

PRINCIPLES FOR FINANCIAL INFRASTRUCTURES: DISCLOSURE FRAMEWORK VIETNAM SECURITIES DEPOSITORY

Responding institution: Vietnam Securities Depository (VSD)

Jurisdiction in which the FMI operates: Vietnam

Authority(ies) regulating, supervising or overseeing the FMI: State Securities Commission (SSC), Ministry of Finance (MoF)

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Executive Summary:

VSD is the sole entity in Vietnam that has the function of organizing, supervising and implementing securities registration, depository, clearing and settlement; provides support services for completing securities transactions of listed securities and non-listed securities of public companies; executes clearing and settlement for derivatives and cash market transactions under CCP mechanism. VSD's members are depository members and CMs who are securities companies, commercial banks, foreign bank branches satisfying regulated specific criteria. In addition, some commercial banks, the SBV (State Bank of Vietnam) Operations center, etc. open direct depository accounts at VSD and use VSD's securities depository, clearing and settlement services to participate in the specialized bond market. Being a market infrastructure that provides services to both cash market and derivatives market, VSD has been applying various risk management methods to ensure settlement activities is done in a timely manner, minimize settlement risks, legal risks, custody risks, operation risks, business risks, etc.

This is VSD's disclosure (updated of the first one in 2018) according to the PFMI of CPSS-IOSCO published in December 2012. This includes two main parts: "General background on VSD" and "Principle-by-principle summary narrative disclosure".

I. General background on VSD

1. Overview of VSD and VSD's services

Services and functions of VSD:

VSD provides registration, depository, clearing and settlement services for securities listed, registered for trading on stock exchanges and securities of other

public companies; other trade-support services as stipulated by applicable regulations and laws; allocates local securities codes and international securities identification numbers (ISINs) for securities listed on stock exchanges and securities of public companies; processes corporate entitlements of securities owners for issuers that are public companies and institutions whose securities are listed on stock exchanges; provides the service of dividend and bond interest payment agent for issuers; acts as a transfer agent and transferring ownership for those transfers, which do not arise from securities transactions, as stipulated by applicable laws and regulations; provides registration, depository and transfer agent services for other securities upon agreement with issuers; establishes and operates risk management mechanisms, including performance of Central Counterparty (CCP) function, manages the Compensation Fund, the Clearing Fund, and the securities lending and borrowing as governed by the Law and regulations on securities; provides asset management services, services for investment funds and other services upon customers' request within the scope of functions and responsibilities of VSD and in compliance with prevailing laws; supervising members' activities to ensure their compliance with VSD's business guidelines for protection of securities owners' assets; manages foreign ownership of securities as regulated by applicable laws; supports market development by providing services of infrastructure, technique, information, training, knowledge propaganda and disseminating.

Some main business and operations statistics of VSD by 30/6/2021:

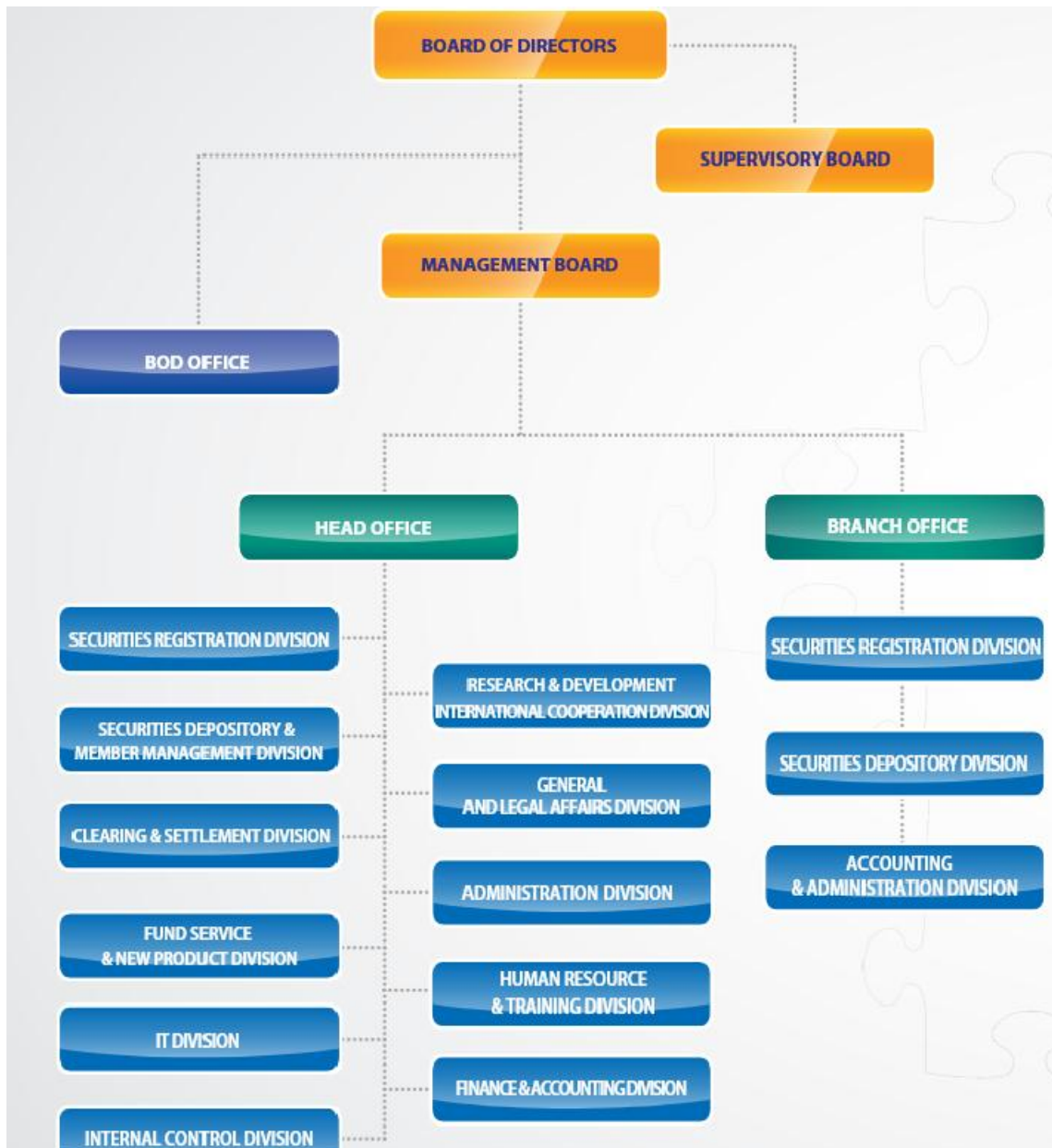
- There were 2,353 securities codes registered at VSD, including 1,895 stock codes, fund certificates and covered warrants; the total balance of registered securities at VSD was nearly 186 billion; the total balance of deposited at VSD was approximately 105 billion (accounting for 57% of the total number of registered securities).

- The number of investor accounts managed by VSD was 3,394,639 accounts, including 3,357,021 domestic investor accounts and 37,618 foreign investor accounts.

- The total number of VSD's depository members was 96, including 82 securities companies, 6 domestic custodians and 8 foreign custodians; there were 25 direct account holders; the total number of CMs was 22, in which 4 are general CMs and 18 are direct CMs.

2. VSD's organizational structure:

Organizational chart:



VSD's management and organization structure includes: Board of Directors (BODs), Supervisory Board, and the Management Board (which includes the CEO, senior managing directors, chief accountant and working-level departments).

- BODs is the direct representative authorized by the owner (the MoF) to fulfill some rights and responsibilities of the owner, decide and execute issues related to defining and realizing targets, tasks and authority of VSD. BODs bears responsibility before the law and the Finance Minister in implementation of rights and tasks as regulated.

- The Supervisory Board (SB) performs functions, including: supervising the implementation of development strategy, business plan, strategic objectives and planned targets of VSD; supervising and assessing implementation of rights, responsibilities of directors in the BODs and the CEO; supervising and assessing the

validity and compliance of internal audit regulation, risk preventing and managing regulation, reporting regime and other internal governance regulations of VSD, supervising the legality, systematicity and truthfulness in accounting work, accounting books and financial statements...

- The Management Board is responsible for daily operations of VSD according to objectives and plan in line with the Charter and decisions of the BoDs, ensuring implementation of assigned tasks and rights as regulated.

3. Legal framework

VSD is organized as a wholly state-owned limited liability company (the state holding 100% the charter capital). VSD's operations and businesses are governed by the following main legal documents:

- The Securities Law no.54/2019/QH14 dated 28th November 2019 of the National Assembly;

- The Enterprise Law no. 59/2020/QH14 dated 17th June 2020;

- Decision No. 171/2008/QĐ-TTg dated 18 December 2008 of the Prime Minister on transforming VSD a State income generating service delivery agency into a wholly state-owned limited liability company.

- The Business certificate No.03/UBCK-GCN dated 29 July 2009 of the Chairman of Vietnam State Securities Commission.

- Decision no. 2396/QĐ-BTC dated 21st November 2017 of the Finance Minister on issuing organization and operation charter of VSD.

- Decree no. 155/2020/NĐ-CP dated 31st December 2020 of the Government specifying implementation of some articles of the Securities Law;

- Decree no. 158/2015/NĐ-CP dated 31st December 2020 of the Government on derivatives and derivatives market;

- Circular no. 119/2020/TT-BTC dated 31st December 2020 of the MoF on registration, depository, clearing and settlement of securities transactions;

- Circular no.98/2020/TT-BTC dated 16th November 2020 on operations and management of investment funds.

- Circular no. 111/2018/TT-BTC dated 15th November 2018 of the MoF on issuance and settlement of Government debt instruments in domestic market.

In addition, VSD's operations have to be complied with other related legal documents, and VSD also formulates business guidelines/rules basing on relevant legal documents to detail VSD's business operations.

4. Main principles in VSD's business operations

Securities registration:

In accordance with prevailing regulations, securities of public companies and other organizations whose securities are listed or registered for trading on the securities trading systems have to be centrally registered at VSD. Securities of other issuers who assign VSD to be their transfer agents have to be registered at VSD.

Securities to be registered at VSD comprise listed/registered-for-trading shares, fund certificates, covered warrants, Government instruments (including Government bonds, treasury bills and state loans), Government-guaranteed bonds issued by the Policy Bank and municipal bonds, and other corporate bonds listed on the securities trading system.

When registering securities at VSD, issuers shall provide VSD with information about the issuers, securities to be registered and securities owners for recording into VSD's system. This is a basis from that VSD realizes eligibility for ownership of securities owner and accepts securities to be centrally registered at VSD. After registration at VSD, all information changes related to registered securities shall follow regulations on information management of VSD.

Processes, procedures and dossiers for registration are specifically stipulated in the Guideline on Securities Registration issued by VSD'S Chief Executive Officer.

Securities depository:

In accordance with the Securities Law, securities of public companies (including securities of public companies listed on Stock Exchanges and securities of unlisted public companies) shall be centrally deposited at VSD before being traded. Securities depository for clients at VSD is performed according to the following principle: Clients deposit their securities at VSD's depository members who will redeposit their clients' securities at VSD. Securities depository accounts at VSD are managed as following: The total balance of clients' securities depository accounts opening at depository members always match with the balance of depository members' securities depository accounts open at VSD. The detailed balance of securities depository account of each client at depository members shall match with ownership figures of that client at VSD. In case of detecting information errors of depository members or their clients' accounts, VSD shall immediately inform depository members and those members are responsible for adjusting appropriately. Securities deposited at VSD are clients' assets, managed separately from VSD's assets, and VSD shall not be allowed to use the clients' securities for the sake of a third party or VSD itself.

At depository members, in order to ensure interests of clients whose securities are deposited, depository members have to open each depository account for each client and manage clients' assets separately. Clients' securities deposited at depository members are clients' assets and managed separately from depository members' assets. Depository members shall not be allowed to use securities in the clients' securities depository accounts for the sake of a third party or depository members themselves.

VSD provides the following securities depository services for its clients:

- Securities lodging
- Securities withdrawal
- Transfer of non-traded securities
- Securities pledging and releasing

Clients have to work with their depository members, at which they open their accounts, to get their securities consigned, withdrawn, transferred and pledged. Depository members manage information on securities ownership in book-entry depository account system. Ownership transfer of centrally deposited securities is done by book-entry instead of transferring physical certificates.

Processes and procedures of securities depository are specifically stipulated in the Guideline on Securities Depository issued by VSD'S Chief Executive Officer.

Securities clearing and settlement:

** For the cash market (VSD's application of CCP mechanism for the cash market is governed in the new Securities Law and sub-law legal documents, and is expected to be actually implemented within 3 years since the new Securities Law comes into effect (1st January 2021).*

VSD applies the following methods and settlement cycle for securities transactions:

- For Government instruments (including Government bonds, treasury bills and state loans), Government-guaranteed bonds issued by the Policy Bank and municipal bonds (hereinafter referred to as debt instruments):

+ VSD carries out settlement by trade-by-trade method right after buyers and sellers have sufficient money and debt instruments respectively to fulfil settlement obligations on the settlement date (T+1), settlement is made under DVP principle.

+ Transfer of debt instruments is made on VSD's system by transferring debt instruments among depository accounts of related organizations. Cash payment is made via the SBV's interbank system.

- For shares, fund certificates, covered warrants and corporate bonds:

+ VSD carries out settlement according to the result of multilateral netting with T+2 settlement cycle (for shares, fund certificates and covered warrants) and T+1 (corporate bonds), complying with DVP principle;

+ For transactions of members, securities clearing is made by each security type and separately by domestic client accounts, foreign client accounts and proprietary trading accounts of CMs. Cash clearing is made for each CM on the basis of cross clearing between the amount receivable and payable for transactions executed on the securities trading system with the same settlement cycle and method and separately by domestic clients, foreign clients and CMs.

+ VSD makes securities settlement in the form of book-entry transfer via the system of depository accounts of selling and buying members and simultaneously adjusts ownership information on depository accounts of buying and selling investors. The settlement bank (Bank for Investment and Development of Vietnam) makes cash payment via the system of cash accounts opened by depository members at the settlement bank based on the cash clearing result sent by VSD.

Processes and procedures of securities clearing and settlement are specified in relevant guidelines including, the Guideline on Securities Clearing and Settlement; the Guideline on settlement of Government debt instruments, Government-guaranteed bonds issued by the Policy Bank and municipal bonds; the Guideline on registration, depository, clearing and settlement, and exercising of covered warrants; the Guideline on creation/redemption transaction, registration, depository, clearing, settlement and entitlements processing for exchange-traded; and the Rule on provision of transfer agent service to open-ended funds issued by VSD's Chief Executive Officer.

*** For the derivatives market:**

- For Index futures: VSD shall define settlement obligations of position loss and profit by each account and clear by CM. Cash settlement is made by the Settlement Bank (Vietnam Joint Stock Commercial Bank for Industry and Trade)

- For Government bond futures: VSD shall define cash/securities settlement obligations for each account and clear by CM. Cash and securities settlement is made by the Settlement Bank (Vietnam Joint Stock Commercial Bank for Industry and Trade) and VSD respectively.

Processes of clearing and settlement are specified in the Guideline on margining, clearing and settlement of derivatives issued by VSD's Chief Executive Officer.

Corporate action processing:

VSD provides corporate actions services for the owners of securities registered at VSD, including: voting right; right to receive cash dividend; right to receive stock dividend, bonus issues; right to receive interest and principal of bonds and treasury bills; right issue; right to convert convertible bonds; right to rename, split, consolidate stocks; right to exchange and merge shares; other rights stipulated by applicable law.

The system of VSD shall enable accurate calculation and allocation with regard to rights for holders of deposited and non-deposited securities according to the execution rate informed by issuers. In addition, issuers shall be provided with the summarized list of allocating rights in the shortest time.

For deposited securities, rights of securities holders are recorded in the account system of depository members and VSD. When exercising rights, VSD shall automatically allocates rights for securities holders via securities holders' accounts opened at depository members.

For non-deposited securities, rights of securities holders are recorded in the account system of VSD. When exercising rights, securities holders shall come to exercise rights at issuers or VSD (in case issuers authorizes VSD to do).

Processes and procedures of corporate action are stipulated in the Guideline on Corporate Actions for Securities Holders issued by VSD' Chief Executive Officer.

Allocation of Security Codes:

VSD allocates and manages local security codes for all securities registered at VSD. Local security codes are used as transaction codes of issuers when they register to be listed/traded on stock exchanges. Besides, VSD is also designated to be the unique and official agency of Vietnam allocating International Securities Identification Numbers (ISINs) for all securities in Vietnam Securities Market.

Local securities codes and ISINs are simultaneously allocated with issuance of securities registration certificates when issuers register their securities at VSD. For securities that are traded on the derivatives market, VSD shall allocate ISIN upon receiving notice of local codes from the Stock Exchange.

Securities codes allocated by VSD can not be changed except for issuers' securities registration cancellation. In special case, at issuer's request, VSD can accept change of securities codes for issuers upon receipt of SSC's agreement (not applicable for issuers who have their securities listed, registered for trading on the Stock Exchanges). When issuers cancel their securities registration, VSD shall automatically cancel securities codes and the respective ISINs.

Processes and procedures are stipulated in the Guideline on allocation of security codes and international securities identification numbers (ISINs) issued by VSD's Chief Executive Officer

Allocation of securities trading codes for foreign investors:

Foreign investors (both institutions and individuals) shall apply for securities trading codes at VSD before investing in Vietnam Securities Market.

Each foreign investor, depositary, foreign invested economic organization shall be granted with one securities trading code, except the following cases:

a) A foreign securities company shall be granted with two securities trading codes: one for proprietary trading account and one for brokerage account.

b) A foreign investment fund, the Multiple Investment Managers Fund – MIMF can apply for multiple trading codes in which each investment portfolio managed by a foreign fund manager is allocated with one securities trading code; investment portfolio managed by foreign investment fund, foreign organization themselves is granted with one securities trading code.

c) An organization of foreign government or investment and finance institution of an international organization of which Vietnam is a member is granted with multiple securities trading codes in which each investment portfolio at a custodian is granted with one securities trading code.

d) A securities investment fund manager is allocated with one securities trading code to manage investment portfolio for foreign investors, foreign invested economic organizations. Securities investment fund manager being foreign invested economic organization is allocated with an additional securities trading code for its investment activities.

e) Branch of a foreign fund manager in Vietnam is allocated with two securities trading codes, one for the branch and one for managing investment portfolios of foreign investors.

Processes and procedures of securities trading code application, change of trading code information and cancellation of trading codes are stipulated in Decree no.155/2020/ND-CP dated 31st December 2020 by the Government.

Fund services:

VSD is one organizations eligible for providing transfer agent and fund administration services to open-ended funds and ETFs as stipulated in Circular 98/2020/TT-BTC dated 16th November 2020 by the MoF guiding operations and management of investment funds and Circular No.99/2016/TT-BTC dated 16th November 2020 by the MoF guiding operations of securities investment fund managers.

Although fund service is not a core service in the current mandates of VSD and its revenue accounts for just a fraction of VSD total revenue. However, VSD still provides transfer agent services to investment funds for the common interest of the market. VSD's provision of fund service is expected to help reducing expenses for investors and other stakeholders, giving fund managers more choices of service providers and supporting the intensive and extensive involvement by market participants in investment fund related services.

Specific process and procedures are specified in the Guideline on creation/redemption transaction, registration, depository, clearing, settlement and entitlements processing for exchange-traded funds; the Rule on provision of transfer agent service to open-ended funds; and the Rule on organization, provision of personal pension account administration service for voluntary pension funds issued by VSD's Chief Executive Officer.

Securities borrowing and lending:

Securities borrowing and lending (SBL) activities at VSD is implemented for the purpose of: supporting the settlement of securities transactions in case of temporary shortage of securities for settlement by VSD's depository members (DMs) as a result of error corrections; supporting ETF authorized participants (APs) in acquiring sufficient securities for capital contribution and execution of creation/redemption transactions with ETF in accordance with current regulations; supporting DMs cum CMs to borrow GBs for the settlement and transfer of underlying assets upon executing GBs futures if CMs do not have right type and sufficient assets for transfer; supporting trading members who are GBs bidders to borrow GBs for sale. VSD acts as an intermediary and operator of the SBL system to ensure participants' compliance with regulations.

VSD acts as an intermediary and operator of the SBL system to ensure participants's compliance with regulations. SBL activities are executed based on the principle that borrowers and lenders sign SBL contracts before inputting information to the SBL system as regards transactions applied direct negotiation method, or after establishing SBL agreement as regards transactions applied negotiation method via VSD's system. SBL contracts are managed on VSD's system from the time of contract establishment to the time of contract termination to ensure rights and benefits of the parties to the contracts.

Processes and procedures are specified in the Guideline on Securities Borrowing and Lending Activities at Vietnam Securities Depository issued by VSD's Chief Executive Officer.

E-voting:

VSD provides E-Voting service (V-vote system) for 2 events of issuers, including: postal voting (seeking shareholder's written opinion) and voting at AGMs or EGMs.

To vote on V-Vote system, domestic investors should be included in the list of shareholders eligible for voting generated by VSD according to the corporate action notice of issuers; have internet connection; have a mobile phone number provided by a mobile phone service provider in Vietnam. Investors will be provided login accounts by VSD to view and access the materials related to the voting and casting votes on V-Vote system.

Foreign investors cast votes on V-Vote system via authorized representatives who are VSD's depository members or fund certificate distributors where foreign investors open depository accounts/fund certificate trading accounts and are authorized by foreign investors to implement E-voting on V-Vote system on their behalf.

Detailed contents related to VSD's E-voting service are specified in the Rule on providing e-voting service issued by VSD's Chief Executive Officer.

II. 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.

Functions covered: PS, CSD, SSS, CCP, TR

Key considerations:

1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.

VSD's jurisdiction is Vietnam. VSD's implementation of activities including registration, depository, clearing and settlement, corporate actions, CCP for derivatives market, etc., are clearly stated in relevant legal documents.

2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

Upon making guidelines, procedures or contracts, VSD bases on relevant legal documents to ensure that they are enforceable, clear and consistent with legal documents. Wherever appropriate, VSD shall seek consultations from market participants and submits SSC for approval prior to issuance.

3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.

During the process of making guidelines, procedures of business operations, VSD always takes members' concerns into consideration and new requirements from regulators. VSD can explain more about relevant guidelines, procedures through meetings with members, their clients, at conferences to help them fully and exactly understand business operations and activities of VSD if necessary. In addition, VSD also has articles to help public understand more the legal basis of VSD's activities. VSD also explains changes in the draft guidelines to the SSC and the SSC has the right to approve, amend or supplement contents to those proposals.

4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.

As mentioned above, all VSD's guidelines and procedures are based on the Securities Law, Enterprise Law, Civil Code, decrees, circulars and decisions issued by the Government, the MoF and other relevant legal documents, which ensures enforceability and effectiveness of application. In addition, contracts signed between VSD and members/partners are based on securities laws and regulations of the securities market as well as provisions of the Civil Code, other relevant laws, legal documents, etc. In case the members fail to comply, violate VSD's guidelines and fail to take corrective measures as stipulated by regulations, their certificate of membership will be revoked and they are not allowed to provide services to the securities market. Besides, there are also legal documents by the Government regulating the sanction for administrative violations in the securities field and securities market.

5. An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

Currently, VSD is only operating in Vietnam so there will be no risk arising from the possibility of law conflicts among different jurisdictions.

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.

Functions covered: PS, CSD, SSS, CCP, TR

Key considerations:

1. An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.

VSD was established under Decision no. 171/2008/QĐ-TTg by the Prime Minister and is organized under the model of a limited liability company, 100% of charter capital owned by the State. According to the Charter on VSD's organization and operation issued with the Decision no. 2396/QĐ-BTC dated 21st November 2017 by the MoF, VSD's operation targets are to ensure the safety and effectiveness of registration, depository, clearing and settlement, other supporting services; protecting legitimate rights and interest of investors. Currently, in the context of new operation mechanisms and products in the market, VSD has always been promoting its role as a provider of post-trade services for the cash market and derivatives market; diversifying post-trade products; renovating and improving the quality of service provision; facilitating and providing maximum support to issuers, members and investors.

2. An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.

VSD's Charter on organization and operation clearly states the objectives and functions, organizational structure, the management, rights and obligations of the owner; functions, tasks and rights of the BODs, the SB, the CEO, Senior Managing Directors, Chief Accountant and assisting apparatus. This document is sent to relevant authorities, published on MoF's and VSD's websites.

3. The roles and responsibilities of an FMI's BODs (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.

As noted above, the functions, roles and responsibilities of the BODs are clearly stated in VSD's Charter on operation. The BODs is composed of Chairman, Vice Chairman and members of the Board. The maximum number of Board member is 5 and decided by the owner representative. The BODs works in a collective manner and meet once each quarter for consideration and decision on issues within the authority and obligations. The BODs might convene an extraordinary meeting at the request of owner representative or proposal of the Chairman or CEO or over 50% of members of the BODs. The resolutions of the BODs are passed in one of

two forms: voting at the meeting; postal ballots. A meeting of the BODs is held when there are at least two thirds (2/3) of the total number of BODs members' direct presence. Board's members without direct presence might vote in writing. The voting cards must be enclosed in a sealed envelope and sent to the Chairman at least one hour before the meeting. The votes are opened in the presence of all attendees. The resolution is valid from the date of approval or the date of adoption, except the cases which have to be approved by the owner's representative. The resolution is adopted when more than half of attendees approve; if the number of votes is equal, the content with the votes of approval from the Chairman or the person authorized by the Chairman shall be the approved content.

4. The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).

Criteria and conditions for appointing members of the BODs are clearly stated in VSD's Charter on organization and operation. The appointment, re-appointment, dismissal of Board members are in compliance with laws and regulations on managing personnel who holds positions at one-member limited liability company, 100% of charter capital owned by the State.

5. The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.

The roles, responsibilities, criteria and conditions of the Management Board are clearly specified in VSD's Charter on organization and operations. The appointment, re-appointment, dismissal of the CEO shall be made at the proposal of the BODs, Head of Department of Personnel & Training – the MoF after obtaining opinion from the SSC. The tenure of the CEO is 5 years and can be re-appointed. The Senior Managing Directors are appointed, dismissed and replaced by the Chairman at the request of the CEO upon approval of the owner representative.

6. The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.

VSD's risks management is specifically stated in relevant business operation guidelines. VSD's internal control division is established to inspect and evaluate the compliance of divisions as regards regulations, the process of handling business

operations in a periodical, regular and unscheduled manner. The internal control division also performs the assessment and analysis of possible risks, identifies shortcomings in VSD's business operations and makes recommendations to VSD's Management Board for measure and remedy to ensure that VSD operates safely, efficiently and in compliance with laws.

7. The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.

When developing plans, regulations, procedures or contracts, VSD always analyzes and bases on relevant legal documents, needs of issuers, members and investors to ensure that those plans, regulations, procedures and contracts are enforceable, clear and consistent with legal documents, reflecting the legitimate interests of market participants. VSD's business operation guidelines and regulation of service provision, taking into considerations comments by market participants, are submitted to the SSC for approval before being issued. Those regulations and guidelines are posted on VSD's website.

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.

Functions covered: PS, CSD, SSS, CCP, TR

Key considerations:

1. An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.

VSD always focuses on risk management. VSD has internal procedures documents for each business operation that clarify responsibilities of staff members at all levels. The Internal Control Division is the specialized unit that inspects compliance with the laws, regulations, guidelines and internal procedures of VSD, thereby reducing risks in all aspects of VSD's operations.

From 2012, to improve the efficiency of corporate governance, VSD has performed corporate management in accordance with ISO 9001: 2015 certified by the Bureau Veritas Certification Service (BVC) which is recognized by UKAS (UK)

and ANAB (USA). Accordingly, VSD has focused on internal inspection and supervision to monitor the performance of VSD's staff members as well as minimize risks in the pre-trade and post-trade activities undertaken by VSD.

2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.

For business operations with members, VSD has the corresponding guidelines which clearly define the coordination method, responsibilities and obligations of the parties. When implementing new systems, policies, regulations, standards, etc. VSD always consults with DMs to provide information on these changes as well as possible impacts on the system and operations of members. Accordingly, members can adjust their operation procedures so as not to affect the overall operation of the market. In addition, members must also follow the relevant regulations and guidelines to carry out activities related to VSD, VSD also has different penalties for members who violates VSD's business operation guidelines. Every year, VSD seeks comments from members in the implementation and compliance with VSD's regulations and guidelines so as to control and prevent the operational risks that may arise.

3. An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.

VSD regularly reviews and evaluates business operation procedures and system to make appropriate adjustment and minimize risks for VSD and related organizations. As for information systems, quarterly, VSD conducts system checks with DMs, stock exchanges and the settlement bank to detect potential risks for early appropriate measures. VSD is also in close contact with IT providers to ensure safety and efficiency for the system.

4. An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.

VSD's disaster recovery plan (DRP) includes remote data storage and operation support equipment. VSD has a back-up system and can be quickly activated if the main system crashes. VSD conducts DRP test quarterly with related

parties, including the settlement bank, stock exchanges and members to ensure the smoothness of VSD's operations in the event of a risks. In case of system's failure, VSD will report to regulators, and notify members and the public accordingly.

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.

Functions covered: PS, SSS, CCP

Key considerations:

1. *An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.*

- VSD establishes robust framework to manage credit exposures to its participants via various measures such as: requirements for members, supervising members' compliance with related regulations on business operations and imposing penalties on violations. Especially, as CCP for derivatives and cash market, VSD establishes many risk-preventive measures, including: setting up a clearing fund from the CM's contribution for using when CM in default; applying margin model and recalculating margin obligation when there are changes in position, number of contracts, the final trading price in the investment portfolio in the account; establishing position limits and thresholds for use of collaterals to monitor positions and margin on each account.

- With reference to settlement bank risks: the settlement banks for the cash market and derivatives market are selected by SSC basing their meeting requirements on capital, technical infrastructure, etc. Settlement of transactions is

made according to DVP principle on the settlement date. VSD implements trading reconciliation and confirmation with the settlement banks and members to ensure DVP principle.

Functions covered: PS, SSS, CCP

2. An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.

As mentioned in Consideration 1, VSD always identifies sources of credit risks and regularly assess and monitor credit risks. Besides, when cash defaults happen, VSD apply the following remedies:

* For the cash market:

- Mechanism of borrowing from the Compensation Fund is applied to the case where cash shortage for settlement of share/fund certificate transactions of a member is less than VND 25 billion or the total cash shortage for settlement of share/fund certificate transactions of members on the same settlement date is less than VND 30 billion.

- Mechanism of borrowing from Settlement Bank is applicable to the cases of cash shortage to settle members' bond transactions; applicable where cash shortage for settlement of share/fund certificate transactions of a member is from VND 25 billion onward or the total cash shortage for settlement of share/fund certificate transactions of the Members on the same settlement date is from VND 30 billion onward.

VSD will defer settlement of securities transactions in the following cases: Members temporarily in default of cash are ineligible to borrow the Compensation Fund according to the Guideline on management and usage of Compensation Fund or fail to obtain loans from the Settlement bank in accordance with regulations of the Settlement bank; Members temporarily in shortage of securities fail to borrow sufficient securities within the prescribed period.

For debt instruments, members who are indirect payment organizations and are in temporary cash default should borrow from the member settlement bank as regulated.

* For the derivatives market:

- Using cash collateral of defaulted CMs or defaulted CMs' client(s) if they can identify the defaulted client(s).

- In case the cash collateral can not cover the obligated settlement amount, VSD can use cash contribution to the Clearing fund of defaulted CMs.

- Selling securities collateral and securities contribution in Clearing fund of defaulted CM at the price decided by VSD.

- Using cash contribution into the Clearing fund of other CMs at the rate decided by VSD. In this case, VSD shall notify related CMs of details on using the Clearing fund on the using day. Defaulted CMs have to fully refund the assets borrowed from the Fund and pay interest to other CMs at the rate defined by VSD and in line with prevailing laws and regulations.

- Using the settlement risk contingency fund and other legal capital sources of VSD according to VSD's financial mechanism and in line with the current regulations.

Functions covered: PS, SSS, CCP

3. A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.

According to trading regulations, investors can only place selling orders with the securities quantity available in their depository account on the trading day and place buying orders upon sufficient funding in their securities trading account (except margin transactions which are buying transactions with money borrowed from securities companies and purchased securities used as collateral). If depository members are in default, VSD will apply measures, particularly: for cash shortage, borrowing from the Compensation fund and the Settlement Bank will be applied (refer to Consideration 2); for securities shortage, borrowing securities via VSD's SBL system will be used. In addition, during the settlement process, VSD implement reconciliation and confirmation steps with the settlement bank and members to ensure DVP principle on the settlement date.

Functions covered: PS, SSS

4. A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). 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 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 for 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 for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.

VSD, currently as CCP for the derivatives market, uses margin mechanisms and the following financial resources to cover potential credit exposures :

- Applying margin model and recalculating margin obligation when there are changes in positions, number of contracts, the updated trading price in the investment portfolio in the account. Determining the margin rate based on the risk-weighted method, historical price data analysis (VaR).

- Setting up a clearing fund from the CM's contribution for using in case of CMs' default. The size of the clearing fund will be periodically re-evaluated via stress Test. The Clearing fund size is calculated to ensure VSD's solvency in case of 2 CMs subject to the largest potential loss (during the evaluation period) and default.

As regulated, in order to meet risk management requirements for derivatives clearing and settlement, during the trading session VSD shall calculate and define collateral using rate via comparison between the margin requirement and the eligible collateral in each investor's account, through which the amount to be purchased and the risk level of each investor can be determined on the principle that the higher the collateral using rate, the higher the risk level. According to VSD's business guideline, there are two warning thresholds at 80% and 90%, and one limit threshold at 100%, and at each threshold, via the system, VSD can immediately identify breaching accounts and coordinate with HNX and CMs for relevant remedy actions. If an account having collateral using rate touching the warning thresholds, it will be subject to strict monitoring, and if its collateral using rate touches 100%, it will immediately be suspended from trading until the investor supplement collateral or close his positions to reduce the collateral using rate to below 100%.

Functions covered: CCP

5. A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate

decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.

As stated above, VSD applies many risk management measures that include margin requirement and contribution to the Clearing fund.

As regulated, CMs can deposit IM in form of cash and securities that ensures the rate of cash collateral out of total value of collateral assets on each account at any time not lower than the rate of minimum cash collateral as stipulated by VSD. Periodically, VSD shall reassess and redefine the initial margin rate to be in line with the market size and fluctuation. The Clearing fund is formed basing on CMs's cash and securities contribution. The haircut rate for securities and asset contributed to the Clearing fund is valued according to the regulation on collateral valued specified in the Guideline on margining, clearing and settlement of derivatives. Each CM's periodically valued contribution shall not be lower initial minimum amount as required. On monthly basis, VSD shall reassess the Clearing fund size and redefine the contribution amount of each CM based on trading volume, market price fluctuation, financial obligation, risk level and other criteria.

Currently, VSD is just applying cash collateral and cash contribution to the Clearing Fund, accordingly securities are temporarily not accepted as collateral and asset to the Clearing fund in the initial stage of market operation.

Functions covered: CCP

6. In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.

The derivatives market of Vietnam has just come into operation with few products, including VN30 index futures and Government bond futures. These are simple ones subject to little fluctuation and influence from factors such as ressure from the capital and asset market, and thus VSD shall strictly monitor market potential risks via flexible intial margin defining, following market situation in terms of trading volume, market price fluctuation, financial obligations, risk level, etc. until sufficiency of reliable information and data for developing and testing risk scenarios.

Functions covered: CCP

7. An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.

For both cash and derivatives markets, VSD has relevant business guidelines specifying default cases, remedies and obligation as well as responsibilities of related members.

Functions covered: PS, SSS, CCP

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.

Functions covered: PS, SSS, CCP

Key considerations:

1. An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

- VSD determines the list of of eligible collateral for each time period basing on securities liquidity. The list of eligible securities collaterals (including haircut rate) is made public on VSD's webiste. Types of securities which are eligible to deposit collateral approved by VSD: Government bonds, Government - guaranteed bonds, excluding treasury bills; securities listed on SEs (equities, fund certificates excluding ETFs).

Collateral securities should meet the following requirements: not being subject to warning, supervision or trading suspension by SEs; or securities of issuers being in state of liquidation, dissolution, bankruptcy, consolidation or merger; not being pledged, blocked, temporarily held at VSD; being freely transferrable and deposited on securities trading account at VSD; being owned by investor, CM and held in the depository account; being in the list of eligible collateral securities determined by VSD for each period based on their liquidity;

2. An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.

VSD regulates haircut rate tailored for each type of collateral securities. VSD can adjust the haircut rate based on the liquidity and risk level of each type of securities. In case of changing the haircut rate, VSD shall send written notice to CMs within one working day before the effective date.

3. In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.

VSD determines haircut rate basing on the characteristics of each securities, specifically the liquidity and risk level. Haircut rate is thoroughly and carefully calculated to minimize procyclical adjustments.

4. An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.

VSD has not specify avoiding concentrated holdings of certain assets as currently only cash is accepted as collateral. However, in the coming time when securities are accepted as collateral and market size reaches certain level, regulation on concentrated holdings of certain assets is necessary.

5. An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.

This is not applicable at VSD.

6. An FMI should use a collateral management system that is well-designed and operationally flexible.

Investors are required to deposit timely and sufficient IM into the account under VSD's name. CM deposits cash collateral of CM and client into CM cash margin account under VSD's name at SB. Securities collateral are managed at VSD. The collateral management system allows CMs to withdraw and replace securities

collateral. VSD can also monitor collateral using rate, process rights and benefits related to collaterals.

Daily, VSD receives information from SB to for reconciling: balance of proprietary cash margin account under VSD's name at SB with the balance in CM's proprietary cash margin account recorded at VSD; balance of client cash margin account under VSD's at SB with the balance of client cash margin account recorded at VSD; the number of debit and credit transactions on margin and settlement accounts under the name of VSD at SB with the corresponding amount of the transactions processed at VSD. Besides, by end of each trading day, CM receives reports on positions, collaterals on VSD's system to check and reconcile information by each client account and CM's proprietary account, including: balance of positions; balance of cash margin account; balance of securities margin account.

Principle 6: Margin

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

Functions covered: CCP

Key considerations:

1. A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.

At present, the only derivative products in the market are index futures and government bond futures, accordingly relevant legal documents only govern and provide guidelines to these products. For each type of derivatives mentioned above, VSD specifies appropriate margin. For example, beside initial margin (IM) and variation margin (VM), delivery margin is additionally applied to government bond futures.

2. A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.

Collateral is priced according to a formula to ensure margin requirement. Price of securities collateral for evaluation is updated on a daily basis upon closure of the trading session:

- Where securities collateral assets are Government bonds, Government-guaranteed bonds, the price is calculated by applying the model of Yield Curve for Government bonds by SEs.

- Where securities collateral assets are equities/fund certificates listed on SEs, the price is the closing price on the trading day.

3. A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.

As regulated, CMs can deposit IM in form of cash and securities that ensures the rate of cash collateral out of total value of collateral assets on each account at any time not lower than the rate of minimum cash collateral as stipulated by VSD.

VSD determines IM for index futures and government bond future basing on factors, including: fluctuation of futures' trading prices or underlying index (for index futures) or government bond price/government bond index (for GBFs) in the observation period of minimum 90 trading days using VaR tool; expiration date of futures; other elements if found necessary by VSD. The IM is calculated to cover at least 99.86% of estimated distribution of future exposure. Periodically on the 1st, 10th and 20th of each month, VSD shall redefine IM rate.

Currently, VSD is just applying cash collateral (except for delivery margin) and cash contribution to the Clearing Fund, accordingly securities are temporarily not accepted as collateral and asset to the Clearing. VSD is applying the IM of 13% and 5% to VN30 index futures and Government bond futures respectively. This rate is reviewed 3 times a month and can be adjusted wherever necessary.

4. CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have

the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.

Besides day-end VM, VSD also applies in-trading-session VM which is determined on the basis of position profit/loss during trading session of open positions on investor's account and difference between:

- For existing positions in the account: Trading price updated in trading session and final settlement price of the previous trading day (for positions available in account at the end of previous trading day), or settlement price of opening positions (for positions opened during the day);

- For closed positions during the day: Settlement price of closing positions and final settlement price of previous trading day (for positions available in account at the end of previous trading day), or settlement price of opening positions (for positions opened during the day).

VM is only added to the margin requirement in case the position of portfolio in investor's account is in loss status. As requested by VSD, CMs have to supplement collateral in case the margin requirement equals or is more than the total value of eligible collateral in investor's account as regulated.

5. In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.

VSD is the only entity that plays the role of CCP for both derivatives market and cash market in Vietnam and has not connected/linked with other CCPs, and thus offsets or reductions in required margin between products that it and another CCP clear are not applicable.

As Vietnam derivatives market is in the initial stage, VSD shall not apply spread margin for products that it clears (eg. VN30 futures with different expiration months) until sufficient market data is available for exact and reliable assessment on correlation among products.

6. A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and

assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.

Margins applied at VSD, including: IM, DM and VM. These are components of margin requirement - MR. In other words, MR is the total margin value which is deposited by CM to maintain positions under CM's name and calculated during trading session for the position portfolio in each investor's trading account and CM's proprietary account. Investor can open new positions in trading account if collateral using rate of the account is below the level 3 warning threshold. If collateral using rate is at the level 3 warning threshold, investor's account shall be suspended from trading and CM must reduce positions by close-out transactions or deposit additional margin collateral with VSD. VSD specifies warning thresholds and disciplines on violations. In addition, as stated above, on the 1st, 10th and 20th of each month, VSD shall redefine IM rate. If necessary, VSD can review the initial margin basing on real market fluctuation and the new initial margin rate can be applied on the next business day following the announcement date.

7. A CCP should regularly review and validate its margin system.

As stated above, VSD shall periodically review and adjust the margin system.

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.

Functions covered: PS, SSS, CCP

Key considerations:

1. An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.

VSD has management frameworks for liquidity risks derived from members, settlement bank based on relevant legal documents and procedures.

Functions covered: PS, SSS, CCP

2. An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.

VSD has procedures of securities settlement, specifying the coordination and steps of information confirmation between VSD and members, settlement bank to ensure that the payment is made smoothly and on time.

Functions covered: PS, SSS, CCP

3. A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or 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 payment obligation in extreme but plausible market conditions.

VSD applies the principle of DVP for securities settlement, ensuring the delivery of securities at the same time with cash payment on settlement date. This mechanism does not cause liquidity risks for VSD.

Functions covered: PS, SSS

4. A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time 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 payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.

VSD maintains sufficient sources of liquidity to timely meet settlement obligations, taking potential risk into account. Refer to Principle 4 for more information on VSD's liquidity sources.

Functions covered: CCP

5. For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed

foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.

The liquidity sources of VSD as CCP include:

- Margin;
- Contribution into the Clearing fund from CMs;
- The reserve fund for payment risks and other legal capital sources of VSD.

Currently, VSD is applying cash margin and cash contribution into the Clearing fund.

For the cash market, VSD establishes settlement support mechanism (Refer to Principle 4 for detailed information)

Functions covered: PS, SSS, CCP

6. An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.

Besides above liquidity sources, CMs are responsible for making additional contribution to the Clearing fund in accordance with VSD's guideline in the following cases:

- The CM is under alert conditions as stipulated by securities laws and regulation on financial security, bank regulations on capital safety;
- Assets contributed by the CMs are frozen, confiscated by competent state agencies or by court decision;
- Other cases reported by VSD and approved by SSC.

Functions covered: PS, SSS, CCP

7. An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.

As mentioned above, VSD's liquidity resources collected from CMs are margin and contributions into the Clearing fund. Obligations of CMs in ensuring the above liquidity resources are clearly stated in relevant legal documents and VSD's guidelines. If members fail to deposit sufficient margin and make contributions into the Clearing fund as stipulated, depending on the extent of violation, VSD shall apply the following measures: written reminder, censure, and temporary suspension of derivatives clearing and settlement of the CMs, revocation of clearing membership certificate.

As for the cash market, VSD also imposes penalties for violations when DMs do not make contribution to the Compensation fund as regulated.

Functions covered: PS, SSS, CCP

8. An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.

VSD does not use services provided by the central bank.

Functions covered: PS, SSS, CCP

9. An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate,

cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.

VSD will monthly assess the size of the Clearing fund and re-evaluate assets contributed into the Clearing fund to determine CMs' contribution. The Clearing fund size is assessed only when sufficient futures trading price data are available for a minimum of 252 trading days. The valuation method is based on stress test, trading data on the derivatives market and the level of market risk. The Clearing fund size is calculated to ensure settlement capacity for VSD in case 2 CMs with largest potential losses (during the evaluation period) are in default.

Method of determining the Clearing fund size: Based on historical price data and the number of positions hold, VSD apply statistics probability formulas to estimate Probable Maximum Loss (PML) of CMs with the potential maximum price fluctuation. Steps of implementation are as follows: determining the maximum rate of historical price fluctuation; calculating losses with Stress conditions; calculating the maximum losses of each CM based on the number of positions under those CMs' names (PML); determining the size of the Clearing fund; determining the required contribution obligations for each CM based on the rate of total monthly required margin of CM/total required margin of the entire market in the 3 months preceding the calculation period.

VSD has a clear reporting mechanism from working level to decision-making level so that it can adjust its liquidity risk management framework.

Functions covered: PS, SSS, CCP

10. An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.

VSD has clear rule on handling default cases to ensure timely settlement. Refer to Principle 4 for details.

Functions covered: PS, SSS, CCP

Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Functions covered: PS, SSS, CCP

* For cash market:

- Settlement for securities transactions is made in compliance with the principle: securities delivery and cash transfer shall be simultaneously carried out (DVP principle - Delivery Versus Payment) on the settlement day. The settlement of debt instruments is made trade-by-trade with the settlement day which is the working day after the trading day (T+1). The settlement time for debt instruments from 9am to 3.30pm on the settlement day. The processes and procedures are specified in the Guideline on settlement of Government debt instruments, Government-guaranteed bonds issued by the Policy bank and Municipal bonds

- VSD makes settlement for transactions of corporate bonds, shares, and fund certificates and covered warrants based on multilateral netting. The settlement cycle is the 2nd working day after the trading day (T+2) for transactions of shares, fund certificates and covered warrants, T+1 for corporate bonds. The cut-off time for fixing cash balance is 11am on the settlement date and the settlement is completed by 4pm (shares, fund certificates and covered warrants) and 2.30 pm (for corporate bonds) on the settlement date.

* For derivatives market:

- After trading, VSD will calculate profit/loss and maturity settlement obligation for each account of investors and determine net settlement obligation for each CM. Report on settlement obligation are sent to CMs at the end of the trading day.

- Derivatives settlement includes daily settlement (settlement of profit/loss of positions) and mature settlement. Settlement of position profit/loss is made in cash form and completed by 11am of the working day immediately after the day of announcing position profit/loss.

+ Index futures settlement: the settlement is completed with settlement of daily position profit/loss on the working day after the last trading day

+ Government bond futures settlement: GBF is settled in physical delivery form with the final settlement day to be the third working day after the last trading day (E+3). From the day after the last trading day (E+1) to the final settlement day (E+3), CM is obligated to deposit margin to ensure implementation of GBF

settlement as stipulated by laws. The buying CM has to transfer sufficient amount and right type of confirmed bonds into securities margin account under VSD's name, the selling has to pay the full amount into the payment account at the Settlement bank.

+ Processes, procedures and method of determining settlement obligation of Index futures and GBF futures are specified in VSD's Guideline on margining, clearing and settlement of derivatives.

Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Functions covered: PS, SSS, CCP

- Money payment for debt instruments is conducted in central bank money (State Bank of Vietnam). Settlement of remaining securities, including derivatives, is made through settlement banks who are commercial banks.

SSC selects commercial banks as settlement banks. Commercial banks that are selected as settlement banks have to meet criteria on capital, financial criteria, infrastructure, etc. and assume responsibility of fulfilling obligation at the request of SSC, VSD and regulation on securities registration, depository, clearing and settlement. In addition, VSD also establishes close coordination mechanism with the Settlement banks, clearly stating the mechanism of contingencies, plans for dealing with payment system risks at the Settlement bank (data reconciliation, replacement system, etc.)

Principle 10: Physical deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

Functions covered: CSD, SSS, CCP

Key considerations:

1. An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.

VSD as a CSD and CCP does not make delivery of physical commodities. VSD transfers securities in the form of book entry after the certificate of share ownership/passbook is lodged at VSD.

2. An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.

As mentioned above, VSD makes securities settlement in the form of book-entry at VSD. VSD as a central depository will safekeep securities for delivery.

Principle 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 securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

Functions covered: CSD

Key considerations:

1. A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.

To ensure the integrity of issued securities, minimize and manage risks associated to securities safekeeping and delivery, VSD manages and monitors information of securities registered at VSD. When the number of securities increase/decrease due to issue and cancellation of securities, VSD controls the quantity of securities and value of capital increase or decrease through the dossiers sent to VSD by issuers. The issuers are responsible for timely and accurately providing VSD with necessary information or documents to control the securities quantity, securities registration as stipulated by laws. Accordingly, VSD will confirm transfer of securities ownership title, calculating and allocate rights to securities holders.

In addition, VSD daily checks the total number of securities at VSD for each issuer to ensure that the total number of securities recorded at VSD equals to the number of securities in VSD's book. To conduct periodical check, VSD coordinates with issuers (or issuers' agents) in verifying the total quantity of an issuance to ensure that the outstanding number of securities in the system equals to the quantity of issued into the system.

2. A CSD should prohibit overdrafts and debit balances in securities accounts.

VSD does not make overdrafts in securities accounts.

3. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.

VSD maintains securities in an immobilized form for book-entry transfer.

4. A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.

The Securities Law, sub-law legal documents and VSD' business guidelines have provisions to protect assets against custody risks (refer to Part I.4 (Securities Depository) for further details.

5. A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.

VSD's system is designed to ensure separation between VSD and its members' assets, assets among members and is able to keep track of each investor's account information. VSD has rules on opening depository account of DM at VSD and client's securities depository accounts at member to ensure that all information of client's securities depository accounts at those members are monitored accurately and used for the right purpose.

6. A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.

VSD's activities are closely monitored and managed through functional divisions to avoid related risks. As mentioned in above principles, the Internal Control Division of VSD with the function of periodically checking and assessing divisions in the Head office and Branch as regard compliance with rules and regulations, VSD's procedures of handling business operations; evaluating, analyzing possible risks, defining shortcomings of VSD's business operations and making proposals to VSD's management board to take measures of handling and remedying for the safety, efficiency, compliance with laws of VSD's activities. Besides, VSD's General and Legal Affair Division also performs legal appraisal of draft regulations, guidelines, procedures within VSD's authority of promulgation and major draft contracts to make sure compliance with laws and avoid legal risks involved.

Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Functions covered: PS, SSS, CCP

VSD closely takes measures to eliminate main risks, ensuring that the final settlement of an obligation occurs if and only if the final settlement of a linked obligation also occurs, regardless of whether FMI make gross or net settlement and when settlement obligation is made. Refer Principle 7 (Liquidity risks) and Principle 8 (Settlement finality) for further details.

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Functions covered: PS, CSD, SSS, CCP

Refer to information in Principle 4 (Credit risk) and Principle 7 (Liquidity risk)

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.

Functions covered: CCP

Key considerations:

1. A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.

To conduct derivatives transaction, investors must open derivatives trading accounts at trading members and margin accounts at the appointed CM. In cases an investor has an ordinary securities trading account opened at the securities company

who is also a derivatives trading member, the investor may use the above-mentioned securities trading account for executing derivatives transactions after opening margin account at the appointed CM.

VSD is responsible for opening cash margin accounts under the name of VSD at the settlement banks and securities margin accounts at VSD to collaterals and execute settlement obligations for novation under the name of CM. The margin accounts of members must be established to ensure separation of CM's assets from VSD's assets; separation of each CM's assets, and separation of CM's assets from their clients's assets.

VSD establishes an information management system for position fluctuations, daily position profits/losses, IM value, margin value as per requirement, value and portfolio of collateral for each account of investors, CMs. Besides, VSD has rules on client porting (transfer of a default CM's clients to a replacement CM). In doing so, VSD can protect clients' position of members and related collateral from members' insolvency or bankruptcy.

2. A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.

As stated above, VSD establishes an information management system for position fluctuations, daily position profits/losses, initial margin value, margin value as per requirement, value and portfolio of collateral for each account of investors, CMs.

3. A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.

As stipulated, in cases of CMs' default, VSD is allowed to transfer collateral assets and open positions of clients to replacement CMs as appointed by VSD.

4. A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.

VSD has set specific regulations on rules, policies, and procedures related to the separation and transfer of positions of members' clients and the collateral

involved in the Guideline on margin, clearing and settlement of derivatives which is available on VSD's website.

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.

Functions covered: PS, CSD, SSS, CCP, TR

Key considerations:

1. An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

VSD was established under the decision of the Prime Minister, is a one-member limited liability company that are wholly-owned by the State. The MoF shall exercise the rights, responsibilities, and obligations of the owner's representative agency for VSD. VSD has a general business risk management mechanism that allows monitoring and managing risks with clear obligations and responsibilities. For example, VSD's BODs takes over and is accountable to the owner's representative agency for the management and efficient usage of capital, assets and other resources assigned to VSD by the State; makes timely report to the owner's representative agency on the management and efficient usage of capital, assets and other resources assigned to VSD by the State; makes timely report to the owner's representative agency when operating at loss, failing to ensure the settlement capability or fulfill its assigned tasks and other violations; takes responsibility for any violations that cause loss of capital or assets of VSD. The CEO is responsible for managing day-to-day operations of VSD via the objectives and plans in line with the Charter and resolutions of the BODs.

2. An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

VSD has a charter capital of VND1,000 billion (one thousand billion VND) and VSD is responsible for the debts and other property obligations of VSD within the allocated capital as regulated. As stated in the above principles (Principle 4, Principle 5), for both cash and derivatives markets, VSD efficiently applies risk preventive and management measures to ensure the continuity of important activities and services at VSD. In addition, VSD also sets up a business operation compensation fund to cover the loss of customers due to technical breakdown, employee negligence during the operation and sets up a settlement risk compensation fund to cover financial losses (if any) related to derivatives clearing and settlement.

3. An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

Refer to the information in consideration 2 above.

4. Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.

Refer to the information in consideration 2 above.

5. An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the BODs and updated regularly.

The adjustment of VSD'S charter capital shall be executed according to the provisions of current laws and regulations. In order to adjust the charter capital, VSD shall make a proposal for adjusting the charter capital to report to the owner's representative agency for submitting to the Prime Minister for decision in accordance with related regulations.

In addition, to increase the revenue, VSD builds up plans on new and value-added products development. New product development projects shall be submitted to the SSC and MOF for approval.

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.

Functions covered: PS, CSD, SSS, CCP

Key considerations:

1. An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

Deposited securities of investors and DMs are held at VSD and managed separately from VSD's assets. As stipulated, VSD or DMs shall not use securities of customers deposited at VSD or DMs to pay debts of VSD or DMs (refer to Principle 11 for more details).

VSD deposits assets including cash of VSD, the settlement compensation fund contributed by DMs (for CSD functions) and the clearing fund contributed, cash margin by CMs (for CCP functions) at large commercial banks under SBV's management and supervision. These banks are selected by SSC on the basis of meeting certain criteria on capital, facilities and under the supervision and inspection by the SSC.

2. An FMI should have prompt access to its assets and the assets provided by participants, when required.

VSD deposited cash assets at large commercial banks so the access to VSD's assets and its member were implemented in a quick and timely manner.

3. An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

Refer to the information in considerations 1 and 2 above.

4. An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

VSD uses the owner's equity to invest and contribute capital to other economic organizations to provide services in developing infrastructure, technical services, and information provision services within the scope of VSD's functions and tasks to develop the securities market upon being approved by the owner's representative.

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.

Functions covered: PS, CSD, SSS, CCP, TR

Key considerations:

1. An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.

VSD formulates guidelines and procedures for internal control of VSD's operations, which include quality policy (VSD's engagement with customers, employees and partners). The quality handbook is the policy and quality guide that is committed to implementing by VSD. The internal control process of VSD's operations applied to business operations of the system, controlling compliance with internal regulations, and procedures of VSD's activities.

VSD has developed and completed the internal risk management mechanism as well as the internal procedures on business operations processing to be in accordance with ISO 9001: 2015, in order to specify each step of the process and the authority from the staff, management and approval level towards transparency, facilitating members and issuers when dealing with related tasks, and contributing to reducing risks for the whole market.

As a CCP, VSD has developed an overall risk management mechanism, applied risk management measures and procedures to control potential basic risks.

2. An FMI's BODs should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.

The CEO is authorized by the BODs to issue business guidelines and operational procedures of VSD, whereby the roles and responsibilities for dealing with operational risks are clearly defined. The SB plays an important role in monitoring and assessing rights and obligations of members of the BODs and CEO. At the level of compliance monitoring, VSD's Internal Control Division is responsible for assessing and analyzing the risks that may occur, identifying the

shortcomings in the VSD's business operations and proposing measurements to VSD's Management Board, in order to ensure safe, effective and lawful operation of VSD; to coordinate with relevant sections in inspecting, evaluating and analyzing cases and incidents occurring in business operations of VSD and proposing precautions. The Internal Control Division shall build up monthly, quarterly and annual internal control plans for submission to the Management Board for approval. Systems, policies, procedures and control measures are constantly evaluated and reviewed by VSD to be in line with new market regulations and requirements.

3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

Reliable targets related to VSD's performance are mentioned in the quality policy, in which VSD is committed to:

- With customers: improving the quality of services, constantly innovating, and diversifying services to meet demands of domestic and foreign members and investors.

- With staff members: Regular training staff to meet all job requirements; creating a healthy and fair working environment so that employees can maximize their creativeness and career development opportunity.

- With partners: establishing relations with partners on the basis of mutual understanding, maximizing cooperation strength, long-term bond, shared success and sustainable development. Actively expand international cooperation activities, and moving forward to provide post-trade products and services according to international standards.

Every year, VSD establishes quality objectives for its professional and general activities.

4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

VSD regularly performs hardware checking to evaluate the scalability of the system against the pressure of increased transaction volume. VSD formulates regulation to ensure the security and safety of IT system so that business operations can be conducted safely, smoothly and continuously. E.g. regulation on managing and using VSD's IT system, regulation on the process of operating and handling IT system breakdown at VSD, regulation on controlling the access to database and supervising VSD's IT infrastructure; process of monitoring, backing up and updating IT system at VSD.

5. An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

Physical security

With the purpose of ensuring the building security and operation business system, VSD has a team being in charge of activities related to the protection, fire prevention, and hygiene to ensure the organization's security, order, and safety. The entry and exit to VSD building is supervised by the security guard and receptionist. For the server room, there is a camera system, and only IT staff in charge and the authorized person are allowed to enter and work in the server room; for those people who visit or work at the server room, the approval of VSD's manager is required. VSD also specifies rules for managing the server room.

Information security

VSD has a regulation on controlling the access to VSD's database and monitoring IT infrastructure and regulation on managing and using VSD's IT system. Accordingly, the database is only accessed by authorized persons using system access passwords with specific permissions. VSD clearly stipulates the principles to control the access to business database; the time and level of access to the business database for access of each group of staff; and the process of monitoring and coordinating process when there are abnormal database access warnings. In addition, these regulations of VSD also state the management and usage of IT system, business data security, system security and virus prevention to ensure the principle of security protection.

6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.

VSD has developed a business continuity plan. VSD has the main database system located at the head office and backup system located at the Ho Chi Minh branch connected via one of two connection lines (the main line of VSDC, the backup line using network infrastructure of the MoF). In case of the main system failure, the backup one will be activated to minimize the interruption period (under 2 hours). After recovering the main system, all business operations will run as originally designed.

The business continuity plan includes onsite and offsite backups, recovery of business software systems in case of the main system failure, the main system and

backup system failures, in case of disconnection between the head office and branch, between the head office and the DMs, Software error, and power failure.

VSD tests the business back-up system quarterly with related parties including settlement banks, stock exchanges and members.

Every month, the IT Division gathers information on IT issues and reports to VSD's BODs and makes recommendations if relevant.

7. An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.

The main risks of VSD are the counterparty risk (from members) and settlement bank risk. To control the potential risks caused by members, VSD has developed specific regulations on criteria for membership, the mechanism for handling money and securities default and members' violations by level (specifically for different types of members). For the settlement bank risk, VSD establishes a coordination mechanism with the settlement bank, clearly stating backup mechanism and risk handling methods for the payment system at the bank (data reconciliation, alternative systems, etc.) (refer to Principles 3, 4 and 7 for further information).

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.

Functions covered: PS, CSD, SSS, CCP

Key considerations:

1. An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.

VSD allows fair and open access to its services and publishes its membership criteria on the website via the relevant regulations and guidelines.

Organizations wishing to become VSD's DM or CM need to meet the following criteria:

* Conditions for DMs:

- Having a registration certificate of securities depository activities granted by the SSC.

- Having at least one member of the Management Board assigned to be in charge of registration, depository and clearing activities

- Having staff members working in the depository department attending VSD's business training course.

- Having operational procedures for securities registration, depository, clearing, and settlement in accordance with the current laws and VSD's business guidelines.

- Having a software system for securities registration, depository, clearing and settlement which is connected to VSD's terminal-based gate way or ISO message-based gateway and the software for managing securities registration, depository, clearing, and settlement activities in accordance with the current laws and VSD's business guidelines.

Direct account holders: Opening accounts for lodging their securities and using services of securities registration, depository, clearing, and settlement of VSD. VSD provides services for direct account holders on the basis of contracts signed between two parties.

CSDs may open accounts to provide services related to securities registration, depository, clearing and settlement activities, based on the written agreement with VSD after being approved by SSC.

Conditions for CMs: Organizations registered to be VSD's CMs should fully meet requirements for providing clearing and settlement services for derivatives provided by the SSC on capital, financial status, and system infrastructure, personnel and connection with VSD's business software system. A securities company registered to be VSD's CM have to complete registration procedures to be derivatives trading members with SEs beforehand.

2. An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.

Criteria for participation:

The member criteria of VSD are developed in line with the Securities Law and relevant legal documents. In order to ensure safe and efficient operation, only organizations that meet the requirements as regulated are eligible to become VSD members. The criteria for DMs and CMs are different depending on the type of the service and the level of risk involved. In addition to its members, there are other entities who are direct account holder or opening accounts in special cases.

Information disclosure:

Regulations and business guideline related to VSD's membership are available on VSD's website in the Legal documents and are not subject to access restriction. In addition, under “Depository members” and “Clearing members” section on VSD's website, the basic and brief information on member criteria is also available.

3. An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

Compliance Management:

VSD requires DMs and CMs to report in a periodic and extraordinary manner on securities depository, clearing and settlement activities of members and investors.

Violations handling and operations suspension:

VSD shall impose the following penalties on DMs depending on the level of their violations of VSD’s business guideline/regulations: written reminder; censure; temporary suspension of custody activities; temporary suspension of clearing and settlement of securities transactions; revocation of DM certificates. The penalties on violations will be posted on VSD's website and reported to the SSC. Punished DM is responsible for information disclosure on DM's website. If a DM who is a trading member is subject to trading suspension or transaction pausing for membership termination by SEs, VSD shall stop providing clearing and settlement services for securities transactions, and send written notice to relevant DMs and disclose the information on VSD's website at the same time. If a DM who is a trading member is subject to membership termination by SEs, VSD shall issue a decision on suspending provision of clearing and settlement services for securities transactions to that DM.

VSD shall impose the following penalties on CMs depending on the level of their violations of VSD’s business guideline/regulations: written reminder; censure; temporary suspension of clearing and settlement of derivatives transactions; revocation of CM certificates. The penalties on violations will be posted on VSD's website and reported to the SSC. Punished CM is responsible for information disclosure on CM's website. If a CM who is a trading member is subject to trading suspension, or transaction pausing for membership termination by SEs, or subject to suspension of providing clearing and settlement services for derivatives transactions by SSC, VSD shall announce temporarily stopping to provide clearing and settlement services for derivatives to that CM within one working day from the date

of notice receipt from the SEs and SSC (suspending opening of new positions of the account under CM's name, excluding opposite transactions to offset existing positions) and send written notice to related CM and disclose information on VSD's website at the same time.

Principle 19: Tiered participation arrangements

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

Functions covered: PS, CSD, SSS, CCP

Key considerations:

1. An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.

As a CCP for the derivatives market, VSD's members consist of two types: GCMs and DCMs. CMs include securities companies, commercial banks, and foreign bank branches signing clearing and settlement contracts with VSD and directly use VSD's services.

GCMs shall be allowed to clear and pay their own derivatives transactions as well as their clients' and provide clearing and derivatives settlement services to trading members who are not CM and these members' clients. Non-CMs sign clearing and settlement entrusting contracts with CMs. Contracts must contain provisions stating that CM is the authorized representative of brokerage clients, and clearing and settlement clients, is the holder of these clients' positions and shall be responsible for fulfilling the client's obligations to VSD. VSD establishes management systems and principles to manage information on position fluctuations, daily position profit and losses, initial margin value, margin requirement, value and portfolio of collateral under each account of investors, DMs. Accordingly, VSD can obtain detailed information on non-CMs and non-CM's clients, thereby preventing and managing related risks.

Refer to Principle 14 for further details.

2. An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

GCMs sign entrusting contracts with non-CMs and are responsible for fulfilling their obligations to VSD.

3. An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose

transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.

Refer to Consideration 1 and 2 for further information

4. An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

As mentioned above, a non-CM signs entrusting contracts with a GCM to execute clearing and settlement operations for their transactions. To minimize counterparty risk, VSD applies a series of measures as follows:

- Establishing clearing membership criteria and supervise compliance with these criteria during the time an organization being VSD's CM; supervising observance of regulations related to derivatives securities clearing and settlement operations of CMs and apply penalties on their violations.

- Setting up a clearing fund from the contribution of CMs for using in case of CMs' default. The scale of clearing funds will be periodically re-evaluated based on stress test.

- Applying margin model and recalculating margin obligation when there are changes in the number of position, contracts, last trading price of products in the portfolio of the account.

- Determining the margin rate based on the risk-weighted method, historical price data analysis (VaR).

- Establishing position limits and collateral using thresholds to monitor positions holding and margins on each account.

- Using sources of settlement guarantee support in case of CMs' default or bankruptcy.

Refer to Principle 4 for specific information.

Principle 20: FMI links

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

Functions covered: CSD, SSS, CCP

This principle is not applicable at VSD.

Principle 21: Efficiency and effectiveness

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

Key considerations:

1. An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.

As a CSD in Vietnam securities market, VSD always strives to effectively provide post-trade services; ensure the national securities settlement system to operate safely and securely and help the securities market operates smoothly and effectively. Over the past 15 years, VSD has non-stop improved its existing services as well as launched value-added services to support its members, issuers, and investors, contributing to the development of the market in a sustainable and safe manner. For example, VSD has shortened settlement cycle from T+3 (AM) to T+2 (PM), provided transfer agent services for open-ended and ETF funds, provided SBL services and GBs loan for sale, issuing online trading codes for foreign investors, shifted the function of cash payment for GBs transactions from the commercial bank to SBV, launching e-voting services, implementing derivatives clearing and settlement service...

Annually, at the Membership Conference organized by VSD, besides answering questions, VSD also receives members' comments to study, amend and supplement VSD's business guidelines. If there are difficulties arising from related legal documents, VSD shall, together with its members, propose to SSC, MoF and relevant agencies to amend appropriately. VSD always works closely with relevant agencies, authorities at all levels, members, issuers and investors to accomplish the assigned tasks well, contributing to stable and sustainable development of securities market in accordance with international practices and in line with Vietnam's context. In addition, VSD also conducts surveys on customers' satisfaction with VSD's service quality in order for completion and further improvement, elimination and avoidance of inappropriateness in the system and service delivery process.

2. An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.

In VSD's restructuring plan for 2016-2020 period, development strategy towards 2025 and vision to 2030, general development goals and specific goals are as follows:

General targets

- Completing the organization and governance restructuring of VSD in line with the sector's general orientation

- Completing and developing a system of securities registration, depository clearing and settlement and diversification of post-trade services for transactions on the cash market, the derivatives market and cross-border transactions according to international rules and standards.

Specific targets

- Renewing VSD's organizational structure, applying best corporate governance rules to improve VSD's performance;

- Completing securities clearing and settlement system according to the best international rules in order to raise the efficiency of risk management and ensure safety and smoothness for transactions on the securities market;

- Diversifying services to create added value and maximize benefits for users of VSD' services;

- Expanding international cooperation and establishing service linkage with other CSDs and clearing houses regionally and worldwide to share and develop post-trade services for cross-border transaction, contributing to the integration process with the regional and world securities markets.

- Completing the investment into physical facilities and modernization of technical infrastructure to raise its operational efficiency and readiness to meet development requirements of the securities market;

- Building highly qualified human resources to meet VSD's development goals.

The above are general and specific goals that are long-term and throughout the development process of VSD. Depending on each stage of development, VSD will have specific plans and solutions to realize the above goals.

In addition, annually, VSD establishes a quality targets in line with developing orientation, based on its, VSD develops plans, clearly defines specific tasks, the required resources, and delegating tasks

3. An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

In order to contribute positively to maintenance of a secure and smooth settlement system of the securities market, VSD issues a quality policy, making commitments to customers, employees, and partners. Every year, VSD leaders review performance and effectiveness of the quality system and discuss quality

targets to improve the effectiveness of the quality system and plan necessary resources to achieve them.

In addition, VSD periodically evaluates the effectiveness and efficiency basing on the set targets, work plans, business operations, IT system, feedback from members and issuers using VSD's services. This evaluation is implemented via meetings of the BODs, Management Board, weekly meetings, or meetings between VSD's Management Board and related departments.

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.

Functions covered: PS, CSD, SSS, CCP, TR

Currently, VSD is using terminal-based gateway and ISO message-based gateway (based on ISO 15022) to exchange information with its members, handle related business operations and generate business reports. VSD is considering the possibility of adopting ISO 20022 standard. In addition, VSD applies digital signatures (CA) in VSD's business operations with its members. This is a combination of encryption and data authentication, integrated with the business operation system to ensure data integrity, authentication, safety, security, and non-repudiation for the system.

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, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Functions covered: PS, CSD, SSS, CCP

Key considerations:

1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.

The activities of VSD are clearly defined in relevant legal documents, including: the Securities Law, sub-law legal documents, Guidelines, and Procedures.

These documents are published in the form of written documents to members and related organizations, and posted on VSD's official website: <https://vsd.vn/en/lel>.

2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.

Information related to VSD's general activities and business operations is available on VSD's website. Members can easily access this information on VSD's website without any restrictions. VSD's business guidelines clearly state the obligations and rights of its members when using services provided by VSD as well as the criteria for becoming a DM and CM of VSD.

3. An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.

Before any change in the VSD's rules or procedures arising may be from the legal requirements, launch of a new system, new products/services... VSD organizes workshops, business training courses or develops testing plans with members to help them understand the system, implementing steps, check and assess the availability & connectivity between VSD's system and its members. Annual Membership Conferences are to be held to discuss difficulties and develop timely measures in the implementation of professional operations.

Members may send written queries regarding regulations, processes, and system to VSD or via the hotline for feedback. In addition, to help members have a quick and overall understanding of VSD's businesses, VSD has posted on VSD's website the introduction of VSD's procedures of business operations, clarifying steps, order, mode of implementation, dossiers, processing time, etc.

4. An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.

VSD is organized as a one member limited liability company, with 100% of charter capital owned by the State. As a result, the price applicable to provision of services are regulated by legal documents stipulating service prices for VSD, institutions and individuals issued by the MoF. These legal documents are published on MoF's and VSD's website.

5. An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

The first disclosure of VSD under the CPMI-IOSCO PFMI Disclosure Framework was public in 2018. VSD will try to update the information whenever

there is significant change related to VSD at least every 2 years as recommended by CPMI-IOSCO.

In addition to the regulations on business operation, information on daily operations, statistics, member data are published in a sufficient and timely manner in Vietnamese and English on VSD's website.

Principle 24: Disclosure of market data by trade repositories

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

Functions covered: TR

This principle is not applicable to VSD.

III. List of publicly available sources

Information is published basing on legal documents including laws, decrees, circulars, decisions in the securities sector and securities market as well as professional regulations at VSD, posted on VSD's website: <https://vsd.vn/en/lel>.