; and
- (i) Legal and regulatory changes to the business landscape.

Given that BM Bonds is a wholly owned subsidiary of Bursa Malaysia, the holding company provides a letter of financial support on an annual basis to BM Bonds in order for it to continue operations as a going concern. Bursa Malaysia also provides operational support to BM Bonds to conduct its activities. BM Bonds relies on Bursa Malaysia for continued financial support to enable it to meet its obligations as and when they fall due.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Summary narrative

Not Applicable. There were no investment activities for the period from 1 July 2021 to 30 June 2022.

Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Summary narrative

The Risk and Compliance division of Bursa Malaysia has established an ERMF, designed based on ISO 31000:2018, Risk Management – Guidelines. One of the risk categories classified in the ERMF is operational risk which is defined as risks arising from deficiencies in information systems or internal processes, human errors, management failures, or disruptions from external events that could result in the reduction, deterioration, or breakdown of services provided by the Group. The ERMF is supported by the risk related guidelines. The risk related guidelines serve to guide the Group in identifying, monitoring and managing the risks it faces in the course of achieving its operations, strategic and business objectives. In the contexts of operational risk, the risk assessment process involves identifying major processes, measuring risk events in terms of likelihood of occurrence and impact and management of current mitigation controls that are in place and action plans if needed.

The ERMF which was approved by the Board defines the roles and responsibilities of the relevant parties including the Board, RMC and management respectively for managing risks and implementing risk management processes and ensuring the adequacy and effectiveness of risk mitigation controls. The Board has tasked the RMC with the responsibility of ensuring that the risk management framework of the Group operates

effectively. Periodically, the Board will receive updates from the RMC on the progress and assessment of risk management of the Group.

The operational risk of Bursa Malaysia is now governed under ERMF which covers the scopes below:-

- a common definition and risk categories to enable a uniform understanding and consistent approach of managing operational risk across the Group;
- ii. a governance and oversight structure for operational risk;
- iii. roles and responsibilities including reporting lines;
- iv. a sound operational risk management approach and process by introducing methodologies/tools and techniques to perform risks assessment/ analysis/ treatment/ monitoring and reporting in a structured, systematic and consistent manner; and
- v. effective communication to cultivate operational risk awareness building.

Operational risk of Bursa Malaysia is further strengthened by the following frameworks and guidelines amongst others:-

- (a) Technology and Cyber Security Risk Guideline:
 - To create a common approach for addressing technology and cyber security within Bursa Malaysia; and
 - ii. To ensure technology and cyber security risks are properly managed throughout Bursa Malaysia.
- (b) Framework for Risk Management on Outsourcing Arrangements:
 - To define the required environment and organizational components for managing outsourcing risk in a structured, systematic and consistent manner within Bursa Malaysia; and
 - ii. The framework describes risk management practices of risk assessment; due diligence assessment; performance assessment; contract considerations; business continuity requirements; and cyber security requirements.
- (c) Bursa Anti-Fraud, Bribery & Corruption Policy and Guidelines:
 - To set the policy stand of Bursa Malaysia in areas relevant to fraud, bribery and corruption and how Bursa staff are expected to conduct themselves in adhering to the highest level of integrity and ethics; and

ii. To assist Bursa Malaysia to adopt a pragmatic approach to assess, detect, prevent and respond to fraud, bribery and corruption within the organisation e.g. Bursa risk control self-assessment questionnaires explicitly probes for potential risk of fraud, bribery and corruption in Bursa staff operational activities within and with external parties.

BM Bonds provides, operates and maintains an ETP for the bond market. The ETP is the centralised price and trade repository and dissemination for the primary and secondary bond market. Henceforth, the operational reliability objectives of the BM Bonds are dependable on the performance of the ETP. The ETP is being maintained regularly to ensure a high degree of security, performance, operational reliability and scalable capacity. This is achieved through information technology (IT) initiatives undertaken by Bursa Malaysia's GT division together with the ongoing support and maintenance arrangements with IT vendors. For instance, the performance of the ETP is measured and monitored at its average and peak CPU utilisation level.

The ETP is able to sufficiently meet the scalable capacity adequacy to handle increasing volumes and its service-level objectives. There was no breach on the capacity limits of the ETP for the period of reporting from July 2021 to June 2022.

To ensure the reliability and availability of the ETP system, the following controls are in place:-

- (a) Incident management and problem management procedures are available and in compliance with Information Technology Infrastructure Library (ITIL). All incidents are centrally logged into the Enterprise Service Management system and categorised by priority. Incidents are escalated to relevant IT support teams, and respective vendors with 24/7 support service for resolution.
- (b) As one of the Bursa Malaysia's critical systems, all major components of the system are in cluster mode at the main site and it has redundant servers at the Bursa Malaysia DR Site. This is to cater for high availability and reliability of the system.
- (c) Performance of the system is monitored using specific monitoring tools which have alert capabilities to trigger alarms in the event that thresholds are being breached.

- (d) Quality assurance of the changes to the system undergoes testing by vendors and internal users. For critical and major changes, an industry wide mock testing is conducted with the market participants.
- (e) Change, Incident and Problem management process is in place where all changes to the system are centrally logged to the Enterprise Service Management system, managed and assessed in respect of impact and risk of the change to the system.

Audit engagements and independent reviews are carried out by the Internal Audit on operational systems, processes, policies and procedures based on an annual audit plan approved by the Audit Committee. All key operational areas and processes are audited within an approved cycle with higher frequency of coverage depending on its criticality and Internal Audit's risk assessment. Using a risk-based audit approach, Internal Audit assesses the selected areas under the audit scope in relation to effective mitigation of risk exposures, compliance towards the approved policies and procedures and relevant laws and regulations as well as improvement to the overall internal control system. As part of the risk-based audit plan, Internal Audit also conducts post implementation reviews after a predefined period to assess the realised benefits of the implemented significant systems and projects.

In relation to physical and information security control and policies in addressing the confidentiality, integrity, availability and potential vulnerabilities and threats of BM Bonds and ETP, several policies and controls have been implemented by Group Technology division. These policies and controls encompass the following:-

Bursa Malaysia Information Security Policy and Standards

- Bursa Malaysia Information Security Policy ("BMISP")
- Bursa Malaysia Information Security Standards ("BMISS")

Bursa Malaysia has implemented appropriate protective and detective controls to minimise the likelihood and impact of a cyber-attack on critical business functions and information assets.

The controls for physical and logical access are the following:-

- (a) Entry into data centers and sensitive areas are controlled using combination of access cards and security identification codes and restricted only to authorised personnel.
- (b) Super IDs or privilege-IDs are centrally controlled and managed by Privilege Access management system.
- (c) System and data owners identified and access matrix defined; access to confidential and restricted information on need-to basis and upon approval.

Bursa Malaysia is certified with ISMS - ISO 27001:2013 for BM Bond Services. The ISMS re-certification assessment was completed successfully in November 2020. The certification is valid until 1 December 2023.

Bursa Malaysia's Cyber Security Strategy Roadmap is a 3-year (2020-2023) roadmap and actions designed to continuously improve the cyber security preparedness and resilience of Bursa Malaysia's infrastructure and services. This is in line and to support the overall business strategy and business plans of the Bursa Malaysia Group.

Bursa Malaysia has invested and implemented tools, process and mechanisms to enhance the cyber resilience capabilities to anticipate, withstand, contain and rapidly recover from a cyber incident with the objective of limiting the escalating risks that cyber threats pose to Bursa Malaysia and its stakeholders. Amongst the controls that have been put in place are:

- (a) Vulnerability assessment and penetration test conducted regularly to proactively identify security vulnerabilities in systems and the appropriate remedial actions taken to address any weaknesses.
- (b) Security monitoring of Bursa's network and infrastructure is in in place to continuously monitor, detect and mitigate malicious activity or suspicious traffic on the network. Technology refresh on security devices and technologies was carried out to to ensure adequate threat mitigation is in place to ensure the security of Bursa's network.
- (c) Re-designed staff Internet access to use a separate network firewall and broadband line to minimise Internet bandwidth contention during peak utilisation for business application / traffic and to prevent cyber-attack.

- (d) Anti-virus software implemented for all desktops, servers, email exchange and gateway.
- (e) Information leakage control to avoid unauthorised access and data leakage.
- (f) Independent consultant to conduct social engineering test to evaluate staff awareness in identifying scam (e.g. email phishing and physical tailgating test), granting access permission to restricted areas and sharing of sensitive information.
- (g) External professional to conduct source code review for in-house developed software to provide comprehensive assurance that Bursa Malaysia's application is secured in terms of application flaw.
- (h) Established Bursa Malaysia Computer Emergency Response Team (BMCERT). The BMCERT is aimed to elevate the operational improvement and instil a culture of cyber risk awareness on incident response to cyber threats.
- (i) Participated in Capital Market Cyber Drill Simulation (CMCDS) organised by the SC on 16 November 2021. Bursa Malaysia was identified as a key participant to participate in the CMCDS with the aim to strengthen the market preparedness in responding and recovering from potential cyber incidents. It is crucial for Bursa Malaysia to remain vigilant and maintain visibility on cyber preparedness and resilience. The objective of the Drill is to identify potential gaps in technology capabilities and incident response processes. Overall cyber simulation result for capital market has improved in 2021. Bursa Malaysia will be participating in CMCDS for 2022 scheduled on 10 November 2022.

The cyber security core functions and controls are reviewed and assessed to observe with the Guidance on Cyber Resilience for Financial Market Infrastructures issued by IOSCO as well as to comply with the Guidelines on Management of Cyber Risk issued by the SC.

In relation to BM Bonds operations, the following are put in place:-

BCP

The overall approach is geared towards to ensure adequate back-up arrangements for all critical office facilities and system components; online data replication from the main site to the DR site and data back-ups to ensure no data loss; and developing business continuity

procedures and testing them periodically. The failure of the critical system components is mitigated with clustering and redundant systems/infrastructure facilities at the Bursa Malaysia's main site, hence minimising the needs to failover to the Bursa Malaysia's DR site/systems. The systems at the Bursa Malaysia's DR site are capable of running all the functionalities that are currently available at the main site.

Alternate Site and Backup Systems and Office Facilities

The Group's back-up systems and office facilities are housed in its own DR site which is away from the main site. These two different sites are provisioned from different power substations and different telecom exchanges for electricity supply and telecommunication services respectively, to mitigate the risk of concurrent impact to both sites. The DR site is having adequate capacity and as part of the annual BCP testing has been found to be capable of handling the operations for a sustained period of time.

BCP and Testing

The Group has a comprehensive group wide BCP plan. The BCP is tested annually with the participation of all stakeholders with target RTOs of 2 to 4 hours. The BCP test includes participation of the BM Bonds participants, they are required to connect to the Bursa Malaysia's DR site and verify their ability to conduct their usual services and the integrity of their data. Appropriate recalibration of the BCP are made and if required these are retested. Procedures in the BCP for mitigating business interruption risks are tested at least once a year. These procedures are also subjected to external audits by the SC and the appointed external auditor of Bursa Malaysia.

BM Bonds' Workflow and Recovery Time Window

BM Bonds business (production) hours are from 9:00 a.m. to 6:00 p.m., Monday to Friday except on public holidays and other market holidays (when the Exchange is declared closed).

BM Bonds market trading hours are stipulated as follows:

Morning session: 9:00 a.m. to 12:30 p.m. Afternoon session: 2:30 p.m. to 5:00 p.m.

For trade reporting, the sessions are as follows:

Morning session : 9:00 a.m. - 1:29 p.m. Afternoon session: 1:30 p.m. - 5:45 p.m.

For trade confirmation, the hours are as follows:

Morning session: 9:00 a.m. - 12:30 p.m. Afternoon session: 2:30 p.m. - 6:00 p.m.

BM Bonds operations conduct its activities i.e. creation or deletion of user identifications, updating of user information and amendments to reported transactions during these hours. Although ETP is a trading platform, the system is currently used by the participating members to do OTC trade reporting only. Any disruption to the process, participating member must manually report the off ETP transaction to BM Bonds by sending the details of the off ETP transaction to BM Bonds by email as prescribed by BM Bonds so that the same may be keyed into the ETP by BM Bonds on their behalf.

Clearing and settlement of bonds is done outside BM Bonds i.e. through the RENTAS of BNM.

BM Bonds EOD starts from 6:30 p.m. to 2:30 a.m. The EOD job is executed automatically after receiving the BNM EOD indicator. During the EOD process, all transactions and related market tables will be initialised, and stock master reconciliation report is generated and transmitted to BM Bonds' Market Operations division on the next business day.

RTO and BCP Test Results

The ETP is classified as critical system with RTO of 4 hours. The recovery time achieved for an intraday failure scenario during the Industry Wide Testing for Securities and Bond Market for the ETP system for the year 2021 was within the recovery timeframe.

Market Participant's DR Site, BCP and Testing

In addressing the risks of key participants may pose to its operations, Bursa Malaysia requires all participants to maintain robust BCP and this is ascertained as part of the ongoing supervision activities which includes onsite audits of the DR sites of the participants. The participants are also required to participate in the BCP tests of the Bursa Malaysia.

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Summary narrative

Criteria and requirements for participation, which are objective and risk-based, are set out in the Rules of BM Bonds which are available at the Bursa Malaysia website.

There are three (3) types of membership for BM Bonds: – TPM, EPM and GPM.

The rules on membership requirement of the BM Bonds can be found under Chapter 3 of the Rules of BM Bonds. There is no financial requirement for members of BM Bonds. TPMs are essentially licensed financial institutions while EPMs are money brokers. GPM is open to any person or corporation.

Criteria and requirements for participation are as stated under the rules which are fair and are applicable to all applicants without exception. Participation as member of BM Bonds therefore is open to all eligible applicant who meets the stipulated criteria and requirements.

A participant of BM Bonds may resign from being a participant, subject to adequate notice and fulfilment of certain obligations. Kindly refer to Rule 302.5, 303.5 and 304.5 of the Rules of BM Bonds on this.

Although Bursa's powers to take action for breaches under the Rules of Bursa Malaysia Bonds differs slightly from the other Business Rules in terms of the sanctions imposable (remedial action, caution, private reprimand, impose restrictions/suspend/terminate access to facilities, any other action Bursa deems fit) and appeal timeline (14 days as compared 7 market days), Bursa Malaysia's Intermediaries Communication on Enforcement/Disciplinary Proceedings and Processes (PCN 2/2017) which is published on Bursa's website may be used as a guide on the general process and considerations involved in Bursa's enforcement of Rules of Bursa Malaysia Bonds Sdn Bhd.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Summary
narrative

Not applicable.

Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link related risks.

Summary narrative

Not Applicable.

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Summary narrative

BM Bonds provides efficient and effective services to its participating members and has implemented an appropriate process of obtaining feedbacks and inputs from the participating members. These are reflected in the goals and objectives of BM Bonds, amongst others to:-

- (a) ensure smooth operation of the ETP system;
- (b) provide support to all stakeholders to ensure uninterrupted access to the ETP system and its related functionalities and services;
- (c) ensure effective flow of primary market data from BNM and secondary market trading data to the relevant stakeholders; and
- (d) facilitate ETP system testing which include BCP testing between Bursa Malaysia and its internal and external users.

BM Bonds has identified and established risk profile for all potential risks related to its operations or activities and provides control to mitigate the risks. This risk profile is reviewed on a quarterly basis to ensure the effectiveness of the control that were put in place.

BM Bonds has service level agreement with the vendor, and it is being reviewed on yearly basis or when required. This is to ensure the vendor provides permanent and/or work around solutions for issues reported by BM Bonds within the agreeable timeline as stipulated in the agreement. BM Bonds obtains feedback via email communication or site visits to participant's premise.

Industry consultation is conducted with the participants, the SC and BNM prior to introduction of any changes to Rules of BM Bonds and/or system enhancements. BM Bonds also performs post implementation review for initiative that has been implemented by obtaining feedback from the participating members and conducts regular meetings to discuss on the issues raised.

In addition, BM Bonds has identified and established the following targets for key operational indicators to ensure it continues to observe and achieve an efficient and effective level in discharging its duties:-

- (a) time taken to disseminate data to relevant parties/authorities;
- (b) adherence to procedures/rules; and
- (c) system availability.

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Summary narrative

BM Bonds uses a proprietary message format to interface with its users (internal and external) that includes participating members, the SC and BNM. BM Bonds also uses other types of messaging and file format of the industry standard protocols i.e. Financial Information eXchange (FIX) to interface with information vendors and Market Message Transfer Protocol (MMTP) with BNM.

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks and fees and other material costs they incur by participant in the FMI. All relevant rules and key procedures should be publicly disclosed.

Summary narrative

The Rules of BM Bonds sets out sufficient information on the requirements and qualifying criteria for its participants and the provisions governing the reporting of OTC transactions, including reporting pursuant to non-routine events.

BM Bonds has clear and comprehensive rules to govern its participants, complemented by operational procedures. The rule-making process is a robust one, involving benchmarking, analysis, review and consultation to ensure that BM Bonds arrives at appropriate rules. Specifically, the rules are clearly formulated and in compliance with the relevant laws and regulations based on a multi-tiered internal process which includes:

(a) consideration of the regulatory objectives to be achieved, concerns to be addressed and the implications of the proposed rule amendments;

- (b) benchmarking the proposed rule amendments to those of other more developed markets and which has a similar framework so that the rules are on par with international standards, where applicable;
- (c) consultation with the relevant stakeholders, including market participants and at times the public to ensure that the rules are clear, practical and are aligned with stakeholders' expectations;
- (d) review of the proposed rule amendments by qualified staff, senior management and the management regulatory committee prior to the approval of the chief regulatory officer;
- (e) for major rule amendments, it would require the approval of a Board regulatory committee, comprising 4 members who are external independent individuals and 3 members who are PIDs of Bursa Malaysia, all of whom are professionals and market experts from the various related fields of the capital market; and
- (f) approval of the SC for all rule amendments except for those that are specifically exempted from the SC's approval, for example amendments that are editorial or consequential in nature pursuant to changes made to other relevant rules approved by the SC.

The Rules of BM Bonds are publicly available at the Bursa Malaysia's website: www.bursamalaysia.com. In addition, all participants of BM Bonds are notified of any amendments to the Rules of BM Bonds via circulars sent vide email. The circulars are also made available at the Bursa Malaysia website. Any amendments to the Rules of BM Bonds will be approved by the SC.

The Rules of BM Bonds were also made available in Bahasa Malaysia on the Bursa Malaysia website from 30 November 2021 to enhance the clarity and transparency of the Rules of BM Bonds for market participants and investors.

The operational procedures in the form of ETP User Manual is provided to the participants of BM Bonds through electronic mail (e-mail). Participants can also refer to FAQs on ETP for Bond which is available on Bursa Malaysia website. Daily and monthly market statistics on bonds are also published on Bursa Malaysia website.

Principle 24: Disclosure of market data by trade repositories

A trade repository should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

Summary narrative

BM Bonds provides bond market data to relevant authorities i.e. BNM and SC. Participating members and authorities are given access to the system for the online market data information. In addition, daily summary reports of off ETP transactions reported on ETP are provided to the SC and BNM twice a day as guided by the procedures. Information vendors that subscribed the bond data feed receive the feed through the FIX interface.

As for the public, selected reports are published on daily basis at the Bursa Malaysia's website. These reports provide information on active stocks transacted, highest price stocks, securities turnover, benchmark stocks and outstanding amount of MGS.

The ETP system is accessible from 9:00 a.m. to 6:00 p.m. The participating members including authorities the SC and BNM have direct access to the primary and secondary market data available on the system. Access to the system is given to the users of the participating members based on the application made and authorised by the participating members.

Additional and ad-hoc data requested by the authorities, namely the SC are extracted from the system or downloaded from the business object and given in the format as requested by the SC in a timely manner as stipulated and guided by the procedures. The data are sent through email to the SC.

Accuracy of data is ensured by the parties involved in the off ETP transaction. The initiator i.e. the participating member keys in the off ETP transaction into the ETP and the counter party is required to check and confirm the transaction.

ETP users are able to access one year of the most recent data via the ETP user interface, however, seven (7) years of the most recent data is stored in the ETP Oracle database.

V. List of Publicly Available Resources

Relevant information pertaining to BM Bonds can be found at:

https://www.bursamalaysia.com/trade/trading_resources/bonds/instruments_traded

Links to documents referenced within this Disclosure Framework are below:

Capital Markets and Services Act 2007

https://www.sc.com.my/regulation/acts/capital-markets-and-services-act-2007

Corporate governance model

https://www.bursamalaysia.com/about bursa/about us/corporate governance/governance model

Rules of BM Bonds and Circulars

https://www.bursamalaysia.com/regulation/bonds/rules of bursa malaysia bonds

Market statistics

https://www.bursamalaysia.com/market_information/market_statistic/bond

Products information

https://www.bursamalaysia.com/trade/our_products_services/bonds/over_the_counter