

MAS Notice No.: CMG-N03

Notice to approved exchanges, recognised market operators which are incorporated in Singapore, licensed trade repositories, approved clearing houses, recognised clearing houses which are incorporated in Singapore, the Depository, approved holding companies, holders of capital markets services licences, Registered Fund Management companies, authorised benchmark administrators, authorised benchmark submitters, designated benchmark submitters and all persons who are approved under section 289 of the Act to act as a trustee of a collective investment scheme which is authorised under section 286 of the Securities and Futures Act and constituted as a unit trust.

Securities and Futures Act (Cap. 289)

Issue Date: 6 August 2019

NOTICE ON CYBER HYGIENE

I. Introduction

1.1 This Notice is issued pursuant to 45(1), 46ZK(1), 81R(1), 81SV(1), 81ZL(1), 101(1), 123ZZB(1) and 293(1) of the Securities and Futures Act (Cap. 289) (the “Act”) and applies to -

- (a) all approved exchanges (“AE”);
- (b) all recognised market operators (“RMO”) which are incorporated in Singapore;
- (c) all licensed trade repositories (“LTR”);
- (d) all approved clearing houses (“ACH”);
- (e) all recognised clearing houses (“RCH”) which are incorporated in Singapore;
- (f) the Depository;
- (g) all approved holding companies (“AHC”);
- (h) all holders of a capital markets services licence;
- (i) all Registered Fund Management Companies, as defined in regulation 2 of the Securities and Futures (Licensing and Conduct of Business) Regulations;
- (j) all authorised benchmark administrators;
- (k) all authorised benchmark submitters;
- (l) all designated benchmark submitters; and
- (m) all persons who are approved under section 289 of the Act to act as a trustee of a collective investment scheme which is authorised under section 286 of the Securities and Futures Act and constituted as a unit trust

(each a “relevant entity”).

II. Definitions

2.1 For the purpose of this Notice----

“administrative account”, means any user account, that has full privileges and unrestricted access to any one or more of the following systems:

- (a) an operating system;
- (b) a database;
- (c) an application;
- (d) a security appliance; or
- (e) a network device;

“business relations”, in relation to a benchmark administrator, means—

- (a) the collection of information from a person (whether a natural person, legal person or legal arrangement) by the benchmark administrator for the purpose of administering a designated benchmark under the Act; or
- (b) the provision of a designated benchmark by the benchmark administrator to, a person (whether a natural person, legal person or legal arrangement);

“customer”—

- (a) in relation to an AE, a RMO incorporated in Singapore, a LTR, an ACH and a RCH incorporated in Singapore, includes “user”, as defined in Section 2(1) of the Act;
- (b) in relation to the Depository, includes “depositor”, as defined in Section 81SF of the Act;
- (c) in relation to an AHC, includes any “user”, as defined in Section 2(1) of the Act, of any AE, ACH or LTR, where such AE, ACH or LTR, is a subsidiary of the AHC;
- (d) in relation to a holder of a capital markets services licence, includes any “customer” as defined in paragraph (a)(i) of the definition of “customer” in section 2(1) of the Act and any person with whom the relevant entity, as principal, enters or will enter into transactions for the sale or purchase of capital market products;
- (e) in relation to an authorised benchmark administrator, includes—
 - (i) a person (whether a natural, legal person or legal arrangement)—

- (A) who provides information to the benchmark administrator in relation to a designated benchmark; or
 - (B) with whom the benchmark administrator establishes or intends to establish business relations; and
- (ii) the clients of any person referred to in sub-paragraph (i).
- (f) in relation to an authorised benchmark submitter or designated benchmark submitter, includes a person whose information is collected by the benchmark submitter for the purpose of providing information in relation to a designated benchmark;
- (g) in relation to any person who is approved under section 289 of the Act to act as a trustee of a collective investment scheme authorised under section 286 of the SFA, includes the managers and participants of the collective investment scheme;

“customer information” means any information relating to, or any particulars of, any customer of the relevant entity, where a named customer or group of named customers can be identified, or is capable of being identified, from such information;

“critical system” in relation to a relevant entity, means a system, the failure of which will cause significant disruption to the operations of the relevant entity or materially impact the relevant entity’s service to its customers such as a system which—

- (a) processes transactions that are time critical; or
- (b) provides essential services to customers;

“legal arrangement” means a trust or other similar arrangement;

“legal person” means an entity other than a natural person that can establish a permanent customer relationship with a financial institution or otherwise own property;

“multi-factor authentication” means the use of two or more factors to verify an account holder’s claimed identity. Such factors include, but are not limited to—

- (a) something that the account holder knows such as a password or a personal identification number;
- (b) something that the account holder has such as a cryptographic identification device or token;

- (c) something that the account holder is such as an account holder's biometrics or his behaviour;

"security patch", in relation to a system, means an update that can be applied to the system to address a vulnerability;

"security standards", in relation to a system, means a set of configurations for the purpose of safeguarding and improving the security of the system;

"system", in relation to a relevant entity, means any hardware or software that is used by the relevant entity;

"vulnerability", in relation to a system, means any weakness, susceptibility or flaw of the system that can be exploited, including but not limited to by allowing an unauthorised person to access the system, or to compromise the security configuration settings of the system.

2.2 Any expression used in this Notice shall, except where expressly defined in this Notice or where the context requires, have the same meaning as in the Act.

III. Application of Notice

3.1 A relevant entity need not comply with a requirement in this Notice to the extent that it is unable to exercise control over a system to ensure compliance with that requirement, in all of the following ways:

- (a) the relevant entity cannot exercise direct control over the system to ensure compliance with that requirement;
- (b) a relevant entity cannot exercise indirect control over the system by requiring the system provider to ensure compliance with that requirement;
- (c) it is not reasonable for the relevant entity to procure an alternative system provider over whom the relevant entity is able to exercise such indirect control referred to in sub-paragraph (b), to provide the system.

IV. Cyber Hygiene Practices

4.1 **Administrative Accounts:** A relevant entity must ensure that every administrative account in respect of any operating system, database, application, security appliance or network device, is secured to prevent any unauthorised access to or use of such account.

4.2 **Security Patches:**

- (a) A relevant entity must ensure that security patches are applied to address vulnerabilities to every system, and apply such security patches within a timeframe that is commensurate with the risks posed by each vulnerability.
- (b) Where no security patch is available to address a vulnerability, the relevant entity must ensure that controls are instituted to reduce any risk posed by such vulnerability to such a system.

4.3 **Security Standards:**

- (a) A relevant entity must ensure that there is a written set of security standards for every system.
- (b) Subject to sub-paragraph (c), a relevant entity must ensure that every system conforms to the set of security standards.
- (c) Where the system is unable to conform to the set of security standards, the relevant entity must ensure that controls are instituted to reduce any risk posed by such non-conformity.

4.4 **Network Perimeter Defense:** A relevant entity must implement controls at its network perimeter to restrict all unauthorised network traffic.

4.5 **Malware protection:** A relevant entity must ensure that one or more malware protection measures are implemented on every system, to mitigate the risk of malware infection, where such malware protection measures are available and can be implemented.

4.6 **Multi-factor Authentication:** Subject to paragraph 4.7, a relevant entity must ensure that multi-factor authentication is implemented for the following:

- (a) all administrative accounts in respect of any operating system, database, application, security appliance or network device that is a critical system; and
- (b) all accounts on any system used by the relevant entity to access customer information through the internet.

4.7 (a) Paragraph 4.6 shall not apply to a relevant entity for the period between 6 August 2020 and 5 February 2021 (both dates inclusive), if the relevant entity meets all of the following conditions:

- (i) the relevant entity identifies all the risks or potential risks posed by its non-compliance with paragraph 4.6 during that period;
- (ii) the relevant entity implements controls to reduce the risks identified in sub-paragraph (i);
- (iii) a committee of the relevant entity, or a member of the senior management of the relevant entity—
 - (A) agrees with the risk assessment in sub-paragraph (i); and
 - (B) is satisfied that the controls to be implemented in sub-paragraph (ii) are adequate to reduce the risks identified in sub-paragraph (i).

(b) In this paragraph—

“committee of the relevant entity” means a group of persons that—

- (i) comprises at least 2 persons, each of whom is a person who is not a member of the senior management of the relevant entity but is concerned with or takes part in the management of the relevant entity on a day-to-day basis; and
- (ii) is appointed by a member of the senior management of the relevant entity to—
 - (A) assess the risks or potential risks posed by the relevant entity’s non-compliance with paragraph 4.6 during the period between 6 August 2020 and 5 February 2021; and
 - (B) approve the implementation of the controls to reduce the risks posed by the non-conformity with paragraph 4.6.

“member of the senior management” means a person for the time being holding the office of chief executive officer or an equivalent person of the relevant entity and includes a person carrying out the duties of any such office if the office is vacant.

V. Effective Date

5.1 This Notice shall take effect on 6 August 2020.