Central Depository Company of Pakistan Limited

Self-Assessment of Observance of the CPSS-IOSCO Principles for Financial Market Infrastructures
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### GLOSSARY

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACG</td>
<td>Asia-Pacific Central Securities Depository Group</td>
</tr>
<tr>
<td>AUC</td>
<td>Assets under Custody</td>
</tr>
<tr>
<td>BPO</td>
<td>Business Process Outsourcing</td>
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<tr>
<td>BCP</td>
<td>Business Continuity Plan</td>
</tr>
<tr>
<td>CCP</td>
<td>Central Counterparty</td>
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<tr>
<td>CCO</td>
<td>Chief Compliance Officer</td>
</tr>
<tr>
<td>CDS</td>
<td>Central Depository System</td>
</tr>
<tr>
<td>CDS Elements</td>
<td>Participants, Account Holders, Issuers and Eligible Pledgees.</td>
</tr>
<tr>
<td>CSD</td>
<td>Central Securities Depository</td>
</tr>
<tr>
<td>DF</td>
<td>Disclosure Framework</td>
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<tr>
<td>ERM</td>
<td>Enterprise Risk Management</td>
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<td>ETP</td>
<td>Element Training Program</td>
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<td>FMI</td>
<td>Financial Market Infrastructure</td>
</tr>
<tr>
<td>IOSCO</td>
<td>International Organization of Securities Commission</td>
</tr>
<tr>
<td>ISO</td>
<td>International Standards Organization</td>
</tr>
<tr>
<td>KC</td>
<td>Key Consideration</td>
</tr>
<tr>
<td>MIP</td>
<td>Master Implementation Plan</td>
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<tr>
<td>NCCPL</td>
<td>National Clearing Company of Pakistan Limited</td>
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<tr>
<td>NCSS</td>
<td>National Clearing and Settlement System</td>
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<tr>
<td>NMS</td>
<td>Notice Management System</td>
</tr>
<tr>
<td>PFMI</td>
<td>Principles for Financial Market Infrastructures</td>
</tr>
<tr>
<td>PS</td>
<td>Payment System</td>
</tr>
<tr>
<td>PSX</td>
<td>Pakistan Stock Exchange</td>
</tr>
<tr>
<td>RAC</td>
<td>Regulatory Affairs Committee</td>
</tr>
<tr>
<td>S2B</td>
<td>Straight through Banking</td>
</tr>
<tr>
<td>SBP</td>
<td>State Bank of Pakistan</td>
</tr>
<tr>
<td>SDF</td>
<td>Securities Deposit Form</td>
</tr>
<tr>
<td>SECP</td>
<td>Securities and Exchange Commission of Pakistan</td>
</tr>
<tr>
<td>SLA</td>
<td>Service Level Agreement</td>
</tr>
<tr>
<td>SOP</td>
<td>Standing Operating Procedure</td>
</tr>
<tr>
<td>SSS</td>
<td>Securities Settlement System</td>
</tr>
<tr>
<td>STP</td>
<td>Straight Through Processing</td>
</tr>
<tr>
<td>TR</td>
<td>Trade Repository</td>
</tr>
<tr>
<td>TREC</td>
<td>Trading Right Entitlement Certificate</td>
</tr>
<tr>
<td>UIN</td>
<td>Unique Identification Number</td>
</tr>
<tr>
<td>SWF</td>
<td>Securities Withdrawal Form</td>
</tr>
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<td>WFC</td>
<td>World Forum of CSDs</td>
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</table>
1. Executive Summary

This Self-Assessment Report, produced during the year 2021 relates to Central Depository Company of Pakistan Limited ("CDC") which is the sole depository in Pakistan and provides custody services for securities pertaining to a wide range of domestic and international participants.

The framework of CDC provides an integrated and harmonized custody solution for Participants, Account Holders, Issuers and Eligible Pledgees (collectively known as “CDS Elements”).

CDC has appropriate, clear and transparent rules and procedures in place to run its operations, support the stability of the broader financial system and to monitor, manage and minimize the risks involved.

The activities of CDC are supplemented by a sound legal basis and adequate governance arrangements. Self-assessment and performance measurement are some of the important measures applied by CDC to help ensure the effective safekeeping of assets and demonstrate a risk-managed approach towards the delivery of new and existing operational services. In this context, the management of CDC is pleased to provide with this CDC Self-Assessment Report.

Overall, CDC is compliant with the applicable CPSS-IOSCO Principles except couple of areas marked as not applicable.

2. Summary of major changes since the last update of the disclosure

CDC continues to invest in regulation and technology-driven initiatives that not only ensure compliance and technological advancement with the market infrastructure regulatory framework but also support cost mutualisation and open access. In financial market context, shaped by an evolving economic and political environment, clients and other market participants seek to work with a trusted, stable market infrastructure that provides greater collateral mobility and access to liquidity, as well as operating safety, speed and resilience through higher levels of process automation. Accordingly, CDC has brought up various reform measures during the period and made necessary regulatory changes (where required) to facilitate the market.

CDC’s first disclosure of information based on CPSS-IOSCO’s "Principles for financial market infrastructures" was made on July 28, 2015. A summary of the changes made since the previous disclosure is as follows:

- Diversification of online payment options for the IAS customers;
- Automation of existing manual processes;
- Facilitation of the Non-Resident Pakistanis diaspora to avail the various investment options introduced under the Roshan Digital scheme. Capital Market investment facilitation for Roshan Digital Account holders;
- eIPO Master TREC Holder Facility; and
3. General Background on the FMI

General description of the FMI and the markets it serves

With an ever increasing exponential growth in the Pakistan Capital Market during the early 1990s causing a huge increase in trading volumes, the physical handling of paper-based shares / certificates not only became laborious but also time consuming. It was in this perspective that CDC was incorporated to implement and operate a depository system and eliminate the tedious process of physical shares handling and transfer.

CDC was incorporated as a public limited company on January 21, 1993 and received certificate of commencement of business on August 10, 1994. The principal business activity of the Company was to act as a depository for book-entry securities. The registered office of the Company is situated at CDC House, 99-B, Block B, S.M.C.H.S. Shahrah-e-Faisal, Karachi, Pakistan.

Experts from PriceWaterhouseCoopers (PWC) conducted a study in 1993 to develop a conceptual framework for the depository. The study was sponsored by the United States Agency for International Development (USAID) and its report laid the foundation for depository design.

In November 1994, the Board of Directors at CDC awarded a turnkey contract to the IBM consortium for the implementation of this system in Pakistan. The IBM consortium proposed a comprehensive Master Implementation Plan (MIP) to the CDC Board after a detailed analysis of the following:

- National requirements
- Company and Banking laws
- Regulations & Procedures
- Financial and organizational aspects of the project

In April 1995, this MIP was approved by the CDC Board. The infrastructural development included development and testing of software, hiring and training of personnel and establishment of CDC offices. The CDC offices at Lahore and Islamabad were connected to the head office through VSAT link leading to the development of a geographically neutral depository.

These long term and broad-spectrum efforts finally resulted in the launch of the Central Depository System on September 3, 1997.

Central Depository Company of Pakistan Limited (CDC) was formed pursuant to the Central Depositories Act 1997, which was passed on June 10, 1997 which envisaged establishment and
operation of book-entry systems for the transfer of securities by central depository companies. CDC was registered as central depository company under the Central Depository Companies (Establishment and Regulation) Rules, 1996 and after promulgation of the Securities Act, 2015 and the Central Depositories (Licensing & Operations) Regulations, 2016. CDC is now licensed as central depository under this legal framework.

Central Depository Company of Pakistan Limited Regulations ("CDC Regulations") are approved by the Securities and Exchange Commission of Pakistan under the Central Depositories Act, 1997 and the Securities Act, 2015. Company's business operations and affairs are governed under the aforesaid legal framework.

We are regulated by Securities and Exchange Commission of Pakistan ("SECP") and have offices in Karachi, Lahore and Islamabad.

In the past two decades, Central Depository Company has evolved as the infrastructure backbone and the Ultimate Custodian of the Pakistan Capital Market. Established as a central securities depository, CDC is the sole entity handling the electronic (paperless) settlement of transactions carried out at the Pakistan Stock Exchange ("PSX"). Through efficient functioning of CDC, all the market settlement is in book entry form.


Primarily, CDC's function was to operate the Central Depository System (CDS) for all financial instruments traded in Pakistan Capital Market. However, with the ever growing need for efficient and technology driven mechanisms in other markets and industries, we have diversified our business beyond the traditional depository domain. Our services portfolio is as follows:

1. **Investor Account Services**
   - Launched in 1999
   - Allows retail and corporate investors to open and maintain custody accounts directly with CDC.

2. **Trustee and Custodial Services**
   - Launched in 2002
   - Provide Trustee services to Open-end and Closed-end Mutual Funds and Voluntary Pension Schemes.
   - Provides Custodian services to discretionary and non-discretionary portfolio clients

3. **CDC Share Registrar Services Limited (Wholly owned subsidiary of CDC)**
   - Launched in 2008
   - Provides share issuing companies state-of-the-art facilities of registrar and transfer agents, including shareholder dealing on behalf of the companies.
   - Offers "Corporate Secretarial Services" to provide Authorized Intermediary services to listed/unlisted companies considering the importance and requirements of day to day regulatory compliances and also their reporting to SECP, PSX in accurate and timely manner.
• Offers “E-Meeting” solution to provide one window electronic arrangement for listed/unlisted companies to conduct their general meetings/Board meetings according to the Regulatory guidance of SECP and PSX.

4. **ITMinds Limited (Wholly owned subsidiary of CDC)**
   • Launched in 2009
   • Provides Business Process Outsourcing (BPO) services which include provision of back office accounting functions to the Mutual Fund industry.

5. **Centralized Information Sharing Solution for Insurance Industry (CISSII) (Developed and managed by CDC Pakistan)**
   • Launched in 2014
   • Offers online information sharing solution for the insurance industry. It allows insurance companies to share information such as acceptance of claims, postponed or declined risks, malpractices of agents, individual life insurance policies and group life claims experience for the purpose of achieving greater efficiency and transparency in the industry.

6. **eServices**
   • Launched in 2017
   • A customer convenience initiative by CDC, in the form of a web portal offering the following free-of-cost facilities:
     - **Centralized eIPO System**: Applications for subscription of shares offered to general public can be made electronically and payments can be made by Internet/Mobile banking, ATMs etc., avoiding the hassle of physical submission of IPO application and visiting the bank.
     - **eDividend Repository**: Provides investors consolidated data of all their cash benefits due and credited by issuers, and in case their dividends have not been credited, the reason for non-disbursement of dividend will also be available.

7. **Emlaak Financials – Mutual Fund Digital Aggregator platform**
   • Launched in 2021
   • The solution has been launched with the objective to offer cross-industry aggregation of mutual funds on a single platform and to allow the investor to make an informed investment decision by leveraging the analytics, performance and comparison tools available on the platform. It is a first of its kind initiative that offers the unique features of consolidated portfolio tracking, cross-industry fund performance comparison and inter-AMC conversions besides digital account opening and online transactions.
   • The project has been envisaged as a “Financial Supermarket” of various financial products and will soon be extended to offer financial products pertaining to other asset classes, such as Insurance products for which the groundwork has been initiated with the relevant stakeholders of the Industry.

8. **Dividend Disbursement through RAAST Payment Gateway**
   As part of its National Payments Systems Strategy, State Bank launched Pakistan’s first payment gateway with the brand name of RAAST on January 11, 2021. CDC played a crucial role in the testing and refinement of the gateway with the first use case being dividend disbursement to shareholders through its “eDividend Project”. For this purpose CDC is
grateful to the SECP for granting the status of Paying Agent and developed the necessary infrastructure to enable the payments. Since the launch, CDC has successfully concluded quite a few dividend disbursement activities as a Paying Agent through RAAST and more disbursement activities are in process with other Issuers. Going forward, CDC has plans to use the RAAST gateway for other activities as well such as Mutual Fund payments and digital payments for its other ongoing projects.

9. **Capital Market investment facilitation for RDA holders**

Another vision of State Bank was realized with the introduction of a novel class of bank account with special privileges for Non Resident Pakistanis. The Non Resident Rupee Value Account (NRVA) was launched with the brand name Roshan Digital Account (RDA). The primary focus of RDA is to attract the large investor base that resides overseas to invest in Pakistan's various investment vehicles such as Stock Market, Mutual Funds, Real Estate and Debt Market etc. through a completely digital process with minimal hassle for the investor. Investment by Non Residents will not only increase the participation rate in capital market but also help the economy by generating more foreign exchange inflows that are vital for Pakistan's further growth and development. RDA is a PKR account opened by a Non-resident Pakistani (NRPs) with a bank in Pakistan on a repatriable basis. RDA holders are able to invest in stocks using the option available on the portal/mobile app of their Banks. CDC was entrusted by SBP for the important task of facilitating the investment process and coordinating the flow of information from banks to other capital market entities, which CDC has successfully accomplished. Upon the NRP’s consent, the Bank will transmit the required details and soft copies of the NRP’s documents to CDC. CDC then acts as the conduit for passing on the information to NCCPL for UIN creation process, and to the Broker for trading account opening. CDC itself opens NRP’s CDC Account and enables it for Direct Settlement Services. The RDA holder even has the option to transfer funds from his bank account to CDC through the bank’s portal. In this seamless manner, all the capital market processes are completed through a completely digital and straight through process which enables NRP to start trading upon receiving confirmation details from the CDC and the Broker.

10. **EClear Services Limited – Pakistan’s first Professional Clearing Member**

With the promulgation of the Securities Brokers (Licensing and Operations) Regulations 2016, SECP had introduced three classes of Brokers; Trading Only Brokers (TO), Trading and Self Clearing Brokers (T&SC) and Trading and Clearing Brokers (T&C). A new entity was simultaneously created to cater to the custodial and settlement needs of the TO Brokers and their clients. CDC played a central role in the development of EClear Services Limited (ESL), which is the first entity in Pakistan to be licensed as a PCM. CDC has been at the forefront on project management and coordinating the major development changes required in the regulations, systems and processes of the PSX, NCCPL and CDC in consultation with the representatives of the SROs. Upon appointment by a TO, ESL will take over the custody of cash and securities, risk management, AML/CFT compliance, cash management, back office, clearing and settlement operations and other functions of the Broker, hence greatly reducing their infrastructure, human resource and compliance related
costs. The launch of ESL will not only benefit the Brokers but also increase the security, transparency and efficiency of the capital market by serving as the bedrock institution handling the important function of custody, clearing and settlement of investor assets.

11. eLoR Payment Facilitation
For CDC Investor Accountholders, collaboration is underway with 1Link, after which customers who have subscribed for LORs using CDC LOR subscription facility can make payments through 1Link’s 1Bill facility. In addition, in October 2020, CDC specially enabled electronic payment facility for Letter of Rights subscriptions by RDA customers and RDA customers get a complete package when they invest in stock market through CDC.

12. Digital Onboarding based on Shared KYC Concept
Building on the resounding success of the RDA framework which enabled account opening and capital market investment through a digital process relying on the KYC information shared through banks, SBP formed a Committee to explore the possibility of extending the same facilitation for local investors. Based on the committee’s recommendations, CDC is working on a “Push Mechanism” that will utilize the KYC information of investors elicited and maintained by banks at the time of bank account opening. Banks will pass on the information and documentation to CDC via online connectivity and CDC will subsequently share the information with NCCPL and Brokers for UIN creation, trading and sub account opening. This service will transform the investment landscape of capital market investment in Pakistan by enabling a completely digital solution for all pre-requisite processes involved before investors can formally start trading.

Description of such activities and historical timelines of CDC’s initiatives are available on www.cdcpakistan.com

Key Metrics:

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</tr>
</thead>
<tbody>
<tr>
<td>Participants / Account holders</td>
<td>633</td>
<td>626</td>
<td>629</td>
<td>631</td>
<td>643</td>
<td>657</td>
<td>651</td>
<td>575</td>
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<tr>
<td>Eligible pledges</td>
<td>92</td>
<td>94</td>
<td>92</td>
<td>94</td>
<td>94</td>
<td>95</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Securities (Issuers)</td>
<td>968</td>
<td>939</td>
<td>902</td>
<td>872</td>
<td>845</td>
<td>822</td>
<td>819</td>
<td>811</td>
</tr>
<tr>
<td>Number of shares in CDS (in billion)</td>
<td>161.24</td>
<td>151.58</td>
<td>142.92</td>
<td>131.82</td>
<td>133.94</td>
<td>128.68</td>
<td>117.73</td>
<td>110.35</td>
</tr>
<tr>
<td>Market capitalization of shares in CDS (Rs. in billion)</td>
<td>5,782.65</td>
<td>4,298.59</td>
<td>4,265.65</td>
<td>5266.28</td>
<td>5,992.68</td>
<td>4,938.23</td>
<td>4,649.56</td>
<td>3,852.07</td>
</tr>
<tr>
<td>Units of TFCs, Sukus, Bonds &amp; Open-End Funds in CDS (in million)</td>
<td>484</td>
<td>536</td>
<td>733</td>
<td>217</td>
<td>212</td>
<td>239</td>
<td>268.92</td>
<td>368.98</td>
</tr>
<tr>
<td>Investor accounts (individual and corporate)</td>
<td>64,758</td>
<td>57,349</td>
<td>55,679</td>
<td>53,094</td>
<td>51,022</td>
<td>50,144</td>
<td>51,262</td>
<td>50,681</td>
</tr>
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<tr>
<td>Number of securities in IAS (in billion)</td>
<td>97.73</td>
<td>90.60</td>
<td>84.24</td>
<td>75.59</td>
<td>79.47</td>
<td>74.15</td>
<td>50.02</td>
<td>43.93</td>
</tr>
<tr>
<td>Market capitalization of securities in IAS (Rs. in billion)</td>
<td>3,349.37</td>
<td>2,519.96</td>
<td>2,443</td>
<td>2,937.59</td>
<td>3,305.00</td>
<td>2,681.00</td>
<td>2,234.00</td>
<td>1,776.00</td>
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<tr>
<td>Number of Sub Accounts (Individual &amp; Corporate)</td>
<td>282,637</td>
<td>251,379</td>
<td>243,896</td>
<td>248,230</td>
<td>282,651</td>
<td>267,906</td>
<td>260,792</td>
<td>240,441</td>
</tr>
<tr>
<td>Number of funds under trusteeship</td>
<td>232</td>
<td>493</td>
<td>420</td>
<td>353</td>
<td>303</td>
<td>254</td>
<td>224</td>
<td>180</td>
</tr>
<tr>
<td>Number of securities in share registrar services</td>
<td>218</td>
<td>203</td>
<td>187</td>
<td>169</td>
<td>144</td>
<td>126</td>
<td>109</td>
<td>102</td>
</tr>
</tbody>
</table>

**Shareholding and Governance Structure**

<table>
<thead>
<tr>
<th>S. #</th>
<th>Shareholders</th>
<th>% of Shareholding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pakistan Stock Exchange Limited</td>
<td>39.81</td>
</tr>
<tr>
<td>2.</td>
<td>MCB Bank Limited</td>
<td>15.00</td>
</tr>
<tr>
<td>3.</td>
<td>Habib Bank Limited</td>
<td>11.35</td>
</tr>
<tr>
<td>4.</td>
<td>LSE Financial Services Limited</td>
<td>10.00</td>
</tr>
<tr>
<td>5.</td>
<td>National Investment Trust Limited</td>
<td>6.35</td>
</tr>
<tr>
<td>6.</td>
<td>Industrial Development Bank Limited</td>
<td>5.00</td>
</tr>
<tr>
<td>7.</td>
<td>Pak China Investment Company Limited</td>
<td>5.00</td>
</tr>
<tr>
<td>8.</td>
<td>Crescent Steel and Allied Products Limited</td>
<td>2.75</td>
</tr>
<tr>
<td>9.</td>
<td>ISE Towers REIT Management Company Limited</td>
<td>2.50</td>
</tr>
<tr>
<td>10.</td>
<td>Others</td>
<td>2.24</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Board of Directors**

- Moin M. Fudda, Chairman (Independent Director)
- Badiuddin Akber, Chief Executive Officer
- Aamir Matin, Director
- Ahmed Chinoy, Director
- Ammar Masood, Independent Director
- Farrukh H. Khan, Director
- Muhammad Sibghatullah Khalid, Director
- Muhammad Tariq Rafi, Director
- Wang Baojun, Director
- Syed Ali Sultan, Independent Director
- Jehan Ara, Independent Director

**System Design and operations**

The Central Depository System (CDS) is a book-entry system that:

- **records & maintains securities; and**
- **registers transfer / pledging of securities.**

The system comprises of modules designed for CDS Elements (different stakeholders) who perform transactions within the system. The categorization of CDS Elements is illustrated in the below figure.
Market based trades/transactions are performed through the following steps. The entire settlement process is completed in T+2 days.

**Trade Day (TD)**
- Execution of UIN Based Trades
- Transmission of Trades to NCSS

**Settlement Day-1 (SD – 1)**
- Generation and Transmission of Balance Orders to CDS (EOD)

**SD**
- Execution of Balance Orders
- Movement of Securities from/to respective CDS Accounts in Blocked Status
- Unblocking/Retrieval of Securities in CDS based on instruction from NCSS

Most of the transactions performed in the system are executed by the CDS Elements. Different transactions have different processes and time intervals involved. System user manuals are available on our website [www.cdcpakistan.com](http://www.cdcpakistan.com)

The workflows of two important transactions i.e. Deposit of Shares and Free Delivery (Transfer of Shares) are illustrated below.
4. Summary Assessment

<table>
<thead>
<tr>
<th>TABLE 1 - RATINGS SUMMARY</th>
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<tbody>
<tr>
<td>Assessment Category</td>
</tr>
<tr>
<td>Observed</td>
</tr>
<tr>
<td>Broadly observed</td>
</tr>
<tr>
<td>Partly Observed</td>
</tr>
<tr>
<td>Not Observed</td>
</tr>
<tr>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
## 5. Principle-by-principle answers by Key Consideration

<table>
<thead>
<tr>
<th>PS</th>
<th>CSD</th>
<th>SSS</th>
<th>CCP</th>
<th>TR</th>
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### 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.*

<table>
<thead>
<tr>
<th>Key Consideration 1</th>
<th>The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td><strong>Material Aspects and Relevant Jurisdiction:</strong></td>
</tr>
<tr>
<td></td>
<td>CDC has a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities. Preamble and Sections of the CD Act, 1997, Section 51 of the Securities Act, 2015 and attendant Regulations i.e. Central Depositories (Licensing &amp; Operations) Regulations, 2016 and CDC Regulations define &amp; envisage material aspects of CDC’s activities, which inter alia include:</td>
</tr>
<tr>
<td></td>
<td>1. to make provision for the establishment and operation of book-entry systems for the transfer of securities;</td>
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<td></td>
<td>2. holding securities in dematerialized form;</td>
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<tr>
<td></td>
<td>3. admission of CDS Elements to the CDS Systems;</td>
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<td>4. transfers and pledges of securities along with their transfer effects, and the settlement of transactions for Participants by book-entry as either a free delivery or DVP;</td>
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<td></td>
<td>5. maintaining securities accounts for Participants and their clients, Account Holder, Pledgees;</td>
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<td></td>
<td>6. providing Participants, Account Holders, Eligible Pledgee and Sub-Account Holder or IAS Account Holders with central safekeeping services and asset services, including the administration of corporate actions and redemptions;</td>
</tr>
<tr>
<td></td>
<td>7. supply of information to the Competent Authorities, CDS Elements so as to carry out their functions and discharge their responsibilities;</td>
</tr>
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<td></td>
<td>8. duty to maintain secrecy and confidentiality and grounds under which disclosures are permitted.</td>
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<tr>
<td></td>
<td>9. default procedures, Restrictions, Suspensions and Termination of admission to the CDS of CDS Elements on occurrence of any event or regulatory non-compliances, including rights and obligations of CDC in case of default of CDS Element.</td>
</tr>
<tr>
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<td>10. links with Central Counterparty (“CCP”).</td>
</tr>
<tr>
<td><strong>Relevant Jurisdiction:</strong></td>
<td>CDC has jurisdiction to</td>
</tr>
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</table>
(i) Provide Settlement and Custody Services for the following market segments of relevant Stock Exchange:
- Regular/Cash Market;
- Odd-lot Market;
- Derivative Markets (Futures and Stock Index);
- Negotiated Deal Market; and
- Debt Market

(ii) Facilitates Settlement Services for the following Leveraged Products:
- Margin Trading System ("MTS");
- Margin Financing System ("MFS"). and
- Murabahah Share Financing

(iii) Take enforcement action.

(iv) Services to Participants, Account Holders, Issuers and Eligible Pledgees (collectively referred as "CDS Elements").

For that purpose, CDS Elements enter into standard agreements, with CDC. Pursuant to these agreements CDS Elements agree that the CD Act, 1997, CDC Regulations and Procedures shall be a part of the terms and conditions of every contract or transaction that the CDS Elements may make (to the extent authorities allowed).

CDC Regulations and Procedures are public, and can be found on the CDC website, [www.cdcpakistan.com](http://www.cdcpakistan.com).

**Legal Basis for Material Aspects**

CDC ensures that its legal basis provides a high degree of legal certainty for each material aspect of its activities.

The legal basis enables a high degree of legal certainty for all aspects of CDC business in Pakistan which are sufficient, clear, and well-defined provisions as mentioned below:

- Central Depositories Act, 1997
- Securities Act, 2015
- Central Depositories (Licensing & Operations) Regulations, 2016 ("the Licensing Regulations")
- Central Depository Company of Pakistan Limited Regulations or CDC Regulations
- Companies Act, 2017
- Listed Companies (Code of Corporate Governance) Regulations, 2019

CDC was incorporated as a public limited company on January 21, 1993 and received certificate of commencement of business on August 10,
1994. The principal business activity of the Company is to act as a depository for book-entry securities. For the governance and operations of CDC, Securities Act, 2015 defines the main legal basis of establishing the central depository and also provides the responsibilities / functions / duties of CDC as central depository. Whereas, CD Act, 1997 provides the manner for establishment and operation of book-entry systems for the transfer of securities by central depository companies.

As per Securities Act, 2015, CDC is required to obtain license from SECP to operate and function as central depository. Section 49 of the Securities Act, 2015 and Regulation 3 of the Central Depositories (Licensing & Operations) Regulations, 2016 provides the details and eligibility criteria for grant of license. Relevant excerpts are as under:

“49. Grant of license.
(1) A public company eligible for a license may apply to the Commission to be licensed as a central depository in such form and manner as may be prescribed…….”

“3. Application for grant of license.
(1) Subject to compliance with the requirements of section 48 of the Act and these regulations, an application for grant of license as a central depository shall be submitted to the Commission in Form A…..”

CDC is licensed to act as Central Depository under section 48 of the Securities Act, 2015. In addition to this, Chapter II of Central Depositories (Licensing & Operations) Regulations, 2016 provides in detail about licensing requirements for central depository. This chapter provides for:

- Steps for the application for grant of license (Regulation 3).
- Matters to be considered by the Commission while granting License to act as central depository (Regulation 4).
- Conditions to be complied by central depository on ongoing basis (Regulation 5).
- Financial resources requirement for central depository (Regulation 6).

As per the abovementioned sections and the Regulations quoted above, CDC has accordingly obtained license to carry on business as Central Depository in Pakistan and renewal is also obtained every year.

Furthermore, CDC being a public limited company (unlisted) also drives its legal basis and authority from Companies Act 2017. Companies Act governs all companies incorporated in Pakistan.
Section 50 of the Securities Act, 2015 defines the duties of a Central Depository. Further, as per section 50(3) of Securities Act, the central depository shall operate its facilities in accordance with the Central Depositories Act, 1997 (XIX of 1997) and the regulations made there under. Accordingly, CDC’s regulations have been drafted and company's operations are conducted in accordance with the Securities Act, 2015, CD Act, 1997 and the CDC Regulations.

In order to continue smooth operation of book-entry systems for the transfer of securities by central depository companies, CDS has been established in the manner prescribed under the CD Act, 1997.

• **Provisions related to Establishment and Commencement of CDS.**

  Chapter 3 of the CDC Regulations defines:
  - the establishment and commencement of CDS.
  - Functions of CDC
  - Powers of CDC
  - Delegation of functions and powers
  - Binding effects of the Regulations
  - State Emergency Regulations for the purpose of dealing with the State of Emergency efficiently and for the protection of the interests of the CDC and the CDS Elements
  - Procedures making and their binding effects
  - CDC Fees and charges for the services rendered
  - Designated Time Schedules
  - Indemnification and warranties
  - Specific exclusions of liability provisions
  - Rights of CDC on Intellectual property
  - Dispute resolution between CDS Elements
  - Complaints against CDC and CDS Elements

• **Provisions related to Admission of Participant, Account Holder and Eligible Pledgee in the CDS and related matters.**

  Chapter 4 of the CDC Regulations deals with the application for admission of Participants, Account Holders and Eligible Pledgee in the CDS. It defines the:
  - Eligibility criteria and requirements for each category’s admission in the CDS.
  - Provisions related to Postponement or waiver of the Admission Requirements
  - Technical and performance requirements
  - Capacity requirements
  - Business integrity requirements
  - Execution of agreements with the CDC
  - Provision and recourse options available with the applicant where applications is not accepted.
  - Specific Warranties and Indemnities
  - Requirements to Segregate client Securities
• **Provisions related to Admission and actions against Issuers in the CDS and related matters.**

Chapter 5 of the CDC Regulations deals with the application for admission of Issuers in the CDS. It defines the:

- Declaration of Securities as Eligible Securities
- Pre-commencement Testing requirements
- Free Float of Securities
- Suspension and revocation of CDS Eligibility
- Placement of a listed company on the Defaulters’ Segment
- Effects of suspension
- Effects of revocation
- Manner of Partial Cancellation of Securities
- Requirement and role of Transfer Agents
- Responsibilities of Issuer to inform CDC of changed circumstances
- Centralized Cash Dividend Register and related matters

• **Provisions related to establishment, maintenance, and operations of Accounts and Sub-Accounts are defined in Chapter 6 of the CDC Regulations whereas Chapter 7 of the CDC Regulations defines the mode and medium of Communication in the CDS.**

Areas which are covered in these chapters are as under:

- Establishment and maintenance of Accounts and their types which can be opened by Participants and Eligible Pledgee.
- Requirement to send Holding Balance statements to Sub-Account Holders, its mode, manner and frequency.
- Board to prescribe Registration Details
- Prohibitory parking of Book-entry Securities in Main Account at the End of Day
- Tagging of Accounts and Sub-Accounts with the Clearing House
- Operations of Accounts
- Regulations for the purpose of Asset under Custody Position and related matters
- Communicating with the CDC
- Technical and Performance Requirements for communications
- Validation of Transactions
- Source of a Transmission on the CDS

• **Chapter 8 series of the CDC Regulations deals with the Corporate action activities which are as under:**

- Deposit and Withdrawal of Securities
- Deposit of New Issues of Securities into the CDS
| Chapter 9 of the CDC Regulations series deals with the Free Delivery Of Book-Entry Securities, Provisions for transfer of Securities pertaining to certain underlying Securities transactions and Delivery of Book-entry Securities under Balance Order Settlement through Clearing House in the Ready market and other leverage markets. |
| Chapter 11 of the CDC Regulations deals with Pledging of Securities |
| Chapter 12 of the CDC Regulations deals with Corporate Actions and its related timelines and information required or are made available to Issuer. |
| Chapter 12A of the CDC Regulations deals with Investor Accounts and its related matters |

**Provisions relating to Audit, Compliance and Enforcement Actions:**
- Chapter 13 of the CDC Regulations deals with matters relating to Audit and Compliances
- Chapter 14 of the CDC Regulations deals with Disciplinary Proceedings
- Chapter 15 of the CDC Regulations deals with Restrictions on or Suspension or Termination of Admission of Participant, Account Holder and Eligible Pledgee to the CDS

| Key Consideration 2 | An FMI should have rules, procedures and contracts that are clear, understandable and consistent with relevant laws and regulations. |
| Description | CDC performs its functions and operations in accordance with the underlying Statues, Regulations and Procedures which are ensured to be clear, understandable and consistent. In this respect following processes are in place: |
| | ▪ Statutes are promulgated by the Parliament whereas regulations thereunder prepared by CDC, are approved by the Apex Regulator. Management oversight is ensured while drafting of amendments in consultation with legal advisors; |
| | ▪ Comments are solicited from relevant stakeholders and public of the proposed changes in Regulations on its website; |
| | ▪ Conducting regular training and awareness sessions to update CDS Elements about recent changes in Regulations and Procedures; |
| Translation of Regulations into native language i.e. Urdu so as to bring further clarity and understandability by the stakeholders and general public. |

The amendments in Regulations are drafted internally on the basis of introduction of new product and services, changes in the scope of existing products and services, consequential amendments required and to enhance investor protections and safeguard of securities from time to time, which are then duly vetted by legal advisor or internally drafted before submitting to the Regulatory Affairs Committee (RAC) and Board and finally to the SECP for its consideration and approval.

52. Approval of regulations of central depository. —

(1) No regulation of a central depository or any amendment, whether by way of rescission, substitution, alteration or addition, to a regulation shall have effect unless it has the approval in writing of the Commission.

(2) A central depository shall submit or cause to be submitted to the Commission for its approval the regulations and every amendment thereto that require approval under sub-section (1), together with explanations of their purpose and likely effect, including their effect on the investing public, in sufficient detail to enable the Commission to decide whether to approve them or refuse to approve them.

(3) The Commission shall, by notice in writing served on the central depository, give its approval or refuse to give its approval to the regulations or amendment of the regulations, as the case may be or any part thereof.

(4) The Commission may give its approval under sub-section (3) subject to requirements that shall be satisfied before the regulations or amendment of the regulations or any part thereof take effect.

(5) Subject to the approval of the Commission under sub-section (3), all regulations or amendments thereto made by the central depository shall be notified in the official Gazette and shall take effect upon such publication or such date as may be specifically specified in the notification.

As per section 51(2) of the Securities Act, 2015, Regulations prepared under Section 35 of the CD Act, 1997 and Section 51 of the Securities Act, 2015 will be placed on CDC’s website for seven days eliciting public comments before submitting it to the SECP for its consideration and approval.
Legal Regulatory Framework that contain Act, Regulations, Rules and procedures governing CSD, CDS Elements, and material aspect of CDC's business are readily available on the CDC's official website http://www.cdcpakistan.com

**Key Consideration 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.

**Description**

CDC defines the legal basis for its business in Regulations, Procedures, agreements, contracts etc. entered into with its clients which includes Participants, Account Holders, Eligible Pledgee, Issuers. These contracts and documents, under the umbrella of legal and regulatory framework, determine the rights and obligations of CDC and its clients, as well as responsibility, and they regulate communications between CDC and its clients, its service fees and other essential provisions. Provisions of these documents have been prepared in accordance with the current legislation in consultation with the SECP after seeking comments from stakeholders and public. Texts of the contracts that form the legal basis of CDC business are made available to the public on request. Rest of information are made available on CDC's website.

Furthermore, for the purpose of clarity and easy understanding CDC has placed various explanations, guidelines, circulars and presentations on its website which are readily available to everyone.

**Key Consideration 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.

**Description**

CDC has business operations in Pakistan only and there is no business being conducted in other jurisdictions or with any entity incorporated under foreign jurisdiction. Furthermore, Section 1 of the Securities Act 2015 and the CDC Act, 1997 clearly state that Acts shall be applicable to whole of Pakistan. The sections state as follows:

“It extends to the whole of Pakistan.”

Regulatory framework within which CDC functions provides certainty to its activities and the Act, Byelaws, Regulations and Circulars. CDC Regulations. CDC Regulations are enacted under the CD Act 1997 and the Securities Act, 2015 and prepared under Section 35 of the CD Act, 1997 and Section 51 of the Securities Act, 2015. Furthermore, the amendments in CDC Regulations are drafted internally on the basis of introduction of new product and services, changes in the scope of existing products and services, consequential amendments required and to enhance investor protections and safeguard of securities from time to time, which are than duly vetted by legal advisor(s) before
submitting to the RAC and Board and finally to the SECP for its consideration and approval.

Furthermore, all CDS Elements are required to sign an agreement with the company, and they are legally bound by the terms of those agreements and must comply with all their liabilities and duties. These contractual arrangements are fully enforceable.

Reference of requirement for application of admission to the CDS and undertaking to enter into an agreement with CDC are as under:

**“4.9 Requirements for applications for admission to the CDS**

Any application for admission to the CDS as a CDS Element (not being an Issuer of Eligible Securities) shall:

(b) contain a covenant by the applicant that if the application is accepted the applicant undertakes to the CDC to enter into the relevant Agreement with the CDC;”

**“4.14 Execution of agreements with the CDC**

4.14.1 An applicant shall, as a pre-condition to admission to the CDS in the capacity of:

- (a) a Participant pursuant to Regulation 4.2.1;
- (b) an Account Holder pursuant to Regulation 4.4.1; or
- (c) DELETED
- (d) recognized as an Eligible Pledgee pursuant to Regulation 4.8.1,

enter into a Participant Agreement, an Account Holder Agreement or an Eligible Pledgee Agreement, as the case may require, with the CDC.”

“5.1.16 An Issuer receiving a notice under Regulation 5.1.1 shall, subject to its right to make an application under Regulation 5.1.6, enter into an Issuer Agreement with the CDC on the first occasion that any of such Issuer’s Securities are to be declared as Eligible Securities prior to the CDS Eligibility Date of such Securities.”

Furthermore, Securities Act, 2015 and CDC Regulations explicitly provide that these regulations are legally binding and enforceable on all CDS Elements. Relevant excerpts are as under:

**“53. Obligation of CDS element to comply with regulations and procedures of central depository.**

CDS element shall at all times comply with the regulations and procedures of the central depository.”

| Key Consideration 5 | An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflicts of law across jurisdictions. |
Description | Currently CDC is operating only in Pakistan and no business is being conducted in any other jurisdiction or with any entity being regulated under foreign jurisdiction.
--- | ---
**Key conclusions** | The applicable regulatory framework provides a comprehensive legal basis for the activities undertaken by the CDC. The CDC Regulations clearly stipulate the activities performed by the entity and the capability to enforce the applicable provisions on the CDS Elements.

**Assessment of Principle 1** | Observed

**Recommendations and comments** | PS ● CSD ● SSS ● CCP ● TR ●

**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.*

**Key Consideration 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.

**Description** | The vision of CDC is to be a world-class institution providing innovative and reliable services primarily to the capital and financial markets, stimulating business growth and maximizing benefits for all stakeholders. CDC is committed to providing secure, reliable and innovative solutions that systematically reduce risk, enable transparency and bring efficiencies to the capital and financial markets. The Company's aim is to be the center of excellence by continuously employing state-of-the-art technology and best talent available in the country while maintaining good corporate governance in its working. To achieve these Vision and Mission, CDC has certain core values which are as under:

Our corporate values represent the core priorities in the organization's culture. Adherence to these values makes it possible for us to continue on the road to sustainable development. Dispensing with our corporate responsibility, we are able to honor our commitments to clients, partners & shareholders and to our most valuable resource, our employees.

**Reliability**

- Reliable & trustworthy for all our stakeholders.
- Ensure integrity and security of information.
Integrity
- Fair & honest in all our dealings.
- Take responsibility for our actions.
- Strive to perform to the best of our abilities.

Transparency
- Policies & procedures are clearly defined, well communicated and applied equally to all.
- Make adequate disclosure of company information.
- Strong adherences to the best practices of Corporate Governance.

Teamwork
- Build strong relationships within and across functions.
- Share ideas / best practices and value diversity.
- Communicate candidly and on an ongoing basis within team.

In light of its vision and mission, principal line of business and objective of the company are provided in Memorandum of Association of the Company.

Board of CDC is responsible for assessing company's performance in meeting its objectives. In addition, the Management Committee of CDC also evaluates company's performance on regular intervals. To achieve overall corporate mission and objectives of the Company, a 3 year Strategic Plan is documented and presented to the Board for its approval with proper tracking updates in the quarterly meetings. Management sets strategic objectives which encompass a range of benchmarks such as reforms for Investors Awareness and Protections, Enhancing Ease of Doing Business, Implementing Stringent Risk Management Framework, Organized Growth through diversification and process improvement, IT Infrastructure enhancements, Strengthening organizational efficiency & effectiveness and support for market development. These corporate objectives are sub-divided into various projects and activities which are clear, defined, measurable and achievable and are reviewed by several level of management and Board with specific attention on those metrics that might be performing below target.

Internal Audit function and Compliance functions are performed by Head of Internal Audit and Chief Compliance Officer respectively, whose roles and responsibilities are defined in the Listed Companies (Code of Corporate Governance) Regulations, 2019 and Licensing Regulations.

CDC is the custodian of trillions of rupees worth of securities hence, there is a dire need of an effective risk management. Accordingly, as
part of organizational development activity, it is very important to have a comprehensive and stringent Risk Management framework.

This also includes adopting international practices and standards in areas like Information Security Management for businesses and internal functions and Business Continuity Management to evaluate business impact and risk assessment of disaster situations. In this regard, CDC has successfully implemented ERM (COSO) Framework in different business areas like Depository Operations & Share Registrar Business, for internal functions, Business Continuity & Enterprise Security. While controls have been identified, reviewed and documented, comprehensive Physical Security Assessment was also performed.

Furthermore, CDC has a robust risk-management framework through which it regularly monitors its financial and public related considerations. CDC regularly reviews its operational and risk management procedures to make sure that it can serve its role as central securities depository to all participants. For the safety and efficiency of Pakistan Capital Market, CDC has included safety and efficiency standards into quality objectives of the company’s business and operation, for which it has achieved ISO/IEC 27001:2013 certification for Information Security Management of its overall operations. CDC is now certified under ISO: IEC 22301 for its Business Continuity Program. CDC has also obtained Limited Assurance Report under ISAE-3402 relating to Assurance Reports on Controls at a Service Organization. Furthermore, compliance with Code of Corporate Governance is ensured by CDC which is subject to Review by the Statutory Auditors. Review report is published in the Annual Accounts of the Company.

CDC has established high standards of professional conduct and ethics that direct the ongoing activities and its staff’s behavior. This Code of Conduct is formally applicable to employees, senior management and Directors.

CDC’s shares are mainly held by Securities Exchange, Commercial Banks and Financial Institutions having representation of Directors on the Board of the Company. Furthermore, independent directors, not affiliated with CDC have been appointed with the prior approval of SECP to exercise their independent judgments.

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<th>Key Consideration 2:</th>
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<td>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.</td>
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<table>
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<th>Description</th>
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<td>Governance Arrangement of CDC</td>
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CDC was incorporated as a public limited company on January 21, 1993 and received certificate of commencement of business on August 10, 1994.

CDC has documented governance arrangements that provide clear responsibility and accountability. These arrangements are disclosed to the relevant stakeholders at different granularity and are derived from Legal frameworks and CDC’s policies.

Governance Structure of CDC is defined in the Securities Act, 2015, Central Depositories (Licensing & Operations) Regulations, 2016, CDC Regulations, Companies Act, 2017 and Listed Companies (Code of Corporate Governance) Regulations, 2019. Relevant excerpts are as under:

"Section 48 of the Securities Act – Eligibility for licensing.

A company shall be eligible for licensing as a central depository only if:

(a) the company is incorporated as a public company under the Companies Ordinance, 1984 (XLVII of 1984);

(b) the company complies with all the requirements in Central Depositories Act 1997 (XIX of 1997);

(c) it has, and maintains at all times, a minimum paid-up capital (net of losses) of rupees five hundred million or such higher amount as may be notified by the Commission;

(d) the collective shareholding of the securities exchanges does not exceed such percentage as the Commission may notify, of the total shareholding of the company:

Provided that the Commission may in the official Gazette notify any class or classes of persons to hold such number of shares of the central depository as the Commission deems appropriate:

Provided further that any sale or purchase of shares of the central depository shall be subject to the prior approval of the Commission; ......”

"Regulation 4 of the Licensing Regulations

Grant of license. (1) The Commission, while considering the application made under regulation 3, shall inter-alia take into account the following matters, -

(a) that the eligibility requirements of the Act and these regulations have been complied with;
(b) that the applicant has demonstrated its ability to perform its duties in accordance with the provisions of the Act, the Depositories Act and any rules and regulations made or codes, guidelines, directions and circulars issued thereunder;

(c) the applicant has shareholding and governance structure as provided in these regulations; and .......

7. Application of fit and proper criteria,

(1) The applicant and its promoters, substantial shareholders, directors and senior management officers shall at all times be fit and proper persons as per the criteria specified as Annexure-I:

Provided that while evaluating fit and proper criteria in respect of promoters and substantial shareholders of the central depository, the fit and proper criteria shall also be applied to the extent practical on the directors and majority shareholders of such promoters and substantial shareholders.

8. Shareholding requirements,

(1) No person other than the following shall, directly or indirectly, acquire or hold shares of a central depository:

(a) a securities exchange or a connected company or the majority shareholder of such securities exchange, or an associate of the majority shareholder of such securities exchange;

(b) any of the following institutions subject to compliance with the conditions provided under sub-regulation (2) below:

(i) a financial institution operating as a development finance institution, an insurance company, or a non-banking finance company;
(ii) a licensed local or a foreign bank operating in Pakistan;
(iii) a local or foreign body corporate constituted or recognized for providing trading, custodial, clearing or settlement services in the securities market as may be approved by the Commission;
(iv) an institution engaged in providing financial services established outside Pakistan as may be approved by the Commission; or
(v) An institution as may be notified by the Commission from time to time:

Provided that any person other than the above holding shares in an existing central depository shall dispose of its shareholding to an eligible person within a time period of
three years from the date of commencement of these regulations.

(2) Shareholding in a central depository by institutions referred at clause (b) of sub-regulation (1) shall be subject to the following conditions:

(a) the institution or any of its sponsors or directors are not associated person(s) of a TRE certificate holder or any of its sponsors or directors;
(b) it complies with the capital requirements specified under the relevant provisions of applicable laws;
(c) it has a minimum long-term credit rating, where applicable, not below A- or equivalent;
(d) has the capacity and demonstrated the commitment to meet any capital call by the central depository in accordance with the requirements of the Act or regulations made thereunder;
(e) its license for providing any financial services has not been suspended or cancelled by any regulatory authority during the last five years;
(f) no investigation or enquiry conducted under the relevant laws has been concluded against it by the Commission, State Bank of Pakistan, National Accountability Bureau, Federal Investigation Agency or any other regulatory or government body, with any material adverse findings;
(g) an order restraining, prohibiting or debarring it from providing any financial services has not been passed by any regulatory authority, government body or agency or a court of law; and
(h) it has not been declared defaulter in payment of taxes.

(3) Shareholding in a central depository shall be subject to the following limits:

(a) collective shareholding of securities exchanges, directly or indirectly, shall not exceed forty percent;
(b) collective shareholding of persons residing outside Pakistan, directly or indirectly, shall not exceed twenty percent;
(c) a single shareholder, other than a securities exchange, directly or indirectly, shall not hold more than fifteen percent shares in a central depository.

(4) Any person holding shares in an existing central depository on the date of commencement of these regulations, shall comply with requirements of sub-regulations (2) and (3).
above within a time period of three years from the date of commencement of these regulations.

**Composition of Board of Directors**

Furthermore, the Regulation 9 of the Central Depositories (Licensing and Operations) Regulations, 2016 prescribes composition of the Board of Central Depository which shall have following categories of directors:

a. Independent Directors;
b. Shareholder Directors; and
c. Chief Executive Officer.

The said Regulation among other criteria also specifies that the central depository shall obtain clearance from the Commission for the directors prior to their appointment or election on the Board of director of the central depository. Further, CDC shall not have more than two directors associated with a TRE certificate holder on its Board of directors and shall have independent directors not less than one third of its total directors. Chapter 2A “Governance” of the CDC Regulations also prescribes the composition of the Board and its sub-committee which is consistent with the Securities Act, 2015, Licensing Regulations, Companies Act and Articles of Association of the Company.

These regulations also specify the guidelines for conduct of its Directors and Senior Management Officers, abidance of which is compulsory.

The Board of CDC comprises of seven (7) non-executive directors representing respective shareholders, four (04) Independent Directors which includes two (2) female directors and the Chief Executive Officer. The names of the directors of CDC are also available on the CDC’s corporate website.

For effective monitoring of governance activities, Internal Audit function exists under the supervision of Chief Internal Auditor who operationally reports to the Audit Committee of the Board. With the promulgation of the Central Depositories (Licensing & Operations) Regulations, 2016, the compliance function has now been further strengthened with the appointment of Chief Compliance Officer (CCO). CCO reports functionally to the Board of Directors through its Committee i.e. Regulatory Affairs Committee and administratively to CEO. Appointment and removal of Chief Executive Officer, Chief Compliance Officer are recommended and approved by the Board and SECP in the manner prescribed under the Licensing Regulations. Under the Listed Companies (Code of Corporate Governance) Regulations, 2019, appointment and removal of Chief Internal Auditor, Chief Financial Officer, Company Secretary is also undertaken by the Board in the manner prescribed under the Companies Act, 2017 and the Code.
For execution of the powers vested on Board, various committees are formed by the Board which are:

- Audit Committee;
- Regulatory Affairs Committee;
- Investment Committee;
- IT Steering Committee;
- Human Resource & Remuneration Committee;
- Nomination & Compensation Committee, etc.

Responsibilities of the Board are defined in Companies Act, 2017, Licensing Regulations, Listed Companies (Code of Corporate Governance) Regulations, 2019 and Articles of Association of the company. The Board is also responsible for supervising the activities of the management and the management is responsible for day-to-day operations of the Company. In order to strengthen and formalize corporate decision making process, significant issues are placed for information, consideration and decision of Board of Directors.

In order to safeguard/ protect the interest of general public and Asset safety of client' securities, CDC sends Account Balance Statements and critical Registration Detail information to the Sub-Account Holders on annual basis so that they can compare/ verify their holding balances and critical personal information. Furthermore, SMS and email alerts are sent to the client on all outward movement of securities, Deposit, withdrawal, pledging of securities or any change in Registration Details etc.

Furthermore, Securities Act 2015, Licensing Regulations and Companies Act, 2017 provide the manners of selection of Independent Directors, Shareholder Directors, Chief Executive Officer and Senior Management Officers, who are subject to various eligibility criteria, Fit and Proper criteria, Affidavits, CIB reports from State Bank of Pakistan, Active Tax Payers List, Minimum Credit Ratings, etc.

**Disclosure of governance arrangements**

CDC always gives paramount importance to its stakeholders and engages with them in formulation of company policies, procedures and regulations and training wherever required. CDC has a robust Element Training Program which is conducted across the country, dedicated email domain and toll free line to make inquiries or information and provide recommendations to CDC for improvement in the system. Comments and views are also solicited from the public.

CDC publishes its governance related information to its stakeholders via different channels such as:

- Publications in annual reports; and
- Publications on CDC's website (e.g. Board and Board Committees composition, Circulars, Notifications, Newsletters, etc.).
- Notice Management System (NMS)
- Different Investor Awareness and Education programs include National & International Road shows.

**Key Consideration 3**

The roles and responsibilities of an FMI's Board of directors (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.

**Description**

**Role and Responsibilities of the Board of Directors**

The Board has the power to carry out all acts that are useful to achieve the objectives. In carrying out this role, each Board member acts in good faith in the way he considers would be most likely to promote the success of the CDC for the benefit of its shareholders as a whole while having due regard to the interests of other stakeholders (such as Participants, Issuers, Account Holders, Eligible Pledgees, Customers, Employees).

The primary responsibility of the Board is to define the strategy of CDC. The main responsibilities and operating procedures of the Board have been defined in the section 204 Companies Act, 2017, Licensing Regulations and Articles of Association of the company and Board’s Terms of Reference. Relevant excerpts of the Act and Regulations are as under:

"204. Duties of directors.— (1) Subject to the provisions of this Act, a director of a company shall act in accordance with the articles of the company.

(2) A director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole, and in the best interests of the company, its employees, the shareholders, and the community and for the protection of environment.

(3) A director of a company shall discharge his duties with due and reasonable care, skill and diligence and shall exercise independent judgment.

(4) A director of a company shall not involve in a situation in which he may have a direct or indirect interest that conflicts, or possibly may conflict, with the interest of the company."
(5) A director of a company shall not achieve or attempt to achieve any undue gain or advantage either to himself or to his relatives, partners, or associates and if such director is found guilty of making any undue gain, he shall be liable to pay an amount equal to that gain to the company."

"Annexure II of the Licensing Regulations

1. Duties and Responsibilities of Directors and Senior Management Officers:

Every director and senior management officer shall:

a) participate in the formulation and execution of strategies in the best interest of the central depository and contribute towards pro-active decision making;

b) give benefit of their experience and expertise to the central depository and provide assistance in strategic planning and execution of decisions;

c) endeavor to ensure that the central depository abides by all the provisions of the Act, the Ordinance, the Depositories Act, these regulations and other applicable rules, regulations, codes, guidelines, circulars and directions issued by the Commission from time to time;

d) endeavor to ensure that the central depository takes steps commensurate to honor the time limit stipulated by the Commission for corrective action;

e) not support any decision in the meeting of the Board which may adversely affect the interest of investors and shall report forthwith any such decision to the Commission;

f) place priority for redressing investor grievances and encouraging fair business practice so that the central depository becomes an engine for the growth of the securities market;

g) endeavor to analyze and administer the central depository issues with professional competence, fairness, impartiality, efficiency and effectiveness;

h) submit the necessary disclosures/statement of holdings/dealings in securities as required by the central depository or the Commission from time to time as per their regulations or Articles of Association or any directives of the Commission;
i) unless otherwise required by law, maintain confidentiality and shall not divulge/disclose any information obtained in the discharge of their duty and no such information shall be used for personal gains;

j) maintain the highest standards of personal integrity, truthfulness, honesty and fortitude in discharge of their duties in order to inspire public confidence and shall not engage in acts discreditable to their responsibilities;

k) perform their duties in an independent and objective manner and avoid activities that may impair, or may appear to impair, their independence or objectivity or official duties;

l) not engage in any act involving moral turpitude, dishonesty, fraud, deceit, or misrepresentation or any other act prejudicial to the administration of the central depository;

m) not disclose confidential information, including commercial secrets, technologies, advertising and sales promotion plans, unpublished price sensitive information, unless such disclosure is expressly approved by the Board of directors or required by law;

Excerpts of Articles of Association:

“POWERS AND DUTIES OF DIRECTORS

69) The business of the company shall be managed by the directors, who may pay all expenses incurred in promoting and registering the company, and may exercise all such powers of the company as are not by the Act or any statutory modification thereof for the time being in force, or by these regulations, required to be exercised by the company in general meeting, subject nevertheless to the provisions of the Act or to any of these regulations, and such regulations being not inconsistent with the aforesaid provisions, as may be prescribed by the company in general meeting, but no regulation made by the company in general meeting shall invalidate any prior act of the directors which would have been valid if that regulation had not been made.

70) The directors shall appoint a chief executive in accordance with the provisions of sections 186 and 187 and the Licensing Regulations. No person who is ineligible to become a director of the Company shall be appointed or continue as the Chief Executive except as permitted by Section 153. Directors shall not appoint any person as the Chief Executive of the Company who does not meet the Fit and Proper Criteria and/or whose name has not been approved by the Commission. The appointment, renewal, non-renewal of appointment and termination of service of Chief Executive Officer shall be subject to the prior approval of the Commission.
71) Within fourteen days from the date of first election of Directors or the office of the Chief Executive falling vacant, as the case may be, the Directors shall, with the prior written approval of the Commission, appoint any person meeting the Fit and Proper Criteria, other than an elected Director, to be the Chief Executive, but such appointment shall not be for a period exceeding three years from the date of appointment. Provided that the Chief Executive appointed against a casual vacancy shall hold office till the directors elected in the next election appoint a chief executive.

72) The Directors of the Company by resolution passed by not less than three-fourths of the total number of Directors for the time being, or the Company by a special resolution, may remove a Chief Executive before the expiration of his term of office notwithstanding anything contained in these Articles or in any agreement between the Company and such Chief Executive. Notwithstanding anything to the contrary contained in these Articles, the appointment, removal, and termination of the Chief Executive shall be made with the prior written approval of the Commission. For this purpose “removal and/or termination” shall include non-renewal of the contract of the Chief Executive.

73) A fit and proper person may be appointed by Directors as Secretary to perform secretarial and other administrative functions at such remuneration and upon such terms and conditions as they may think fit, and any Secretary so appointed may be removed by them. The Secretary shall be responsible to ensure compliance with the provisions of the Act relating to filing of returns, information’s, etc.

74) The amount for the time being remaining undischarged of moneys borrowed or raised by the directors for the purposes of the company (otherwise than by the issue of share capital) shall not at any time, without the sanction of the company in general meeting, exceed the issued share capital of the company.

75) The directors shall duly comply with the provisions of the Act and Licensing Regulations, or any statutory modification thereof for the time being in force, and in particular with the provisions in regard to the registration of the particulars of mortgages, charges and pledge affecting the property of the company or created by it, to the keeping of a register of the directors, and to the sending to the registrar of an annual list of members, and a summary of particulars relating thereto and notice of any consolidation or increase of share capital, or sub-division of shares, and copies of special resolutions and a copy of the register of directors and notifications of any changes therein.

In order to perform their responsibilities more efficiently, the Board has established the following sub-committees:
Board Committees
For execution of powers vested on Board, various committees have been formed by the Board including the following:

- **Audit Committee (As per Code of Corporate Governance)**
  The primary function of the Audit Committee of CDC is to assist the Board of Directors (the Board) in fulfilling its oversight responsibilities by reviewing financial reports and other financial information; the Company's system of internal controls regarding finance, accounting, and operations; and the Company’s auditing, accounting and financial reporting processes and risk. The Audit Committee shall facilitate coordination amongst the external auditors, internal auditor and the Board. Consistent with this function, the Audit Committee shall encourage continuous improvement of, and foster adherence to the Company's policies, procedures and practices at all levels.

- **Regulatory Affairs Committee**
  Regulatory Affairs Committee is mainly responsible to ensure the Regulatory Affairs and Compliance function is managed, led and controlled effectively and efficiently. The roles and responsibilities of the RAC is defined in its Terms of References which are derived from the Licensing Regulations. Among other major tasks include reviewing the amendments proposed by the Chief Compliance Officer (CCO) in the CDC Regulations and recommending the same for the approval of Board, reviewing the reports, analysis and presentations prepared by the CCO with respect to the compliance status of the Company and reviewing the outcome of any investigation, inspection or enquiry that has been conducted by the CCO.

- **Human Resource and Remuneration Committee (As per Code of Corporate Governance)**
  The objective of the Committee is to assist the Board in carrying out its duties with respect to Human Resource management, policies, Organizational structure, and Compensation matters of the Company and to establish a plan of continuity and development of Management and other critical staff of the Company. The Committee shall submit its recommendations to the Board for approval.

- **Investment Advisory Committee**
  The objective of the committee is to devise guidelines for investment of surplus funds of the Company to maximize return without compromising on credit risk.

- **IT Steering Committee**
The Information Technology Steering Committee (ITSC) shall assist the company management and the Board of Directors in overseeing and control of the implementation of Information System related strategies, polices, practices and procurements. The committee through its recommendation shall ensure that Information Technology Department (IT) does not lose focus in providing the organization with cost effective Information Technology products/services and helps the company Board of Directors and Management to achieve the corporate strategic objectives.

**Board of Directors’ Review of Performance**

Board’s Evaluation Mechanism facilitates the Board of Directors to evaluate and assess performance for providing strategic leadership and oversight to the management. Accordingly, procedures have been developed based on emerging and leading practices to assist in the self-assessment of individual director, committees of the Board and the full Board’s performance and the guidelines issued by the SECP for performance evaluation of Board.

**Conflict of interest**

As per section 205 of Companies Act, 2017 and as provided in the Listed Companies (Code of Corporate Governance) Regulations, 2019, Directors are required to disclose their direct or indirect interest, if any, at meeting of Board of Directors. Furthermore, disclosure about conflict of interest, if any, is also included as part of notice of every meeting of Board of Directors. In addition to this, the Board of Directors has approved a conflict of interest policy, for all directors as well as employees of the company.

**Key Consideration 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).

**Description**

In accordance with the Companies Act, 2017, Shareholder Directors are elected by the shareholders of the Company in the General Meeting whereas Independent Directors are selected in the manner prescribed under the Central Depositories (Licensing & Operations) Regulations, 2016 and forwarded to the Commission for its approval.

The Board comprises of 12 Directors with a balance of following categories:

1. 4 Independent Directors
2. 7 Non-Executive Directors
3. 1 Executive Director i.e. Chief Executive Officer.
All directors have the highest degree of personal integrity and ethics, leadership qualities and a proven ability to exercise sound business judgment.

In addition, to adequately fulfill its role and responsibilities, the Board as a whole possesses the necessary balance of skills and experience required to set CDC's general policy and strategy and to properly supervise management of its implementation. The skills that represent the Board are both generic (finance, accounting, management and organization) and specific to CDC's business (Operations, IT, capital markets).

To ensure that persons with appropriate skills and expertise are appointed in the Board, Securities Act 2015 provides the requirement of fulfillment of fit and proper criteria and the qualification criteria for Board members. Section 151 of the Securities Act, 2015 is hereunder:

“(2) In considering whether a licensed person, in case of company, member of the Board of directors or senior management officers is fit and proper person for the purposes of this Act, the Commission shall, in addition to any other matter that the Commission may consider relevant, have regard to—

(a) the financial status or solvency;
(b) the educational or other qualifications or experience;
(c) the ability to carry on their activity competently, honestly and fairly; and
(d) the reputation, character, reliability and financial integrity of;
(i) where the licensed person is an individual, the individual himself; or
(ii) where the licensed person is a company, the company and any officer of the company.”

Regulation 7 of Central Depositories (Licensing and Operations) Regulations, 2016 provides that the promoters, substantial shareholders, directors and senior management officers shall be fit and proper persons as per the criteria specified as Annexure I to the Regulations. The Annexure I of Regulations provides details for below mentioned categories:

- Financial Soundness and Integrity
- Educational Qualification and Experience
- Competency
- Integrity, Honesty and Reputation
- Additional Criteria for Independent Directors

**Key Consideration 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
| Description | The roles and responsibilities of senior management relevant to CDC's operations are set out and governed by Central Depositories (Licensing & Operations) Regulations, 2016 and the management's line of command are clearly specified in the organization structure. Senior Management Officers are also subject to Fit and Proper criteria, eligibility requirements, Affidavits, clean CIB reports from State Bank and availability of name in the Active Tax Payer's list.

The Board appoints members of the Human Resource & Remuneration Committee to review performances and compensation arrangements for human resource of the Company, taking into consideration their skills, integrity, and experience in carrying out their respective roles. The skills and experience of executives at management level are carefully selected by HR committee to ensure that each member has the necessary capabilities for the position.

Companies Act sections 186 to 196 specifically provide manner for appointment, term of appointment, restrictions on CEO and removal of CEO. In addition to this Central Depositories (Licensing and Operations) Regulations, 2016, also provides for below mentioned matters:

- Regulation 10: Appointment of Chief Executive Officer
- Regulation 11: Appointment and functions of chief compliance Officer. This regulation also provides that the Chief Compliance Officer shall be a dedicated person and shall not have other responsibilities except as provided in this Regulation or any ancillary responsibility.

**Experience, Skills and Integrity**

The recruitment process includes a series of interviews of the candidate, an assessment of candidate's profile carried out by the concerned department and head of Human Resource, as well as verification of the candidate’s professional references. Eligibility criteria for the position of Senior Management Officers have already been defined in the Licensing Regulations and HR Manual which are also ensured by the Chief Compliance Officer and Head of HR.

Regulation 7 of Central Depositories (Licensing and Operations) Regulations, 2016 provides that the promoters, substantial shareholders, directors and senior management officers shall be fit and proper persons as per the criteria specified as Annexure I to the Regulations. The Annexure I of Regulations provides details for below mentioned categories:

- Financial Soundness and Integrity |
Furthermore, Roles and responsibilities of management are clearly defined in the form of job descriptions and are governed by the relevant human resource manual which are consistent with the Licensing Regulations.

**Key Consideration 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.

**Description**

CDC has a documented Risk Management Framework which is mainly derived from COSO ERM Framework issued in 2017 and approved by the Board. The Framework clearly identifies the risk management policy of CDC.

The framework emphasize three lines of defense of the COSO ERM framework which includes front office, risk management and internal audit over sighted by the Board through Board Audit Committee (AC)

The ERM framework covers the risk governance structure including roles and responsibilities, the risk appetite statement, the policies statement for Market, Credit and operational risk management.

The framework provides comprehensive mapping of risks, their likelihood and expected implications as well as an action plan for the mitigation of any risk that is beyond CDC's tolerance limit.

Risk management framework and its suitability are under constant evaluation and monitoring of the Audit Committee and the Board of Directors of the Company. CDC has documented a risk register prepared in consultation from M/s A. F. Ferguson (a member firm of Price Waterhouse Coopers) and business units of the Company. All the risks pertaining to the CDC have been appropriately identified, categorized and a suitable response has been formulated accordingly. Residual risks falling within the risk-appetite have been accepted by the company.

Similarly, in order to mitigate system related risk, efficiency and integrity of system are been audited by the external auditors having relevant experiences. Along with monitoring the risks internally, risk
management exercise has also been performed by Thomas Murray.

Oversight function is overseen by the Audit Committee having representation of independent directors and non-executives directors.

**Key Consideration 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.

**Description**

CDC uses different approaches to involve relevant stakeholders in its decision making processes, among others:

**(i) CDC Element Level:**

Accountability to CDS Elements is performed both by (i) regular and ad-hoc communication regarding any important decisions or changes in the products offered and the markets served by CDC, and (ii) proactively approaching Participants for the development of products and services. CDS Elements are in touch with the Senior Management Officers of CDC who have decision making authorities regarding their issues.

Furthermore, CDC, NCCPL and PSX have joint Consultation Committee, which is a forum for discussion on strategic initiatives for the development and growth of Capital Market and meets on periodic basis. The Committee's aim is to anticipate and better understand the needs and expectations of the CDS Elements, Clients and other stakeholders.

**(ii) Stakeholders who provide services to/ have interaction with CDC:**

Existing relationships with PSX, NCCPL, Competent Authorities, Commercial Banks, and connectivity providers are reviewed on an ongoing basis, and completed by onsite visits. CDC monitors developments in relation to these stakeholders on an ongoing basis. Furthermore, CDC conduct surveys to get participant feedback.

Any changes made in the CDC Regulations are circulated for public opinion and comments. Further, CDC interacts with its CDS Elements continuously through the following channels in order to understand their needs and expectations and to take into account their legitimate interests:

- Element Training Program;
- Ad hoc consultations launched in the event of material development projects or special purpose meetings;
- Dedicated email domains and toll free line
- The Participants are always welcome to express their views and
provide recommendations for improvement in the system.

- Changes in Regulations, Tariff Structure etc. are published in Gazette and are disseminated to CDS Elements through Notice Management System (NMS).

- Remote Education Program

Input collected via above channels is duly considered by CDC in its decision making. As a matter of principle, CDC consults Participants, Stock Exchanges and relevant entities as well as the Regulator prior to every major strategic decision that could have material implications to the local market.

**Key conclusions**

The mission and vision statements adopted by the Board clearly put emphasis on ensuring efficient, effective and reliable depository services at par with the best business practices and international standards and commit CDC to develop and provide state of-the-art business and technology infrastructure for efficient and cost effective integration of capital and financial markets. CDC accordingly provides the highest priority to safety and efficiency as is evident from its rules, regulations and bye-laws framed to govern its business and operations. The applicable regulatory framework clearly determines the roles and responsibilities of the Directors. Further, the composition of the Board enables it to function effectively towards achieving the objectives of the Company.

The roles and responsibilities of the management have been clearly defined and communicated. Major decisions are implemented after approval of the Board that have adequate representation of all stakeholders.

**Assessment of Principle 2**

<table>
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<th>Recommendations and comments</th>
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**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.

**Key Consideration 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
Risk management framework

CDC has a comprehensive risk management framework approved by the Board, which is articulated in its business strategy and regulates the extent of risk that can be taken within the various business activities. In its risk management, CDC has a holistic approach and considers the risk it bears from its relationship with its CDS Elements, clients, and other entities. The framework provides comprehensive mapping of risks, their likelihood and expected implications as well as an action plan for the mitigation of any risk that is above CDC's tolerance limit.

Risk Framework of CDC is the overall approach through which CDC's risk tolerances are established, communicated, and monitored. The Risk Framework defines the organization’s risk management program and provides guidelines for managing CDC’s key risks in a comprehensive, consistent, and effective manner, enabling achievement of strategic business objectives while remaining within established risk tolerance thresholds. While risk types are diverse, their effective management requires a core set of common principles and common processes for identifying, assessing, measuring, monitoring, mitigating, and reporting risks.

The Risk Management Framework identifies 5 broader types of risks, applicable to CDC. They are:

- Systemic Risk – when one institution’s inability to meet its obligation makes other institutions unable to meet their obligations, resulting in significant liquidity and credit problems that threaten the stability of or confidence in capital markets
- Credit Risk\(^1\) – risk that may arise from the potential that an obligor is either unwilling to perform on an obligation or its ability to perform such obligation is impaired resulting in economic loss to the company
- Operational Risk – risk of direct or indirect losses resulting from inadequate or failed internal processes, people, systems, or from external events. This definition also includes legal risk and reputation risk which is consequent of the operational failure
- Business Risk – risk of loss due to adverse movements in market rates or prices, such as interest rates and equity prices.

Risk management policies, procedures and systems

To mitigate these risks, the Board of Directors has delegated to management the responsibility for identifying, managing, mitigating,

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\(^1\) CDC is not exposed to Credit Risk as CSD, however CDC has made investments in Debt Securities or receivable balances and/or advances paid to creditors which may be unrecovered. CDC Regulations has provisions to recover outstanding balances from CDS Elements in case of non-payment.
and reporting of these risks through the establishment of mitigating level controls which include Risk Tolerance Statements, as well as business line and functional unit Risk Profiles. Moreover, investment related risks are managed through Investment Policy approved by the Board.

CDC has a documented risk register prepared in consultation with the business units. All the risks pertaining to the CDC have been appropriately identified, categorized and a suitable response has been formulated accordingly. Residual risks falling within the risk-appetite have been accepted by the company. Furthermore, mitigating controls are under critical review to calibrate all possible means and measures to avoid & reduce associated risks with any potential risk event.

The aim is to make use of suitable safeguards and control measures such as guidelines and procedures, the segregation of functions, the principle of dual control, limit restrictions, and business continuity management to reduce the probability, frequency, and level of potential losses from the corresponding risk cases. CDC Risk Management Framework ensures that all risks are recorded, assessed and controlled, and that a consolidated report on these risks is submitted to the Audit Committee. Risk management framework and its suitability are under constant evaluation and monitoring of the Audit Committee and the Board of Directors of the Company.

Similarly, in order to mitigate system related risk, efficiency and integrity of system are being audited by the external auditors having relevant experiences. Along with monitoring the risks internally, risk management exercise has also been performed by Thomas Murray.

By the time, CDC has realized to further strengthen and streamline Risk Management processes and has adopted in-house developed Enterprise Risk Management Framework which is in its implementation phase.

Now, the Risk Management policies, procedures and systems are developed by the concerned Department, reviewed by internal stakeholders, consulted with and approved by the Management. Additionally, Internal Audit is responsible for assessing the organization framework of risk management, control and governance processes, and for determining whether:

- risks are adequately identified and mitigated by appropriate controls;
- significant financial and operational information is accurate and reliable;
- resources are used efficiently and are adequately protected; and
- the organization is in compliance with internal policies and procedures, as well as applicable laws and regulations.
Risk management policies, procedures, and systems are reviewed periodically and designed to account for fluctuations in risk intensity.

<table>
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<tr>
<th><strong>Key Consideration 2</strong></th>
<th>An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.</th>
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<tr>
<td><strong>Description</strong></td>
<td>CDC ensures that CDS Elements are able to properly manage and absorb the risks they pose to the CDS system. Systemic Risk are properly managed whereby it is ensured that CDS system and services offered by CDC are timely available to CDS elements and customers and are provided with sufficient information. For that purpose, CDC has dedicated call centers to respond and address queries of its customers, Complaint and Query Management Systems and Customer facilitation desk to manage it effectively.</td>
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<td></td>
<td>In case any CDS element faces any issues, CDC provides support services, installs CDS systems, and establishes necessary connectivity to communicate without any interruption.</td>
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<td>Non-compliance of CDS Elements with CDC Regulations is among the risks that CDS Elements could pose to CDC. CD Act, 1997 and CDC Regulations empowers CDC to impose penalties on the CDS Elements for certain type of contraventions. CDC makes CDS Elements aware of their responsibilities established under the applicable legal frameworks through Element Training Programs, Remote Education Programs, Circulars, Notifications and Newsletters. No penalties are imposed on CDS Elements who are compliant with CDC Regulations and this may be considered as incentive for CDS Elements.</td>
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<td></td>
<td>CDC also provides various reports aiming at enabling CDS Elements to better manage the reporting responsibilities, compliances and risks they pose to it. In addition, CDS Elements can also make queries at our call center and/ or online queries.</td>
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<th><strong>Key Consideration 3</strong></th>
<th>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.</th>
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<tr>
<td><strong>Description</strong></td>
<td>CDC is a Systematically Important Organization which has highly integrated system connected with National Clearing &amp; Settlement System (NCSS). CDC has a comprehensive Disaster Recovery and Business Continuity Plan to address the events which may disrupt operations significantly. The plan has included the use of a secondary site and ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan is enabled to execute all critical transactions by the end of the day of disruption. CDC regularly tests these arrangements periodically. Moreover, CDC, NCCPL and PSX perform BCP drills both independently and jointly to cater such risk.</td>
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### Material risks
The risks that the CDC bear from and pose to National Clearing Company of Pakistan ("NCCPL") and Pakistan Stock Exchange Limited ("PSX") and service providers are operational risks. The risks borne by the CDC from NCCPL and PSX may mainly affect the efficiency of the system and the level of services offered by the CSDs. A long system standstill or severe technical or operational error at the CSD side, could cause substantial delays, losses to participants or their customers.

To mitigate this, CDC have implemented many layers of precaution and protection of its processes and services (business continuity plans regularly tested), and operates a comprehensive risk management framework built on established standards and best practices. Specific risks in the context of CSD links with NCSS are described under Principle 20. CDC has a two way Straight Through Process ("STP") established with NCCPL, acting as SSS, whereby NCSS is integrated with CDS for the book-entry movement of securities to settle obligation.

### Key Consideration 4

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<td>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.</td>
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CDC works on the identification of scenarios that could interrupt its critical operations and services. The scenario risk analysis includes disruption of CDS system caused by hardware, network, software, terrorist attack; disruption of services from external providers, including utilities services; internal human errors and omissions related to calculation of custody positions and delivery of securities.

To prevent such scenarios, CDC has implemented a data backup procedure and built standby data centers, alternate BCP sites and alternative communication channels to transfer data and communicate with external parties effectively.

In addition, CDC has prepared Recovery Instructions, built a structure of the software and hardware package (backup, mirroring), secured the availability of software source codes, etc. CDC has prepared an effective plan for Business Continuity and Recovery.

CDC has implemented a comprehensive Business Continuity Plan to ensure continuity of business operations in case of any disaster. This comprehensive plan comprises of Business Impact Analysis, Critical Business Functions Identification, Minimum Resource Requirements, BCP Organization, Interdepartmental Dependencies, Disaster Recovery Scenarios, Alternate Operating Procedures and many more material information with respect to the Business Continuity and Disaster Recovery. This plan also ensures the maintenance or recovery of
operations, including services to customers, when confronted with adverse events such as natural disasters, technological failures, human error, terrorism etc.

Further, BCP Plan helps CDC to minimize financial losses to the Company, continue to serve customers and financial market participants and mitigate the negative effects of disruptions on the Company's strategic plans, reputation, operations, liquidity, credit quality, market position, and ability to remain in compliance with applicable laws and regulations.

CDC also carries out periodic BCP / DR drills to test the adequacy and preparedness of the organization to effectively respond in case of major disruption or disaster situation. For this purpose, various routine and systems audit are conducted by CDC to identify any gaps in systems and processes, and observations / risk identified are accordingly mitigated.

In order to counter the assessed risk, CDC has established business continuity program which was earlier certified with BS25999 British standard and now certified against ISO/IEC 22301:2012 global standard for business continuity management. CDC is the first company in Pakistan to have acquired this certification. Following are the provisions of standard through which business continuity of CDC is ensured:

1. All critical hardware has an onsite back-up.

2. A same city disaster recovery and business continuity site exists which has equivalent capacity hardware and infrastructure to have no deterioration of service if the same is activated. Data is real time replicated to ensure zero data loss at any given time.

   1. Another DR site is in another city to cover for a city wide disaster, the same also get transactional data (with a difference of 5 mins) from the main site.

   2. At day end data is backed up on tapes which is then stored in fire resistant and water resistant vaults of a specialized service provider.

In the area of financial health improvement, CDC has prepared and approved the Financial Stability Recovery Plan and has maintained sufficient liquid cash reserves and insurance coverage so as to avoid risk.

Furthermore, Regulation 6 of the Central Depositories (Licensing and Operations) Regulations, 2016 and attendant notification prescribes the financial resource requirements for central depository whereby the minimum paid-up capital requirement is set at Rs. 4 billion and Rs. 7 billion in terms of its net-worth by February 15, 2026. CDC maintain Paid-up Capital and Net-worth is Rs. 2.5 Billion and Rs. 5.462 Billion as of June 30, 2021 respectively.
This financial stability of CDC assists in improving financial health and maintains business continuity.

Under the Licensing Regulations, CDC has to meet financial resource requirement within 8 years. Relevant excerpts are as under:

“6. Financial resource requirements,-(1) An applicant seeking license under regulation 4 shall have an initial paid-up capital and net worth of not less than rupees one billion:

Provided that the Commission may require the applicant to achieve and maintain, as a licensing condition, a higher paid-up capital and net-worth in a progressive manner:

Provided further that a central depository registered with the Commission prior to commencement of this notification shall be required to maintain such minimum paid-up capital and net-worth and within such timelines as may be notified by the Commission.

In this respect, SECP issued Notification dated January 11, 2021 under Regulation 6 of the of the Central Depositories (Licensing and Operations) Regulations, 2016 whereby central Depository shall be required to maintain:

(i) Paid up Capital of Rs. 4 billion by February 15, 2026; and
(ii) Net worth of Rs. 7 billion by February 15, 2026.

CDC is the first company in Pakistan to be certified under CDC is the first company in Pakistan to be certified under have Paid-up Capital and Net-worth of Rs. 2.5 Billion and Rs. 5.462 Billion as of June 30, 2021 respectively.

This financial stability of CDC assists in improving financial health and maintains business continuity.

Key conclusions

CDC has developed robust risk management policies, procedures and systems that enable it to manage the risks associated with the activities undertaken by CDC. Regulations, rules and procedures are effectively enforced to ensure ongoing compliance by CDS Elements. CDC analyzes the risks arising from interdependencies with other entities such as NCCPL and PSX. CDC also has comprehensive business continuity arrangements. Further, CDC maintains sufficient reserves and liquid assets to cover its general business losses and meet its expenses.

Assessment of Principle 3

Observed

Recommendations and comments
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.

Principle 4 is not applicable to CDC as CSD. This principle is applicable for Payment System (“PS”), Securities Settlement System (“SSS”) and Central Counterparty (“CCP”) only.

<table>
<thead>
<tr>
<th>Assessment of Principle 4</th>
<th>Not applicable</th>
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</thead>
<tbody>
<tr>
<td>Recommendations and comments</td>
<td></td>
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</table>

Principle 5 – Collateral
An FMI that requires collateral to manage its or its participants’ credit exposures should accept collateral with low credit, liquidity and market risks. A CCP should also set and enforce appropriately conservative haircuts and concentration limits.

Principle 5 is not applicable to CDC as CSD. This principle is applicable for PS, SSS and CCP only.

<table>
<thead>
<tr>
<th>Assessment of Principle 5</th>
<th>Not applicable</th>
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<tbody>
<tr>
<td>Recommendations and comments</td>
<td></td>
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</table>

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.

Principle 6 is not applicable to CDC as CSD. This principle is applicable to CCP only.
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.

Principle 7 is not applicable to CDC as CSD. This principle is applicable for PS, SSS and CCP only.

Assessment of Principle 7

<table>
<thead>
<tr>
<th>PS</th>
<th>CSD</th>
<th>SSS</th>
<th>CCP</th>
<th>TR</th>
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<tr>
<td>●</td>
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</table>

Recommendations and comments

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.

Principle 8 is not applicable to CDC as CSD. This principle is applicable for PS, SSS and CCP only.

Assessment of Principle 8

<table>
<thead>
<tr>
<th>PS</th>
<th>CSD</th>
<th>SSS</th>
<th>CCP</th>
<th>TR</th>
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</table>

Recommendations and comments

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 risks arising from the use of commercial bank money.

Principle 9 is not applicable to CDC as CSD. This principle is applicable for PS, SSS and CCP only.
### 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.*

CDC does not deal in physical deliveries. Therefore this principle is not applicable.

### 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.*

#### Key consideration 1

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

#### Description

All financial institutions providing securities accounts to clients under different jurisdictions are subject to specific rules on account segregation which are categorized under following categories:

**Category A – Omnibus Account Structure:**
CSDs do not have direct access to information on the identity of individual clients of CSD participants or on end investors.

**Category B – Semi-Segregated Account Structure**
CSDs offer a special type of account allowing CSD participants to segregate securities of end investors, whereby only the CSD Participant has direct access to information on the identity of end investors.
Category C – Segregated Account Structure
CSDs offer a special type of account structure allowing CSD participants to segregate securities of individual clients or end investors whereby the CSD has direct access to information on the identity of individual clients or end investors.

In Pakistan, Segregated Account Structure is followed where the clients hold their securities in dedicated client accounts i.e. Sub-Account or IAS Account. At any moment in time it is known which securities belong to clients due to Client Asset Segregation. The clients of the Depository have access to CDS statements through Web Access Services, along with the responsibility of Participant to disseminate monthly statements to their respective client to reconcile their holdings.

Changes to the positions clients hold on their accounts happen due to following two events.

i. Transfers of securities within the CDS system from one client to another through market trades. These securities transfers are carried out by book-entry instructions and settlement movements processed by NCCPL.

ii. Transfer of securities in/out of the CDS system due to Free Delivery Mechanism, Deposit & Withdrawal Transactions. These (physical) securities deposits or withdrawals (though limited in number), require standard SDF and WDF forms and Request Transactions from the respective Participants that is subject to controls by the CDC and approval/ rejection of such Transactions by the Issuer, before they generate/ remove book-entry securities in the respective accounts. Furthermore, effective control checks are built on movement of securities by way of Free Delivery Mechanism which are only permitted if authorized by the client or permitted under the law or court.

Both these events take place under strict (system) controls and procedures. This safeguards the rights of issuers and holders and prevents the unauthorized creation/deletion of securities.

To address the operational risks related to settlement, safekeeping and custody activities, CDC has following control objectives:

- Securities matching and settlement instructions from NCCPL are processed accurately, completely and in a timely manner.
- Specific controls and procedures are in place to verify that the securities balances post-settlement reconcile with overall securities holdings.
- Reconciliation of Central Depository Register (CDR) where the Issuer of eligible Securities is require to reconcile the number of Book-entry Securities held on CDR with the number of such
Securities recorded in the name of CDC on the books of Issuer at following frequencies:

- Monthly basis by the Issuer itself, where any difference, if so identified, shall be reported immediately to CDC within 3 Business Days of identification of such discrepancy.

- Bi-annual basis and submission of such report to CDC within 10 Business Days of end of such six month period, entailing the reason of difference, if any.

- Annual Basis, duly verified by external auditors on a format prescribed by CDC within 4 months of end of financial year.

Deposit and withdrawal requests are authenticated with the pre-specified procedures and documents prior to the acceptance or release of certificates. All participant data or information is kept confidential, except that which is widely known by the public or demanded for retrieval by a competent authority.

All businesses of CDC are certified against globally accepted ISO/IEC 27001:2013 standard, demonstrating CDC’s commitment and focus to safeguard the information critical to the functioning of Pakistan’s Capital Market. Moreover, it ensures that the clients’ assets are well protected in line with internationally recognized best practices of the digital era.

Securities are created in the system through the process of Induction wherein, Issuers complete formalities specified within the Procedures of CDC for induction into the CDS system. The issued securities can then be deposited by the shareholders into their respective accounts. Securities are also issued through Corporate Actions which are governed by well-defined, approved procedures and carry adequate controls.

Securities are cancelled from the system on final redemption, revocation.

<table>
<thead>
<tr>
<th><strong>Key consideration 2</strong></th>
<th>A CSD should prohibit overdrafts and debit balances in securities accounts.</th>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>CDC does not allow securities account overdrafts. CDS settlement platform performs a provision check before executing a participant delivery instruction to ensure that sufficient securities are available in the respective account. CDC prohibits the settlement of transactions in case sufficient securities are not available in the Client Account. Moreover, system restricts the deposit of securities in CDS beyond the issued paid-up capital, and Issuers are required to reconcile the number of Book-entry Securities held on Central Depository Register</td>
</tr>
</tbody>
</table>
with the number of such Securities recorded in the name of CDC in the books of Issuer at following frequencies:

- Monthly basis by the Issuer itself, where any difference, if so identified, shall be reported immediately to CDC within 3 Business Days of identification of such discrepancy.

- Bi-annual basis and submission of such report to CDC within 10 Business Days of end of such six month period, entailing the reason of difference, if any.

- Annual Basis, duly authenticated and verified by external auditors on a format prescribed by CDC within 4 months of end of financial year.

<table>
<thead>
<tr>
<th>Key consideration 3</th>
<th>A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book-entry. Where appropriate, a CSD should provide incentives to immobilize or dematerialize securities.</th>
</tr>
</thead>
</table>

**Description**

CDC only keeps securities in dematerialized form and processes only the book-entry form in the settlement and securities transfer. The CDC Legal framework provides for a sound basis for admission and book-entry transfers of immobilized or dematerialized securities. Maintenance of securities in book-entry format ensures safe custody and smooth electronic transfers and transactions. Further, it safeguards investors against loss or theft of shares. The investors are provided value-added services such as eAlert, SMS etc. for keeping a check on transactions taking place through their accounts.

77.48% of shares w.r.t Share Capital are CDS Eligible and in Demat form. Issuers whose securities are in book-entry form have an edge over Issuer whose securities are not CDS eligible. Fees for transfers of securities, deposits, uploads and corporate action is comparatively low as compared to cost of such activities in physical form.

<table>
<thead>
<tr>
<th>Key consideration 4</th>
<th>A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.</th>
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</table>

**Description**

Securities kept in the CDS are protected against custody risk. Hence optimum care is undertaken to maintain and protect all securities maintained under the custody of the CSD. The movement of securities are recorded in the Activity Reports.

In terms of controls, CDC has hierarchical level of management and monitoring. Access to CDS is classified into sub groups, each group having different authorities. As per section 4 of the CDC Act, where any securities are issued to or registered in the name of a central depository or transferred by endorsement to or deposited with a central depository, such securities shall, in accordance with the regulations, be
entered in the relevant accounts or sub-accounts, as the case may be, as book-entry securities. Central Depository System shall be operated by a central depository for holding book-entry securities as a nominee for account-holders and for facilitating the transfer of such book-entry securities, where the title to any book-entry securities entered in an account shall vest in the account holder and the title to any book-entry securities entered in a sub-account shall vest in the sub-account holder.

As per Section 8 of the CD Act, central depository, if acting in good faith and without negligence, shall be fully discharged of its obligations to an account-holder and participant, upon the transfer or delivery of book-entry securities under the instructions of the account holder or participant, as the case may be.

In order to further strengthen the security of clients’ asset by TREC Holder Participants, CDC has implemented Asset Under Custody Regime in the capital market. With the approval of SECP, the Limit on Assets under Custody Regime (AuC) was rolled out in August 2015 along with applicable procedures. Monitoring of breach of AuC Limit and enforcement commenced from January 16, 2016.

The introduction of this regime is a revolutionary step in Investor protection. ‘Limit on Assets under custody” prescribes a limit to the extent of custody of securities which TREC holders may have under their control.

This regime is applicable on Participants who are TRE Certificate holders and compliance is mandatory. CDC has also devised a set of periodic actions which will be taken against TREC holders in case of non-compliance of these Procedures.

### Key consideration 5

A CSD should employ a robust system that ensures segregation between the CSD’s own assets and the securities of its 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.

### Description

Participants are legally obliged to segregate their own assets from the assets of their clients. The same has been covered within the CDC Regulations. Relevant excerpts are as under

**“4.19 Participants to segregate client Securities**

4.19.2 Each Participant shall ensure that the Book-entry Securities owned by the Participant himself are not entered in any Group Account or Sub-Account(s) maintained by the Participant on the CDS.”
Each participant has a unique identity in the system. The CSD enables its Clients to implement segregation in the CSD’s books by allowing them to open as many sub-accounts for their clients as are requested by their clients, whereas securities owned by Participants are only held in their House Account(s). Securities owned by the Participants in their House Account have proprietary rights on it only.

As per Section 4 of the CD Act, 1997 title to any book-entry securities entered in an account shall vest in the account holder and the title to any book-entry securities entered in a sub-account shall vest in the sub-account holder. Facility of Group Account has been withdrawn in May 2005 pursuant to SECP directive.

If a Participant becomes insolvent, its liquidator (appointed by the regulator or the court) has full authority to access the accounts, but the Participant’s client’s securities are protected and segregated from its bankruptcy/ insolvency.

<table>
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<tr>
<th>Key consideration 6</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>The CDC offers services related to custody and settlement of securities including Investor Account Services, Trustee and Custodial services for Asset Management Companies and Registrar / Transfer Agent Services. For all its services, CDC identifies, measures, monitors and manages its risks in line with its Enterprise Risk Management framework. Before new services are offered, they need to be approved by Risk and Management team, who review the initial risk assessment undertaken by the business department. Systems of CDC and National Clearing Company are tightly integrated where risk emanating from SSS are managed by NCCPL being CCP and SSS. Since the system of CDC is used to complete the Settlement process, settlement of securities is mentioned as an activity. Delivery versus Payment Model is followed in our jurisdiction where NCCPL in case of Buy, releases the securities from the Blocked Account of Buyer once it gets the Purchase Proceeds. In case Buyers (through its Participant) fails to submit the proceeds, NCCPL will retrieve the securities held in his Blocked Account to NCCPL account to meet settlement obligations. CDC facilitates such Blocking, Unblocking, and Retrieval of Securities in the Central Depository System.</td>
</tr>
<tr>
<td>Key conclusions</td>
<td>CDC has appropriate rules, procedures, and controls safeguarding the rights of CDS Elements, Account Holders and protecting the interest of all parties.</td>
</tr>
<tr>
<td>Assessment of Principle 11</td>
<td>Observed</td>
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</tbody>
</table>
Principle 12 – Exchange of value settlement system

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.

Principle 12 is not applicable to CDC as CSD. This principle is applicable for PS, SSS and CCP only.

Assessment of Principle 12

Not applicable

Recommendations and comments

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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.

**Key consideration 1**

An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that addresses the replenishment of resources following a default.

**Description**

CDC has effective and clearly defined Regulations and Procedures to manage a Participant default. The CDC Regulations along with Procedures are designed to ensure that CDC can take timely action to protect the assets of Account Holders and also protect itself.

**Default of Participant, Account Holder or Eligible Pledgee:**

As the CDC is not party to any settlement transactions, the default of a Participant, Account Holder or Eligible Pledgee will have no direct impact on CDC's financial resources and will not lead to any losses other than in respect of unpaid fees.

Regulation 15.1.1 of the CDC Regulations specify events that may constitute non-compliance at Participant, Account Holder and Eligible Pledgee’s end which may lead to imposition of Restrictions, Suspension, or termination of admission to the CDS.
Excerpts of Regulation 15.1.1 of CDC Regulations are as under:

**Circumstances on which actions to be taken:**

"15.1.1 The admission of an Account Holder and an Eligible Pledgee to the CDS may be Restricted, suspended or terminated upon occurrence of any of the events set out below:

(a) in the case of an Account Holder who is a TRE certificate holder:

(i) that TRE certificate holder ceases to be a TRE certificate holder of the Securities Exchange;

(ii) that TRE certificate holder is restricted from carrying on business as a securities broker by the Securities Exchange or the Commission;

(iii) that TRE certificate holder is suspended from all or any of the privileges of TRE certificate by the Securities Exchange or the Commission;

(v) that TRE certificate holder voluntarily ceases to carry on its business for the time being as a securities broker; or

(vi) that TRE certificate holder contravenes any of the provisions of these Regulations;

(b) in case of any Account Holder:

(i) the Account Holder ceases to comply with any Admission Requirement;

(iii) the Account Holder contravenes any of the provisions of or, becomes unable or unwilling or in any respect fails to comply with, these Regulations;

(iv) the Clearing House restricts, suspends or terminates the Account Holder, who is a Clearing Member;

(v) if at any time the Account Holder (other than the Account Holder who is a TRE certificate holder) ceases to meet the eligibility criteria stipulated in Regulation 4.1.1 or, as the case may be, Regulation 4.3.1; or
(vi) the Commission, a court or any other competent authority directs CDC to impose Restriction on or, suspend or terminate, the admission of the Account Holder to the CDS;

(vii) the Clearing House restricts, suspends or terminates the Account Holder, who is an Authorized Intermediary, provided that no action shall be required under these Regulations where CDC is the Authorized Intermediary; and

(c) in case of an Eligible Pledgee:

(i) if at any time the Eligible Pledgee ceases to meet the eligibility criteria stipulated in Regulation 4.7.1;

(ii) the Eligible Pledgee ceases to comply with any Admission Requirement; or

(iii) the Eligible Pledgee takes a step that results in a contravention of any of these Regulations by the Eligible Pledgee.

15.1.2 Every Account Holder and Eligible Pledgee shall immediately give notice to CDC upon occurrence of any of the events set out in Regulation 15.1.1.

Who may take action:
Upon receipt of notice of grounds of non-compliance from either Account Holder, Eligible Pledgee, PSX, NCCPL or SECP, CDC will take enforcement action under Regulation 15.2. of CDC Regulations.

“15.2.1 Upon receipt of a notice from the Account Holder, the Eligible Pledgee, the Securities Exchange, a Clearing House or the Commission, as the case may be, notifying the occurrence of any of the event set out in Regulation 15.1.1 or where the CDC is otherwise satisfied that any of such event has occurred in respect of an Account Holder or, as the case may be, the Eligible Pledgee, the CDC may, in accordance with the Procedures:

(a) impose Restrictions on;
(b) suspend; or
(c) terminate,

the admission to the CDS of that Account Holder or, as the case may be, the Eligible Pledgee.”
Notice may be received by various means including by way of formal information from the Commission, PSX, NCCPL, court order or any other Competent Authority.

As soon as CDC becomes aware of any such event, CDC takes the enforcement action in light of applicable framework where access to the system, Client Accounts and House Account are withdrawn as per defined Regulations and Procedures.

In case access to Client Accounts is restricted for the Participants, such clients may take the custody of their securities in accordance with Procedures for Transfer of Holding.

**Circumstances under which Actions to be taken against Issuer:**

**5.3 Suspension and revocation of CDS Eligibility**

5.3.1 Without prejudice to any remedy of the CDC under the law or under these Regulations, if:

(a) an Issuer becomes unable or unwilling or in any respect fails to comply with these Regulations;

(b) in the case where the Eligible Securities are listed on the Securities Exchange, the Securities Exchange suspends trading in such Securities or delists them;

(c) at the time of any determination, one or more eligibility criteria stipulated in Regulation 5.1.1 cease to be met; or

(d) the CDC thinks it necessary or desirable so to do having regard to:

(i) the integrity, reliability and efficiency of the CDS; or

(ii) the protection of CDS Elements from risk of loss, the CDC may, subject to Regulation 5.3.2”

**Actions to be taken by CDC:**

(e) suspend the CDS Eligibility of any Securities of an Issuer until further notice, provided that any period of suspension does not exceed 60 Business Days or such other period or periods not exceeding 60 Business Days each after the first 60 Business Days period, as the CDC may, in its discretion, from time to time deem appropriate; or

(f) revoke the CDS Eligibility of any Securities of an Issuer.

Provided that Regulation 5.3.2 shall not apply where CDC suspends the CDS Eligibility of any Securities of an Issuer due to reason enunciated in clause (b) of this Regulation 5.3.1.
As soon as CDC becomes aware of any such event, CDC takes the enforcement in light of applicable framework where access to the system is restricted and only following activities are permissible:

"Suspension due to non-compliance"
3.1. If the Issuer fails to comply with the notice of intention within the specified time period, CDC may issue notice of suspension of CDS Eligibility of security to the concerned Issuer.

3.2. The said notice of suspension shall state the effective date of suspension and impact thereof in the CDS (non-acceptance of new deposit request transactions) and also mention consequence of prolonged suspension.

Suspension due to suspension of trading
3.3. In case of suspension of CDS Eligibility of a security due to suspension of trading in such security at the Pakistan Stock Exchange on which such security is listed due to any reason attributable to non-compliance, CDC shall issue a notice of suspension to the concerned Issuer and during the suspension period, only following transactions would be allowed:

(a) Transfer of Securities pertaining to settlement of pending market-based Securities transactions through the Clearing Company;
(b) Valid Pledge Call Transactions;
(c) Valid Pledge Release Transactions;
(d) Valid Deposit Request Cancellation Transactions;
(e) Valid Deposit Rejection Transactions;
(f) Valid Withdrawal Request Cancellation Transactions;
(g) Valid Withdrawal Rejection Transactions;
(h) Valid Rights Subscription Request Transactions;
(i) Valid Cancellation Request Cancellation Transactions;
(j) Crediting of Book-entry Securities made pursuant to Chapters 8AA, 8C, 8D, sub-clauses (e) to (h) of clause (i) of Regulation 8F.1 and Regulation 12.4.6;
(k) Gift transactions between the Family Members;
(l) Transfer of securities pursuant to Order of Court /Competent Authority;
(m) Portfolio transfers; and
(n) Transfer of securities by reason of transmission to executor, beneficiary or nominee on death of Account Holder.

3.4. The notice shall contain a note requiring all CDS Participants to inform their relevant sub-account holders (holding securities of the Issuer).

3.5. However, any other transaction or activity may also be allowed by CDC taking into consideration the specific nature of
the non-compliance on a case-to-case basis, if deemed appropriate

3.6. In case of suspension of trading in any security at the Pakistan Stock Exchange, where the security is listed due to any requirement:

- Prescribed in any charter, statute, memorandum or articles of association or in any resolution of the issuer, such cases include:
  
  a) Spilt of securities  
  b) Consolidation of Securities  
  c) Conversion of securities into another (type or class) securities  

- Imposed under any order of any court or competent authority, such cases include:
  
  a) Merger of Companies  
  b) Demerger of Companies  
  c) Reduction of Share Capital  

CDC shall, Start of Book Closure period, freeze all movement in that security including Pledge Call and pledge release and no transactions will be allowed, except of pending deposit and withdrawal transaction.

CDC has well defined Regulations and Procedures to handle events that may effect Participant's capacity to meet the eligibility criteria or any conditions laid down thereunder. Chapter 15 of the CDC Regulations “Restrictions on or Suspension or Termination of Admission to the CDS”, Joint Procedures of SECP to handle default situations, Procedures to handle Restriction/ Suspension/ Termination of Participant and Procedures for Transfer of Holding of Securities are comprehensive, detailed and well defined to cater such circumstances.

<table>
<thead>
<tr>
<th>Key consideration 2</th>
<th>An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.</th>
</tr>
</thead>
</table>
| Description         | CDC has well defined Regulations and Procedures to handle events that may affect Participant's capacity to meet the eligibility criteria or any conditions laid down thereunder. Chapter 15 of the CDC Regulations “Restrictions on or Suspension or Termination of Admission to the CDS”, Joint Procedures of SECP to handle default situations, Procedures to handle Restriction/ Suspension/ Termination of Participant and Procedures for Transfer of Holding of Securities are comprehensive, detailed and well defined to cater such circumstances.  
In respect of default of Participant, CDC takes following actions:  
- preventing the entry into the system of new instructions |
Key consideration 3

An FMI should publicly disclose key aspects of its default rules and procedures.

Description

CDC Regulations and underlying Procedures are publicly available (www.cdcpakistan.com) and detail all aspects that are relevant for Participants in case of default.

- CDC Regulations sets out the admission criteria to become a participant in the Central Depository System that the participants must meet on an ongoing basis
- Chapter 15 list the events that may trigger the Restrictions, suspension or termination of the participant in the Central Depository System
- CDC Regulations, Joint Procedures and Procedures for change in Controlling Account Holder clarifies the rules applicable to defaulted participants and its clients.

RESTRICTIONS ON OR SUSPENSION OR TERMINATION OF ADMISSION TO THE CDS OF PARTICIPANT, ACCOUNT HOLDER & ELIGIBLE PLEDGEE

Upon occurrence of any of the Grounds for imposition of Restriction on or, suspension or termination of admission of, Account Holders or Eligible Pledgees to the CDS as specified under Regulation 15.1, following actions will be taken scope of which is hereunder:

15.2.1 Upon receipt of a notice from the Account Holder, the Eligible Pledgee, the Securities Exchange, a Clearing House or the Commission, as the case may be, notifying the occurrence of any of the event set out in Regulation 15.1.1 or where the CDC is otherwise satisfied that any of such event has occurred in respect of an Account Holder or, as the case may be, the Eligible Pledgee, the CDC may, in accordance with the Procedures:

(a) impose Restrictions on;
(b) suspend ; or
(c) terminate,

the admission to the CDS of that Account Holder or, as the case may be, the Eligible Pledgee.

15.3. Notice of Restriction, suspension or termination of admission to the CDS

15.3.1 if the CDC:
(a) imposes Restrictions on the admission to the CDS of a non-compliant Account Holder or, as the case may be, an Eligible Pledgee, under Regulation 15.2.1(a);

(b) suspends the admission to the CDS of a non-compliant Account Holder or, as the case may be, an Eligible Pledgee, under Regulation 15.2.1(b); or

(c) terminates the admission to the CDS of a non-compliant Account Holder or, as the case may be, an Eligible Pledgee, under Regulation 15.2.1(c),

the CDC shall, in accordance with the Procedures, promptly give notice of the Restrictions, suspension or termination, as the case requires, to:

(d) the non-compliant Account Holder or, as the case may be, the Eligible Pledgee;

(e) the Sub-Account Holders of such non-compliant Account Holder;

(f) if the non-compliant Account Holder is a TRE certificate holder, the Securities Exchange and the Clearing House

(g) if the non-compliant Eligible Pledgee is a banking company within the meaning of the Banking Companies Ordinance, 1962 (LVII of 1962) or a company, corporation or institution to which Section 3A of the Banking Companies Ordinance, 1962 (LVII of 1962) applies, the State Bank; and

(h) the Commission.

15.3.2 If a notice is given under Regulation 15.3.1, the CDC may, at its discretion, also, give notice of the Restrictions, suspension or termination, as the case requires, to other Account Holders or to Eligible Pledgees or to Issuers to the extent that it thinks reasonably necessary.

15.3.3 A notice given under Regulation 15.3.1 shall specify:

(a) the reason for the Restrictions, suspension or termination; and

(b) the date on which the Restrictions, suspension or termination has or will become effective.

15.3.4 A notice of Restrictions shall, in addition to the requirements of Regulation 15.3.3, specify:
(a) the nature and extent of the Restrictions to apply to the admission to the CDS of the non-compliant Account Holder or, as the case may be, the Eligible Pledgee; and

(b) the period for which the Restrictions will apply.

15.3.5 A notice of suspension shall, in addition to the requirements of Regulation 15.3.3, specify the period for which the suspension shall remain effective.

15.3.6 A notice of termination shall, in addition to the requirements of Regulation 15.3.3, specify the effects of termination and the actions, if any, to be performed by an Account Holder including the time period within which such action shall be performed.

15.3.7 CDC may give a notice of:

(a) termination or, as the case may be, a notice of Restrictions during a period of suspension or;

(b) suspension or, as the case may be, a notice of termination during a period of Restriction,

of admission to the CDS of a non-compliant Account Holder or, as the case may be, the Eligible Pledgee.

**Suspension and Revocation of CDS Eligibility of Issuer**

Upon occurrence of any of the Grounds for imposition of Suspension or Revocation of admission of Issuer to the CDS as specified under Regulation 5.3.1 following actions will be taken scope of which is hereunder:

5.3.1 Without prejudice to any remedy of the CDC under the law or under these Regulations, if:

(a) an Issuer becomes unable or unwilling or in any respect fails to comply with these Regulations;

(b) in the case where the Eligible Securities are listed on the Securities Exchange, the Securities Exchange suspends trading in such Securities or delists them;

(c) at the time of any determination, one or more eligibility criteria stipulated in Regulation 5.1.1 cease to be met; or

(d) the CDC thinks it necessary or desirable so to do having regard to:

(i) the integrity, reliability and efficiency of the CDS; or
(ii) the protection of CDS Elements from risk of loss,

the CDC may, subject to Regulation 5.3.2:

(e) suspend the CDS Eligibility of any Securities of an Issuer until further notice, provided that any period of suspension does not exceed 60 Business Days or such other period or periods not exceeding 60 Business Days each after the first 60 Business Days period, as the CDC may, in its discretion, from time to time deem appropriate; or

(f) revoke the CDS Eligibility of any Securities of an Issuer.

Provided that Regulation 5.3.2 shall not apply where CDC suspends the CDS Eligibility of any Securities of an Issuer due to reason enunciated in clause (b) of this Regulation 5.3.1.

5.3.2 If the CDC intends to suspend the CDS Eligibility of any Securities of an Issuer under Regulation 5.3.1, or if the CDC intends to revoke the CDS Eligibility of any Securities of an Issuer under Regulations 5.3.1, 5.4.3 or 5.4.4, the CDC shall:

(a) give such notice to the Issuer as the CDC thinks reasonable in the circumstances;
(b) if the Securities are listed on the Securities Exchange, together with giving the notice to the Issuer under Regulation 5.3.2(a), give a copy of that notice to the Securities Exchange; and

(c) to the extent that the CDC thinks reasonably necessary, give a copy of that notice to other CDS Elements.

5.3.3 If the CDC suspends or revokes the CDS Eligibility of any Securities of an Issuer in accordance with Regulation 5.3.1, or revokes the CDS Eligibility of any Securities of an Issuer in accordance with Regulations 5.4.3 or 5.4.4, the CDC shall, in accordance with the Procedures, give notice of the suspension or revocation to:

(a) the Issuer of the Securities;
(b) if the Securities are listed on the Securities Exchange, to the Securities Exchange;

(c) to the extent that the CDC thinks reasonably necessary, other CDS Elements;

(ca) the Investor-Accountholders who hold the Book-entry Securities representing such Securities, provided that, in case of suspension, notice shall be sent to such Investor-Accountholders where suspension has been made due to suspension of trading in such Securities by the Securities Exchange; and
5.3.4 A notice given under Regulation 5.3.3 must state:

(a) the time and date on which the suspension or revocation is effective; and

(b) the reason for the suspension or revocation.

5.3.4A Where a Participant has, pursuant to Regulation 5.3.3, received from CDC a notice of:

(a) suspension of CDS Eligibility of Securities of an Issuer from CDC the CDS Eligibility of which has been suspended due to suspension of trading in such Securities by the Securities Exchange; or

(b) revocation of CDS Eligibility of Securities of an Issuer,

such Participant shall, within two Business Days from the date of receipt of such notice, notify, in accordance with the Procedures, the contents of such notice to all Holders of the Sub-Accounts controlled by such Participant who hold Book-entry Securities representing such Securities.

CDC Regulations and related Procedures are available on the website www.cdcpakistan.com which are accessible to the general public. Furthermore, notices are sent to the persons specified in the Regulations 5.3.3 and 15.3.1 & 15.3.2 and also placed on CDC website.

Key consideration 4

An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.

Description

CDC Regulations and Standard Procedures are in place for timely dissemination and to take appropriate actions by the CDC, PSX and NCCPL.

All enforcement actions by PSX, CDC and NCCPL are connected and discussed in case of any related regulatory changes are made so as to ensure that they are practical and effective. Furthermore, testing is also performed in case of any material change to the Default Regulations and Procedures to ensure that they are practical and effective.

CDC, on an ongoing basis, engages CDS Elements and other relevant parties to review default and compliance procedures, and updates the CDC Regulations/Procedures accordingly to ensure consistency and practicality with the Market practices and actions of other FMIs. In this
connection, Chapter 13, 14 and 15 of the CDC Regulations have been revamped in 2017 considering changes/development.

The actual default scenarios of Participant also assist CDC in ensuring the practicality and efficiency of default proceedings. CDC Regulations and procedures prevalent at that time enabled CDC to deal with those defaults efficiently and are also tested in practical scenarios.

**Key conclusions**

CDC has developed effective and clearly defined rules and processes to manage default of a Participant. Roles and responsibilities including the series of actions to be undertaken are clearly prescribed in CDC Regulations.

**Assessment of Principle 13**

Observed

**Recommendations and comments**

**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.

Principle 14 is not applicable to CDC as CSD. This principle is applicable for CCP only.

**Assessment of Principle 14**

Not applicable

**Recommendations and comments**

**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.

**Key consideration 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.

**Description**

CDC Board defines its general business risk and responsibilities for the company’s risk management system. Specialized departments identify
risks and report them in accordance with the hierarchical reporting structure. CDC has robust management and control systems to identify, monitor and manage their general business risks.

The Board of directors comprises of members having the core competencies, diversity, requisite skills, knowledge and experience and fulfills any other criteria relevant in the context of the company's operations. CDC has 12 Directors on its Board composition of which is hereunder:

- Independent Directors 04
- Non-Executive Directors 11
  (representing Shareholder Directors)
- Executive Director (CEO) 01

CDC has a formal and effective mechanism for an annual evaluation of the Board’s own performance as required under the Regulation 17 of the Central Depositories (Licensing & Operations) Regulations, 2016 guidelines issued by the SECP for performance evaluation of Board and Regulation 10(3)(v) of the Listed Companies (Code of Corporate Governance) Regulations, 2019. Performance of Chief Executive Officer and Chief Compliance Officer are also subject to review under the Licensing Regulations.

Relevant excerpts are as under:

“Regulation 17(1) The central depository, with approval of its Board of directors, shall submit to the Commission, within two months of the close of its financial year, a yearly performance report of the central depository against the approved targets and plans, highlighting in particular performance of the Board of directors, chief executive officer and compliance officer of the central depository.”

“Regulation 10(3)(v) The Board of directors of a company shall ensure that:

(v) a formal and effective mechanism is put in place for an annual evaluation of the Board's own performance, members of Board and of its committees;”

The Operations of CDC are governed under the following:

- Securities Act 2015;
- CD Act, 1997;
- Central Depositories (Licensing & Operations) Regulations, 2016
- CDC Regulations;
- CDC Procedures; and
- Companies Act, 2017.
Among other conditions for licensing as Central Depository under Regulation 5 of the Central Depositories (Licensing & Operations) Regulations, 2016, Central Depository shall

“(h) comply with the code of corporate governance for listed companies to the extent consistent with the provisions of the Act, rules and regulations made thereunder.”

Regulation 10 of the Listed Companies (Code of Corporate Governance) Regulations, 2019 also specifies Responsibilities of Board of Directors and its members which are as under:

“10. (1) Subject to the requirements of section 183 and 204 of the Act, the Board is responsible for adoption of corporate governance practices by the company and monitoring effectiveness of such practices and the members of the Board shall ensure high ethical standards in performing their responsibilities.

(2) The Board is responsible for the governance of risk and for determining the company’s level of risk tolerance by establishing risk management policies and for this purpose the Board is encouraged to undertake at least annually, an overall review of business risks to ensure that the management maintains a sound system of risk identification, risk management and related systemic and internal controls to safeguard assets, resources, reputation and interest of the company and shareholders.

(3) The Board of directors of a company shall ensure that:

(i) a vision and/or mission statement monitoring the effectiveness of the company’s governance practices and overall corporate strategy for the company is prepared, adopted and reviewed as and when deemed appropriate by the Board

(ii) a formal code of conduct is in place that promotes ethical culture in the company and prevents conflict of interest in their capacity as member of the Board, senior management and other employees. The Board shall take appropriate steps to disseminate code of conduct throughout the company along with supporting policies and procedures

(iii) adequate systems and controls are in place for identification and redressal of grievances arising from unethical practices;
(iv) a system of sound internal control is established, which is effectively implemented and maintained at all levels within the company;

(v) a formal and effective mechanism is put in place for an annual evaluation of the Board’s own performance, members of Board and of its committees;

(4) The Board shall ensure that complete record of particulars of the significant policies along with their dates of approval or updating is maintained by the company. The significant policies may include but not limited to the following,

(i) governance of risks and internal control measures;
(ii) human resource management including preparation of a succession plan
(iii) permissible fee for non-executive directors including independent directors;
(iv) procurement of goods and services;
(v) communication policy and investors'/shareholders’ relations;
(vi) marketing;
(vii) determination of terms of credit and discount to customers;
(viii) write-off of bad/doubtful debts, advances and receivables;
(ix) sale and lease of assets, undertaking, capital expenditure, planning and control;
(x) investments and disinvestment of funds;
(xi) debt coverage;
(xii) determination and delegation of financial powers;
(xiii) transactions or contracts with associated companies and related parties;
(xiv) environmental, social and governance (ESG) including but not limited to health and safety aspects in business strategies that promote sustainability, corporate social responsibility initiatives and other philanthropic activities, donations, contributions to charities and other matters of social welfare; and
(xv) whistle blowing policy, by establishing a mechanism to receive, handle.

As per Regulation 36 of the Listed Companies (Code of Corporate Governance) Regulations, 2019, CDC is also required to publish Statement of Compliance in the annual reports and such statement is reviewed and certified by statutory auditors. Relevant excerpts are as under:
“36. Compliance Statement and Auditor Review.- (1) It is mandatory that the company shall publish and circulate a statement, as given under Annexure A to these Regulations, along with their annual reports to set out the status of their compliance with the requirements of these Regulations and the said statement shall be specific and supported by necessary explanations.

(2) It is mandatory that the company shall ensure that the statement of compliance is reviewed and certified by statutory auditors as per relevant Regulations specified by Commission.

(3) It is mandatory that the statutory auditors of company shall highlight any non-compliance with these Regulations in their review report.”

Clean reports have been issued by Statutory Auditors on the Statement of Compliance with the Listed Companies (Code of Corporate Governance) Regulations, 2019 for consecutive last 5 years.

CDC’s Risk management process includes periodic assessment of all risks in terms of probability and impact of any occurrence, as well as action plans to mitigate the risks.

CDC manages the types of general business risks cited. General business risks are managed in the framework and guidelines of Board of Directors, as well as in the process of planning and monitoring of CDC budget implementation for current and projected activities. CDC considers those general business risks including potential impairments to its financial position that could result in a loss that consequently would be charged against capital.

Guidelines cover the financial impairment that can be caused by a variety of business factors, including poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses and other factors that have impact on its financial position. For that purpose variety of factors that may impair financial position are considered such as unexpected downturn in business volumes or in the economic cycle; external market events with adverse systemic consequences; changes in regulatory requirements that may adversely impact CDC or its CDS Elements; unexpectedly large operating expenses; and operational risk events.

In addition, business-related losses may also arise from risks covered by other principles, for example, legal risk (in the case of legal actions.
challenging the FMI’s custody arrangements), investment risk affecting the FMI’s resources, and operational risk (in the case of fraud, theft, or loss). However, in the presence of Risk Management Framework, it reduces the probability of such events/situation and incase CDC experiences an extra-ordinary one-time loss, it maintains insurance coverage and Reserve of Rs. 100 million to cater such unforeseen circumstances.

The potential for financial impairment could be affected by a variety of factors, including, but not limited to, an unexpected downturn in business volumes or in the economic cycle; external market events with adverse systemic consequences; changes in regulatory requirements that may adversely impact CDC or its CDS Elements; unexpectedly large operating expenses; and operational risk events.

The following methods are used to monitor business risks market data, means of automatic notification of failures in business processes and/or operation of information systems etc.

To manage general business risks, CDC uses the following mechanisms: procedures for the management of projects/costs, insurance, training and awareness in the field of risk, consideration of recommendations of the external and internal auditor and regulator.

CDC is also a certified ISO Accredited Organization under ISO 27001:2013 standard commonly known as ISMS (Information Security Management System, which further corroborates the strength and effectiveness of its control systems and highlights its international recognition. Additionally, the company has been generating net profit and positive cash flow from operating activities since 2011 as also reported in its annual audited financial statements, which are available on company’s website for information of all concerned.

In addition to this, the Central Depository (Licensing and Operations) Regulations, 2016 also provide specific financial resources requirements for a Central Depository. Notification issued by SECP under Regulation 6 provides that existing central depository shall have paid-up capital of Rs. 4 billion and net worth of Rs. 7 billion by February 15 2026. Currently, Paid-up Capital and Net worth as of June 30, 2021 are Rs. 2.5 billion and Rs. 5.462 billion respectively.

Sufficient reserves are always available with CDC, to ensure its liquidity and going concern and the same are audited annually by its statutory auditor.

**Key consideration 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.

| Description | CDC has liquid net assets financed by equity to be able to continue to perform critical operations and provide critical services in the event of financial risks or other general business losses. According to notification issued by SECP under Regulation 6 of the Central Depositories (Licensing & Operations) Regulations, 2016, CDC should have a specific capital base, which comprises of Paid-up capital, retained earnings, and reserves. The minimum paid-up capital requirement is set at Rs. 4 billion and Rs. 7 billion in terms of its net-worth by February 2026 to cover all risks, such as credit, market, operational, business risks. In order to comply with the Paid-up capital and Net-worth requirement under the Securities Act, 2015 and the Central Depositories (Licensing & Operations) Regulations, 2016, CDC maintain Paid-up capital of Rs. 2.5 Billion and Net-worth of Rs. 5.452 Billion as at June 30, 2021. In order to reduce credit, market and liquidity risks to a maximum low level, all liquid funds have been kept in bank accounts with Commercial Banks, government backed treasury bonds/ instruments and Mutual Fund units. For information of all concerned, the annual financial statements are uploaded on the website of CDC at [http://cdcpakistan.com/downloads_category/publications/](http://cdcpakistan.com/downloads_category/publications/) CDC has enough resources to continue as Going Concern and its Financial Statements are prepared on Going Concern basis duly audited by Statutory Auditor. As per the financial statements, the available funds along with the return earned from investment in bank deposits, are enough for an orderly wind-down and are sufficient to cover the general business losses and operating expenses. |
| Key consideration 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. |
| Description | CDC has maintained the Reserve fund of Rs. 100 million to continue as going business activity without any interruptions. Furthermore, its |
current assets are highly liquid.

CDC's liquid net assets (cash and cash equivalents) as of June 30, 2021 are Rs. 4.262.71 billion as compare to its six months operating and administrative expenses i.e. Rs. 0.637 billion.

**Key consideration 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.

**Description**

CDC manages its general business risk and holds sufficient liquid resources to cover potential business losses. CDC maintains a portfolio comprised of low-risk and high-liquidity government debt instruments which are highly liquid, while the rest of assets are held in form of cash or cash equivalent to meet its current and projected operating expenses considering market booms and recessions.

The banks that are considered for the investments shall have at least a rating in “A” range. The type of instruments used is limited to short / medium - term or overnight deposits or similar products.

In addition to above, stress-testing of financial sustainability is performed regularly, taking into account a wide range of scenarios, including adverse market conditions.

As at June 30, 2021, the liquid assets of CDC as follows:

- Treasury Bills Rs. 1,691,122,292
- Mutual Funds Rs. 2,498,118,256
- Cash and bank balances Rs. 73,478,549

**Key consideration 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 Board of directors and updated regularly.

**Description**

Regulation 6 of the Central Depositories (Licensing and Operations) Regulations, 2016 prescribes the financial resource requirements for central depository.

Under the Licensing Regulations, CDC has to meet financial resource requirement by February 2026.. Relevant excerpts are as under:

"6. **Financial resource requirements**,-(1) An applicant seeking license under regulation 4 shall have an initial paid-up capital and net worth of not less than rupees one billion:"
Provided that the Commission may require the applicant to achieve and maintain, as a licensing condition, a higher paid-up capital and net-worth in a progressive manner:

Provided further that a central depository registered with the Commission prior to commencement of this notification shall be required to maintain such minimum paid-up capital and net-worth and within such timelines as may be notified by the Commission.

CDC maintain the Paid-up Capital and Net-worth which is Rs. 2.5 Billion and Rs. 5.462 Billion as at June 30, 2021 respectively.

Key conclusions

The capital adequacy requirements for the CDC are determined under the Securities Act. The control environment implemented at CDC takes into account the business risk of the entity. CDC has sufficient liquid assets to cover operational expenses. The Board reviews the quarterly, half yearly and annual financial statements of the CDC to assess and keep a check on the financial health of CDC. The financial statements are audited by an independent firm and audit opinion takes into account the going concern assumption.

Assessment of Principle 15

Observed

Recommendations and comments

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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.

Key consideration 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.

Description

CDC holds its own assets and security deposits obtained from CDS Elements with Commercial Banks regulated by the State Bank of Pakistan and approved by the Board of Directors which shall meet the minimum credit rating thresholds. These Regulated Banks have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

CDC is also subject to various Financial, Operations, Regulatory, System Audits under the applicable statute to ensure its capacity to
continue its business affairs, its compliances, smooth operations and resiliency. List of audits are as under:

- Annual Financial Audit carried out by Statutory Auditor
- Audit by Statutory Auditors to ensure that the compliance function had appropriate resources including the human resource and implemented effective compliance procedures and reporting mechanism which can be reasonably expected to ensure compliance with the applicable laws and detect and report any non-compliance in a timely manner.
- Audit by Statutory Auditors to ensure that an adequate internal control system commensurate with the size and nature of services performed by the central depository was implemented during the period.
- Operational, Regulatory and IT System Audit by external auditors approved by SECP on annual basis
- BCP/ ISMS Audits
- Penetration Testing Audits
- ISAE 3402 report, that provides substantive information on the operation of controls and procedures implemented at CDC along the ISAE 3402 standard

<table>
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<tr>
<th>Key consideration 2</th>
<th>An FMI should have prompt access to its assets and the assets provided by participants, when, required.</th>
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<td>Description</td>
<td>For the purpose of investments of own liquidity and received cash CDC has established relationships with a variety of Financial Institutions as per the criteria approved by the Board.</td>
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<td>CDC’s cash assets are placed in commercial banks, or in highly liquid financial instruments with minimal market risk and credit risk. CDC has prompt access to its cash assets through Online arrangement with various banks of Pakistan.</td>
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<td>CDC’s own assets held in the form of Securities are invested in Government Bonds, Term Deposits or Units issued by AMC not under the management of CSD. These assets have rapid liquidity capabilities with minimal adverse impacts.</td>
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<th>Key consideration 3</th>
<th>An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.</th>
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<tbody>
<tr>
<td>Description</td>
<td>CDC as CSD, does not have exposure to the custodian banks.</td>
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<th>Key consideration 4</th>
<th>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</th>
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little, if any, adverse price effect.

Description

The investment and treasury operations of CDC are conducted in accordance with the Investment policy formulated by the Investment Committee and approved by the Board of Directors of CDC. The Investment Committee considers various risks associated with investments and formulates policy that minimizes risks whilst ensuring maximum returns to the Company. All the existing funds are currently placed with Commercial Banks with adequate credit ratings and government backed treasury bonds in order to reduce credit, market and liquidity risks to a bare minimum.

Key conclusions

The CDC maintains its assets in accounts with high rated commercial banks or in highly liquid financial instruments with minimal market risk and credit risk. Furthermore, CDC’s investment are conducted in accordance with the investment policy.

Assessment of Principle 16

Recommended

Recommendations and comments

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**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.*

**Key consideration 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.

Description

As apprised above, CDC has a Risk management framework in place as approved by the Board. The Framework clearly identifies the risk management policy of CDC.

The framework provides comprehensive mapping of risks, their likelihood and expected implications as well as an action plan for the removal or reduction of any risk that is above CDC’s tolerance limit.
Risk management framework and its suitability are under constant evaluation and monitoring of the Audit Committee and the Board of Directors of the Company.

By the time, CDC has realized to further strengthen and streamline Risk Management processes and has adopted in-house developed Enterprise Risk Management Framework which has now been implemented entity-wide.

To mitigate these risks, the Board of Directors has delegated to management the responsibility for identifying, managing, mitigating, and reporting of these risks through the establishment of mitigating level controls which include Risk Tolerance Statements, as well as business line and functional unit Risk Profiles. Moreover, investment related risks are managed through Investment Policy approved by the Board.

All Business Units and individual employees of CDC must identify and quantify potential risks in their area of responsibility. Newly identified risk shall be identified by the Business Unit which are assessed and mapped by CDC’s Enterprise Risk Management (ERM). The procedure stipulates that Business units are responsible for the identification, measurement, and control of the risk in their area of operations. The ERM is responsible for the assessment and the reporting phase of the risk management process and assessing the adequacy of contingency measures.

CDC has a documented risk register prepared in light of ERM Framework mainly derived from COSO ERM framework issued in 2017. All the risks pertaining to CDC have been appropriately identified, categorized and a suitable response has been formulated accordingly. Residual risks falling within the risk-appetite have been accepted by the company. Furthermore, mitigating controls are under critical review to calibrate all possible means and measures to avoid & reduce associated risk with any potential risk event.

It has been developed and is maintained in accordance with best practices for risk management and regulatory guidelines, including:

- ISO 31000:2009 principles and generic guidelines on risk management
- ISO 27001:2013 guidelines for Information Security
- ISO 22301 certification for Business Continuity Management Program
- As far as Operational Risk is concerned, the key preventive measures consist in strong internal control processes, which are performed and documented in the framework of the ISAE 3402 “Assurance Report on Controls at a Service Organization” certification.
Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events and consists of:

- Availability Risk: Risk of disruption in service delivery due to unavailability of resources. It includes risk of unavailability of technical infrastructure, facilities, and staff;

- Risk of Service Deficiencies: Risk arising from impaired (no or wrong) process or execution, due to product, process or execution deficiencies. It includes internal human errors and omissions, suppliers deficiencies and product flaws;

- Risk of Damages to Physical Assets: It includes the risks due to accidents and natural hazards, as well as terrorism and sabotage; and

- Legal Risk: Risk arising from the non-compliance of laws and Regulations and all contractual commitments.

Management of Operation Risk:

Major controls / steps implemented by the company to mitigate the above mentioned risks include:

- Implementation of a business continuity plan / disaster recovery plan, ensuring adequate back up arrangements. CDC's Information Technology department continuously monitors the performance of its Business critical servers and as a result of that capacity planning is performed considering the peak load. Furthermore, redundant servers are also available both at Main Processing Site and at Disaster Recovery site. DR Drill is conducted at least once every year and last DR Drill was conducted in December 2019. Furthermore, running business operations from home during Covid-19 situation also demonstrate our ability to carry out our activities during pandemics and disasters.

- The company has implemented an approved Physical and Environmental security policy as per international standards. Operational controls to mitigate physical access risks are implemented such as:
  - Entry to the building premises is only allowed after the physical search by security guards;
  - Access to the Data Center is restricted and controlled through Biometric device; and
• Surveillance cameras are placed in the Data Center, as well as in the company's premises.

• An Authority Management system has been developed, through which authorities are given only to specific users. Furthermore, only authorized IPs, given to authorized users, are allowed to access CDS. All outside connections to CDS such as by third parties including clearing members are protected through firewall and encrypted data transmission channel. Furthermore, the Board has constituted an IT Steering Committee to ensure that all IT related operational matters are properly addressed.

• A comprehensive automated system, with adequate system based controls, for execution of company core operations such as CDS has been implemented to reduce risk of human errors, as well as fraud, and all actions by employees are subject to review through a well-planned hierarchical based structure.

• Furthermore, the company's information security management systems have been certified under ISO 27001: 2013, that entails implementation of best standards with respect to information security.

  The ISO standard requires internal audit of the Company's ISMS policies, procedures and their implementation before the external authorized consultant perform the evaluation against the prescribed standards.

  CDC has also implemented Enterprise Risk Management (ERM) Framework of the company prepared on the basis of guidelines of COSO ERM framework 2016.

  The CD Systems and its controls are reviewed by an external auditor from the big four firms every year and this is generally a two month exercise where they cover all areas. The report is submitted to SECP.

  CDC also undertakes regular penetration testing through its in-house security team. Further, CDC also uses the services of a consultant to undertake a penetration testing exercise and the findings are then immediately reviewed and actioned upon.

<p>| Key consideration 2 | An FMI's Board of directors 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. |</p>
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<tr>
<th>Description</th>
<th>The CDC’s Board is the ultimate decision making body. In order to perform its responsibilities more efficiently, the Board has made Personnel responsible to comply with all the implemented security requirements, to manage operational risks and include Risk Management. Segregation of duties are in place for the purpose of Risk Management. Risk Owners who are relevant Business Units have to identify Risk and Risk Representatives and Internal Audit department to review and test. Which follows the three lines of defense governance concept for Operational Risk management. However, the ultimate responsibility for risk management lies with the Board through its Sub-Committee i.e. Audit Committee for Risk related matters. The risk owner is responsible for managing and mitigating risk within the assigned area. Furthermore, the Risk Representative is entrusted with the day-to-day risk oversight and evaluation. It is the responsibility of the Risk Management function to assess risks and to independently monitor risk management as well as to develop instruments for overall risk management and controlling. In general, the Risk Management functions must create transparency over the risk situation and oversight the risk profile. Internal Audit conducts examinations of Risk Management based on the approved annual audit plan. Audit results and audit recommendations are reported to the responsible Risk Management Committee as well as to Audit Committee. CDC get its CDS audited every year by external auditors providing substantive information on controls and operating procedures and to confirm the operating effectiveness of its controls. The verification of these controls demonstrates that effective risk management is practiced in the daily provision of new and existing operational services.</th>
</tr>
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<tbody>
<tr>
<td><strong>Key consideration 3</strong></td>
<td>An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.</td>
</tr>
<tr>
<td>Description</td>
<td>CDC sets out high level objectives for the organization, including those related to operational reliability. All day-to-day activities and projects have to be related and contribute to the achievement of these high level objectives, both on a group and on a local level. Operational reliability objectives are defined in this context, at different levels. The following are two examples of high level qualitative objectives, defined in the risk register:</td>
</tr>
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</table>
• we deliver operational services that meet clients’ expectations and maintains robust service resilience;
• we operate our systems to achieve defined service levels appropriate to the business application.

Functions which are indispensable for the critical daily operations in view of CDC’s business objectives are defined as mission critical and must be resumed within a Recovery Time Objective (RTO) of 2 hours following a disruptive incident, crisis or disaster. The RTO is the time period following a disruptive incident within which products, services or activities must be resumed or resources must be recovered.

The standard way to determine vital business processes is through assessment of the two measures of availability, from a business process owner perspective, namely, Recovery Time Objective and Recovery Point Objective.

Importance of each business process, has been calculated as a result of:
• Classification of the process and role the process plays in achieving corporate business goals
• Impact, defined as resulting damage in a timescale, resulting in maximum acceptable unavailability period

In each of the importance group there are different RTO and RPO times which are documented in our BIA Documents. The RTO and RPO for vital processes, constitute the right recovery scenario, as well as appropriate data protection strategy. The business continuity plans specify how services, processes and resources will be reinstated to a pre-determined level within pre-defined time scales after an incident or disaster. To ensure that CDC is able to respond to an incident in rapid, controlled and effective manner, an incident and crisis management process is in place for the timely detection, escalation and assessment of incidents and the prompt activation of the business continuity plans.

The rest of the processes may also have short expected RTO and/or RPO, but the process importance gives the business direction about the restoration order.

Business processes altogether identified by the relevant business functions which have RTO and RPO are defined in Corporate Business Document.

Classification of business processes is on the following basis:
• Vital – There is a high cost (financial and image) associated with the loss of these business processes. This process must be recovered within a short period of time. The recovery time is up to 2 hours.
- Necessary – There is a medium / low cost (financial and image) associated with its loss. It has medium visibility and will result in some loss of goodwill. Recovery does not need to be immediate. The recovery is from 2 hours up to 3 days.

- Required – There is no stated cost associated with the loss of these processes. It is low visibility and can wait for recovery until a return to ‘business as usual’. The recovery is 3 days onwards.

As far as the Recovery Point Objective (“RPO”) are concerned, business data required to be recovered for day to day operations is from the business applications. Further, all the business applications are designed in a way that data is replicated to a metro DR site on real time basis. Moreover, business data is also replicated to a tertiary DR site situated outside Karachi at a distance of approximately 1500 kms.

Following the mentioned architecture, enables CDC to achieve Zero data loss requirement. Additionally, RPO for most of the business processes using business applications is zero.

Internal assessments, client interactions, as well as the monitored track record of operational reliability and follow-up of all incidents, allow CDC management in assessing, whether the achieved levels are matching the set requirements.

CDC’s high operational reliability is ensured by a good systems design and by well-constructed Business Continuity Plan. CDC is the one of the few organizations in Pakistan certified under against ISO 22301:2013 as it fully appreciates the criticality of its role in the overall capital and financial market and therefore gives great importance to ensuring that its system and services are resilient. It continues to undertake periodic drill generally unannounced to not only verify its readiness but also to provide comfort to the market intermediaries as well as the investment community that its systems and services are robust and can be relied upon.

CDC has placed safety and efficiency on high priority and explicitly support financial stability and other relevant public interest considerations which are derived from “Central Depositories (Licensing & Operations) Regulations, 2016 – Regulation 5 i.e. “Conditions of Licensing”. These objectives further include ensuring that services of CDC are efficient and effective.

Furthermore, CDC Regulations provide detailed policies and procedures for execution of its operations effectively. Further, to independently assess operational, information system reliability; it is stipulated in Regulation 13.5 of CDC Regulations that CDC shall undergo audit in the manner prescribed under Central Depositories
(Licensing & Operations) Regulations, 2016. Relevant excerpts are as under:

**“13.5 Operational, information system, risk evaluation and regulatory audit of CDC**

13.5.1 The CDC shall be subject to audit of all of its systems, regulatory compliance audit and special audit to be conducted by an independent auditor or an expert, pursuant to Sections 59 to 61 of the Securities Act, 2015 (III of 2015).

13.5.1A The audit of CDC shall be conducted under Regulation 13.5.1 in such manner and with such time intervals and the report thereof shall be prepared in such form as prescribed by the Commission under the Central Depositories (Licensing and Operations) Regulations, 2016.

13.5.2 The CDC shall provide the report of the audit conducted under Regulation 13.5.1 to the Commission within 1 calendar month of receiving such report from the auditor or, as the case may be, the expert.”

Regulation 15 (7) and 15 (7A) of the Central Depositories (Licensing and Operations) Regulations, 2016 also states the following

(7) A central depository shall undergo a mandatory annual audit of its operations, regulatory functions and IT systems and any other systems or functions as specified by the Commission from time to time.

(7A) For the purposes of the audit specified in sub-regulation (7) above, the central depository shall, with the prior approval of the Commission, appoint an independent auditor with relevant expertise who shall conduct such audit in accordance with the terms of reference specified in Annexure III.

The result of this audit is communicated to the Board and the SECP.

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<tr>
<th><strong>Key consideration 4</strong></th>
<th><strong>Description</strong></th>
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<tr>
<td>An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.</td>
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<td>Capacity management is in place to ensure that IT capacity meets current and future business requirements. There is a continual monitoring of defined infrastructure services to identify potential issues ahead of time. Tests are performed on regular intervals or after major architectural changes in systems or changes in services. Actions are taken to increase capacity (or rebalance workload) as thresholds are approached.</td>
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<tr>
<td>CDS is capable of processing the necessary information to perform the activities and operations in a safe and efficient manner. System</td>
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</table>
Documentation on the information technology architecture is available and redundant system architecture with failover functions are placed to ensure CDC is scalable and can deal with operational needs and the risks faced, even in stressed conditions. Additionally, regularly tested business continuity measures are in place.

To assess the need for introducing new technology, CDC monitors system performance constantly. Reports of this monitoring are provided to the management in Management Committee meetings as well as IT Steering Committee. Stringent testing is performed for each change to the system and changes are simulated in a separate technical environment including involvement of CDS Elements, other FMIs, vendors, etc.

Additionally, a permanent simulation environment is operated for testing. Transaction volumes on CDS systems are monitored if they are within a defined overall capacity target. If necessary, the capacity target is adjusted and an increase of system capacity is initiated to meet the new capacity target.

Based on increased protection needs, a data center exists. Security is the process or means of delaying, preventing, and protecting against external or internal dangers, loss, and criminals, rigid to environmental conditions i.e., flooding and provides power and cooling even in case of bigger outages and other individuals or actions that threaten to weaken, hinder or destroy a data center. Therefore, data centers are analyzed at periodic intervals which are in line with ISO 27000 (Information Security Management Systems).

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<tr>
<th><strong>Key consideration 5</strong></th>
<th>An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.</th>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>The CDC has comprehensive physical and Information security policies in place. Hence, identifying, monitoring, assessing, and managing the full range of physical vulnerabilities and threats on an on-going basis is part of Company's policy.</td>
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<tr>
<td><strong>Physical security</strong></td>
<td>Detailed procedures have been defined at entity level. The objective is to prevent unauthorized physical access, damage and interference to business premises and information and to prevent loss, damage, theft or harm to assets (including personnel) and interruption to our activities. Critical or sensitive business information processing facilities are housed in secure areas, protected by a defined security parameter, with appropriate security barriers and entry controls. They are physically protected from unauthorized access, damage and interference.</td>
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</table>
The physical security takes into account general best practices as recommended by international standards like ISO/IEC 27001:2013.

**Information Security**

Information Security Policies and Standards are designed to maintain the confidentiality, integrity and availability of information. Detailed standards and procedures have also been established in a great variety of IT security related areas such as firewall management, Internet access, intrusion detection, password management, remote access etc. Information Security Team and Internal Audit Team are responsible for continuously auditing and verifying IT Security and compliance.

CDC has formal policies and standard procedures governing Information security based on internationally recognized control standards, such as the ISO/IEC 27001: 2013.

CDC information security policies and procedures are based on ISO 27001 standard requirement, following are the list of policies:

- Access Control Policy
- Business Continuity Management Policy
- Communications Security Policy
- Compliance and Auditing Policy
- Cryptography Policy
- Enterprise Information Security Policy
- Human Resource Security Policy
- Information Asset Management Policy
- Information Systems Acquisition and Maintenance Policy
- Organization of Information Security Policy
- Physical and Environmental Security Policy
- Retention Policy
- Security Incident Management Policy
- Supplier Relationships Policy

All changes to the hardware, software and network devices need to be approved before implementation. Changes to such things can be made subject to respective SOPs,

- Changes required to hardware, network devices and software by raising a change request form (CRF) and need to be approved by authorized management staff;
- A test approach is approved, determining the level of testing appropriate to the change or project;
- The production launch process is controlled by a User maintenance team that reviews changes and verifies that an
Impact analysis was conducted and that all required approvals are present.

Emergency changes, required in case of system blockage or non-availability, are following strict procedures, authorization and reviewed.

**Key Consideration 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 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.

| Description | CDC has a Business Continuity Plan (incident and crisis management process) in place, which facilitates the coordinated response and rapid reaction to an incident or crisis in a controlled and effective manner. The process aims to minimize business and market impact, as well as enable the swift return to regular business activity.

This plan describes how to achieve continuity of the vital processes in the event of disruption of services. The critical business operations and corresponding resources are prioritized, organized and managed in order to fulfill obligations towards customers, regulators and other stakeholders. Incident response procedures have been developed and are tested regularly with different scenarios and compositions. Technical back-up site is available, alternative communication channels are in place for data and telecommunication services. Employees can be given secure access to IT services outside of the office premises if necessary.

The CDS is reactivated in the event of disruptive events within 2 hours. The back-up system is activated in the event of the main system failing within 2 hours. CDS runs on Primary server while all data is being backed-up to Secondary server in real-time throughout the day. In such way, in case Primary server encounters any problems, the switch to Secondary server is almost instant.

CDC’s Recovery Point Objective (RPO) is zero. It ensures this requirement by constantly synchronizing and mirroring all data in real time between two independent data centers. The BCM test approach includes systems unavailability test to ensure and monitor the Recovery Point Objective of zero. The responsible IT units simulate the loss of one data center and validate that critical systems can effectively run in the remaining data center. The tests prove that in case of the unavailability of CDS the recovery is possible to the full extent. In particular, the triggered fail-over mechanism that is processed by
switching off services of one data center and restarting services in another allow to assess the effect of any disruptions and to implement the processes to prevent a detrimental impact on the continuous operations.

Primary and Secondary servers are located in separate locations in order to limit dependency on one service provider. Back-up working places are guaranteed in order to complete accounting day procedures in case the main office becomes unusable.

CDC’s business continuity plan incorporates the use of secondary site. Sufficient resources cover all critical processes in order to complete ongoing and accounting day closing procedures. The secondary site is located at a considerable distance from primary location. One of the Disaster Recovery site is situated outside the city as well.

In order to ensure hassle free activities, test of BCP are performed at intervals during which a realistic incident are stimulated and applications are tested.

CDC has obtained certification against a Business Continuity standard ISO/IEC 22301:2012.

All businesses of CDC are certified against globally accepted ISO/IEC 27001:2013 Information Security standard, demonstrating our commitment and focus to safeguard the information critical to the functioning of Pakistan Capital Market. Moreover, it ensures that our clients’ assets are well protected in line with internationally recognized current best practices of the information age.

Security is embedded into all functions of the company such as IT, Finance, Legal, Operations, Marketing, Product Development, HR, Administration and Internal Audit. This cross-functional implementation provides best value to the quality of service.

CDC has a fully functional BCM Committee headed by the CEO and is comprised of top management that reviews and upgrades the policies and takes necessary actions as and when required. BCM is designed to bridge potential gaps between people, locations and technology that could threaten the smooth execution pf CDC’s business operations.

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<tr>
<th>Key Consideration 7</th>
<th>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.</th>
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<tbody>
<tr>
<td>Description</td>
<td>Even though CDC has a strong control environment in place, there are certain inherent risks which CDC carries in performing its functions.</td>
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**Risks to the FMI’s own operations**
CDC has identified operational risks that could be caused due to unavailability of services or service deficiency by service providers, e.g., telecommunication providers are considered as root causes within operational risk scenarios of CDC. In that circumstances, CDS elements are advised to maintain an alternate connectivity to communicate uninterrupted with CDS.

**Risks posed to other FMIs**
The CDC BCM Plan contains a requirement to take into account external links and interdependencies within the financial infrastructure and critical functions or services which have been outsourced to third-party providers.

Furthermore, CDC involves PSX, NCCPL, CDS Elements etc. with which interdependencies have been identified in the BCM Plans in the testing process.

**Risks to the FMI by Service Providers**

CDC avail certain services and outsource activities to third party service providers. Service deliveries are reviewed and measured & compared with targets to identify whether the objectives are met, and where applicable, what actions need to be taken to improve the service.

**Key conclusions**
The company has implemented a well-defined operational risk management framework, where operational risks are identified, measured and adequate controls have been implemented to mitigate those risks. Furthermore, a detailed BCP has been developed and implemented by the company. The company performs DR Drill at least once every year.

**Assessment of Principle 17**

<table>
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<tr>
<th>Recommendations and comments</th>
</tr>
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**Principle 18 – Access and participation requirements**

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.

**Key consideration 1**

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

**Description**

**Participation criteria and requirements:**
CDC has established Eligibility criteria relating to types of institutions, operational capabilities and technical requirements. Eligibility requirements are set forth in Chapter 4 and 5 of the CDC Regulations, which are publicly available on CDC’s website at [www.cdcpakistan.com](http://www.cdcpakistan.com). Relevant excerpts are as under:

“4.1 Application for admission to the CDS as Participant

4.1.1 Any:
   (a) TRE certificate holder eligible for licensing as securities broker under the Securities Brokers (Licensing and Operations) Regulations, 2016 and having mandate to hold Securities on behalf of Customers;

   (b) banking company within the meaning of the Banking Companies Ordinance, 1962 (LVII of 1962);

   (c) company, corporation or institution to which Section 3A of the Banking Companies Ordinance, 1962 (LVII of 1962) is applicable; or

   (d) company, corporation or institution in such class as the Board may, from time to time, determine in this behalf, may apply to the CDC for admission to the CDS as a Participant by an application which:

   (e) is on the most current version of the relevant Admission Form in which the Registration Details and other particulars of the Participant are filled out; and

   (f) complies with the additional requirements of Regulation 4.9.1.

4.4 Admission as Account Holder

4.4.1 The CDC shall admit as an Account Holder a person making an application pursuant to Regulations 4.3.1 and 4.9.1 if the CDC is satisfied that:

   (a) the applicant has complied with the requirements of Regulations 4.3.1 and 4.9.1;

   (b) the applicant has supplied additional information required by the CDC pursuant to Regulation 4.9.2;

   (c) the CDC is satisfied with any information obtained in pursuance of Regulations 4.3.1, 4.9.1, 4.9.2 and 4.9.3;
(d) the applicant meets the technical and performance requirements of this Chapter;

(e) the applicant meets the business integrity requirements of this Chapter;

(f) the applicant meets the capacity requirements of this Chapter;

(g) it has the data processing capacity and operational capabilities to provide service to additional Account Holders without endangering

4.7 Application for admission to the CDS as Eligible Pledgee

4.7.1 Any banking company, financial institution, Securities Exchange, Clearing House, trustee of a collective investment scheme or any other company, corporation or institution in such class as the Board may, from time to time, determine in this behalf, may apply to the CDC for recognition by the CDC for the purpose of admission to the CDS as an Eligible Pledgee by an application which:

(a) is on the most current version of the relevant Admission Form; and

(b) complies with the additional requirements of Regulation 4.9.1.

5.1 Declaration of Securities as Eligible Securities

5.1.1 If, in respect of any Securities of an Issuer, the CDC is satisfied that:

(a) it has the data processing capacity and operational capabilities to permit, in relation to the Securities, without endangering or impairing the integrity of the CDS or its orderly functioning, the performance of services ordinarily rendered by the CDC with respect to other Eligible Securities;

(b) a question does not exist, in the opinion of the CDC, regarding the validity, legality or transferability, whether by book-entry or otherwise, of the Securities;

(c) the Issuer of the Securities:
   (i) has acquired; or
   (ii) in the opinion of the CDC, has the capability to acquire,
       the capacity to communicate reliably with the CDC in accordance with the Procedures;

(d) the Issuer of the Securities:
   (i) employs or retains; or
(ii) in the opinion of the CDC, has the capability to employ or retain,

such personnel familiar with these Regulations and the Procedures made thereunder as are necessary to allow the Issuer to carry out its obligations in accordance with these Regulations and generate, receive and process Transactions and Obtain Reports in accordance with the Procedures, provided that where the Issuer is also an Account Holder or a Participant or, as the case may be, the Securities of the Issuer are listed on the Securities Exchange for the purpose of trading, it has, in accordance with the Procedures, entrusted to an independent Transfer Agent, the duties and functions of the Issuer as set out in these Regulations in connection with the registration of transfer of Securities and the issue and offer of Securities and in particular, without limiting the generality of the foregoing, duties and functions of the Issuer under Regulations 8.3.1, 8.3A, 8.7.1 and 8.7.2;

Provided that provisions of this clause relating to independent Transfer Agent shall not apply where the applicant is a private company or a single member company.

(e) (i) if the Issuer of the Securities is a company, the Issuer is not in receivership, Court-appointed mangership or winding up; or
(ii) if the Issuer of the Securities is a body corporate other than a company, the Issuer is not under any equivalent form of administration; and

(f) the declaration of the Securities as Eligible Securities would be in the public interest, the CDC may give notice to the Issuer of the Securities, the Commission and, if the Securities are listed on the Securities Exchange, also to the Securities Exchange that, with effect from the date specified in that notice, those Securities shall be declared as Eligible Securities whether or not the Issuer has made an application for those Securities to be declared as Eligible Securities.”

Institutions meeting the aforesaid eligibility criteria may apply for declaration for CDS Eligibility. The information and documentation to be provided by the Applicants are exhaustively mentioned in the System Operating Manual.

All applicants, whether to be a Participant, Account Holder, Eligible Pledgee or Issuer, must submit required application request and documents depending on the CDS services the applicant seeks to utilize. These application documents include the applicable form,
undertakings, agreement with CDC, among other matters, that the applicant will abide by the CDS Regulations and agreeing to the governing law. There are standard Admission Forms, Certificates templates required under the CDC Regulations. Once approved/declared as CDS eligible, the Element can avail all the facilities and services that are available to such category. CDC applies its eligibility criteria and requirements on a nondiscriminatory basis, and any applicant that is aggrieved by CDC in applying such qualifications is entitled to a right of appeal under CDC Regulations.

| Key consideration 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 endeavor to set requirements that have the least restrictive impact on access that circumstances permit. |
| Description | Eligibility requirements for CDS Elements to have access to CDS are based on the criteria established under the CDC Regulations in order to ensure the security, integrity and effectiveness of CDS activities. Chapter 4 and 5 of the CDC Regulations specifies the eligibility criteria to become Participants, Account Holders, Eligible Pledgee and Issuers which includes the Regulatory requirements, Technical and Performance requirements, Business Integrity requirements, Capacity requirements, Processing capacity and Operational capabilities requirements. Same non-discriminatory criteria are applicable to every person who intends to apply. Furthermore, this admission criterion is a public document, as it is part of CDC Regulations, which are readily available to general public, as well as, they are published on the company’s website. |

| Key consideration 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. |
| Description | According to the eligibility criteria, CDS Elements are obliged to ensure that they meet/fulfill these conditions at all times. As part of each CDS Element admission process it is ensured that all admission requirements are fulfilled. In order to also ensure the application of the admission criteria on an ongoing basis, CDS Elements are regularly audited based on the scope of Inspection Framework framed under the CDC Regulations. This includes on-site visits as well off-site inspections. Any deviation or non-compliance leads to enforcement action in accordance with the CDC Regulations. |
CDC Regulations contain provisions that facilitate restrictions, suspension or termination of Participants that does not meet the eligibility criteria or upon occurrence of any of the events that are set in Regulation 15.1.1 of CDC Regulations which are as under:

(a) in the case of an Account Holder who is a TRE certificate holder:
   (i) that TRE certificate holder ceases to be a TRE certificate holder of the Securities Exchange;
   
   (ii) that TRE certificate holder is restricted from carrying on business as a securities broker by the Securities Exchange or the Commission;
   
   (iii) that TRE certificate holder is suspended from all or any of the privileges of TRE certificate by the Securities Exchange or the Commission;
   
   (iv) DELETED;
   
   (v) that TRE certificate holder voluntarily ceases to carry on its business for the time being as a securities broker; or
   
   (vi) that TRE certificate holder contravenes any of the provisions of these Regulations;

(b) in case of any Account Holder:
   (i) the Account Holder ceases to comply with any Admission Requirement;
   
   (ii) DELETED
   
   (iii) the Account Holder contravenes any of the provisions of or, becomes unable or unwilling or in any respect fails to comply with, these Regulations;
   
   (iv) the Clearing House restricts, suspends or terminates the Account Holder, who is a Clearing Member;
   
   (v) if at any time the Account Holder (other than the Account Holder who is a TRE certificate holder) ceases to meet the eligibility criteria stipulated in Regulation 4.1.1 or, as the case may be, Regulation 4.3.1; or
(vi) the Commission, a court or any other competent authority directs CDC to impose Restriction on or, suspend or terminate, the admission of the Account Holder to the CDS;

(vii) the Clearing House restricts, suspends or terminates the Account Holder, who is an Authorized Intermediary, provided that no action shall be required under these Regulations where CDC is the Authorized Intermediary; and

(c) in case of an Eligible Pledgee:

(i) if at any time the Eligible Pledgee ceases to meet the eligibility criteria stipulated in Regulation 4.7.1;

(ii) the Eligible Pledgee ceases to comply with any Admission Requirement; or

(iii) the Eligible Pledgee takes a step that results in a contravention of any of these Regulations by the Eligible Pledgee.

Furthermore, An Account Holder may also terminate its admission on Voluntary basis to the CDS by giving notice to the CDC.

Procedures for Action against Participant are available on the website for ease.

In addition to these, certain compliances are also established on the Participants and Issuers, failure of which lead towards enforcement actions i.e.

- More specifically, compliance of Participant with Capital Adequacy Level is by obtaining audited Financial Statement or Certificate of Capital Adequacy Level, on the basis of which Participant can hold twenty-five times of assets of its clients. Monitoring of compliance with twenty-five time is done on regular basis and any excess custody is handled in accordance with manner prescribed under Regulation 6.8 of CDC Regulations.

- Issuers are also subject to various compliances established under Chapter 5, 8, 8AA, 8B, 8C, 8D, 8E, 8F, 8G, 8H and Chapter 12 and Regulation 13.7 of CDC Regulations, compliance of which is mandatory. Such compliances are either monitored on real time while executing Corporate Actions or at later stage during inspection of books and records by engaging services of external auditors as CDC’s agent.
In case of irregularities detected during inspection activities or in case of any doubt regarding the compliance of the CDS Element, CDC applies measures like:

_ Regulation 13.1.1 “For the purpose of monitoring compliance with these Regulations by a CDS Element, the CDC may by notice require the CDS Element to provide any information to the CDC’s reasonable satisfaction:

(a) that is known to that CDS Element; and

(b) in connection with:

(i) the performance of any obligations of the CDS Element under these Regulations; or

(ii) any actions taken or required to be taken by the CDS Element under these Regulations.”

CDC Regulations gives CDC the right to Restrict/ Suspend and/or terminate the admission of CDS Element in case the admission requirements are no longer fulfilled as referred in Regulation 15.1.1. In case the admission of a Participant to the CDS is suspended or, as the case may be, Restricted; and Sub-Account Holder, having a Sub-Account controlled by the Participant, by notice to CDC in terms of and in accordance with the Procedures requires that the Book-entry Securities entered in the Holding Balance of his Sub-Account be moved to the Holding Balance of his Sub-Account controlled by another Participant or to his Investor Account with CDC, as the case may be, then CDC may, in accordance with the Procedures for change in controlling account holder, upon giving seven (7) Business Days notice to such Participant of CDC’s intention to do so, comply with the notice received from the Sub-Account Holder.

**Key conclusions**

The Access and Participation criteria, including the criteria for Restrictions, Suspension, Termination/ Revocation, as the case may be, and orderly exit of CDC Elements is clear and transparent. The criteria is provided in CDC’s Regulations which are published on the company’s website.

**Assessment of Principle 18**

Observed

**Recommendations and comments**
**Principle 19 – Tiered participation arrangement**

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

CDC has not entered into any tiered participant arrangement. Therefore this principle is not applicable.

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<tr>
<th>Assessment of Principle 19</th>
<th>Not applicable</th>
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<td>Recommendations and comments</td>
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<th>PS</th>
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**Principle 20 – FMI Links**

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

**Key Consideration 1**

Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.

**Description**

CDC currently has links with NCCPL, to perform the process of securities settlement in CDS through Balance Order Delivery System, sharing of information with NCCPL and PSX, to discharge their functions, linkages with 1Link for the purpose of IBAN updations etc. These link arrangements are designed in a way to facilitate the core operations of CDC, as well as, for facilitation of operations of NCCPL and PSX.

CDC’s link arrangements with NCCPL, PSX and 1Link are subject to approval of Regulatory Affairs Committee and the Board. Before soliciting approval of the RAC and the Board, impact analysis of the link and its risk assessment processes are performed to identify the risks inherent and the controls and processes designed to mitigate those risks. Such risk and mitigating controls are monitored, from time to time, in light of changes that occurs in the market.

When links are established with other FMI, CDC conducts a legal analysis and solicit views of its legal counsel. Agreements, SLAs or necessary amendments in CDC Regulations whereby indemnification and warranty clauses are also entered to protect the interest of CDC.

Risks arising from links with other FMIs include; ‘Link Failure’ that may arise due to the exploitation of some well-known weaknesses such as...

Further, in this regard CDC has already taken measurable steps in implementing controls such as tools to monitor these links, SLA/contract with the vendors, redundancy in links, capacity management of links.

**Key Consideration 2**

A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.

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<tr>
<th>Description</th>
<th>Legal Basis</th>
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<tr>
<td>Regulation 5(e) of the Central Depositories (Licensing &amp; Operations) Regulations, 2016 requires CDC to establish and maintain connectivity with the clearing house(s) and CDS elements and enter into service level agreement(s) with the securities exchange(s) and clearing house(s).</td>
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Operations of CDC and NCCPL are highly integrated, coupled and dependent on each other, therefore, CD Act, 1997, Securities Act, 2015 and CDC Regulations specifically and generally provided various clauses relating to the provision of sharing of information, coordination in case of various events and to provide inclusion of various regulations in the respective regulations of each entity.

The links entered by CDC are either subject to specific Agreements/SLAs or necessary provisions in CDC Regulations to protect the interest of CSD from any risk that may be arise. CDC has also signed SLAs with the NCCPL clearly defining the contractual arrangements.

Furthermore, Regulation 3.3.1 of the CDC Regulations provide that the CDC shall have powers to perform such functions as conferred on it by or under

“(a) the Act;

(b) the Securities Act, 2015 (III of 2015);

(c) the Central Depositories (Licensing and Operations) Regulations, 2016;

(d) these Regulations; or

(e) any contract or arrangement with a CDS Element or any other person.

as the case may be.”
### Key Consideration 3
Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.

**Description**
Not applicable as no links are established between two or more CSDs.

### Key Consideration 4
Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.

**Description**
Not applicable as no links are established between two or more CSDs.

### Key Consideration 5
An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.

**Description**
Not applicable as no link is established between and issuer CSD and investor CSD.

### Key Consideration 6
An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.

**Description**
Not applicable as no link is established between issuer CSD and investor CSD either directly or through intermediaries.

### Key Considerations 7, 8 & 9
Key Considerations 7, 8 & 9 are not applicable to the CDC being CSD. Key consideration 7 and 8 are applicable to Central Counter Party and Key Consideration 9 is applicable to Trade Repositories.

### Key Conclusions
The CDC has links with NCCPL and PSX. Both of these FMIs have sound legal basis, and their operations are governed by SECP. Furthermore, the company has entered into service legal agreements with NCCPL and PSX, thus providing a legal basis for these links.

### Assessment of Principle 20
**Recommended**

### Recommendations and comments

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## Principle 21 – Efficiency and effectiveness

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

<table>
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<tr>
<th>Key Consideration 1</th>
<th>Description</th>
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<tr>
<td>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.</td>
<td>CDC is efficient and effective in meeting the requirements of its CDS Elements and the markets it serves, providing central securities depository services to promote the prompt and accurate settlement of securities transactions in the Pakistan Capital Market. CDC makes every effort for maximum efficiency in its operations and technology, and responsiveness to the needs of its CDS Elements in the scope of services provided. CDC conducts periodic Element Training Program to ensure that their needs in the scope and quality of CDC provided services are met and adjusted accordingly. Also, CDC has regular meetings with the PSX, NCCPL and SECP to ensure that the scope and quality of CDC provided services are in line with local and international trends of regulatory environment. Consultations are made with PSX and NCCPL for the purpose of alignment of respective Regulations and business processes for smooth functioning and operations of capital market. CDC collects the feedback received during the meetings with its participants when discussing not only the upcoming changes but also any retrospective issues. The participants can also provide their feedback through our website as well or by calling our toll free number to discuss with customer services department. Prior to launch of any new product or feature, CDC conducts session(s) and focus group meetings to carefully consider the requirements, necessity and demand for operational system or procedural implementation with CDS Elements before the launch. Moreover, prior to any amendments in the Regulations, CDC also solicits the public opinion as required under section 51(2) of the Securities Act, 2015.</td>
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<tr>
<th>Key Consideration 2</th>
<th>Description</th>
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<tr>
<td>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.</td>
<td>To achieve overall corporate mission and objectives of the Company, 3 year Strategic Plan is documented and presented to the Board for its approval with proper tracking updates in the quarterly meetings. Management sets strategic objectives which encompass a range of benchmarks such as reforms for Investors Awareness and Protections, Enhancing Ease of Doing Business, Implementing Stringent Risk Management Framework, Organized Growth through diversification</td>
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and process improvement, IT Infrastructure enhancements, Strengthening organizational efficiency & effectiveness and support for market development. These corporate objectives are sub-divided into various projects and activities which are clear, defined, measurable and achievable and are reviewed by several level of management and Board with specific attention on those metrics that might be performing below target.

In order to achieve the corporate strategic objectives, Board of CDC also bears the overall responsibility for the implementation and effective operation of the Internal Control System (ICS), as provided under the Listed Companies (Code of Corporate Governance) Regulations, 2019. Internal Control System assists in achieving the corporate objectives regarding effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations. The ICS is an essential component of good corporate governance.

CDC also makes a concerted effort to maintain lines of communication with its CDS Elements, so that it can keep track of its developing needs, as well as assess the degree to which its service provision is meeting market requirements and standards. Feedback on the degree to which customers are satisfied is elicited via both formal and informal mechanisms.

Section 48 of the Securities Act, 2015 specifies the Licensing Requirements to act as Central Depository which are as under:

“(a) the company is incorporated as a public company under the Companies Ordinance, 1984 (XLVII of 1984);

(b) the company complies with all the requirements in Central Depositories Act 1997 (XIX of 1997);

(c) it has, and maintains at all times, a minimum paid-up capital (net of losses) of rupees five hundred million or such higher amount as may be notified by the Commission;

(d) the collective shareholding of the securities exchanges does not exceed such percentage as the Commission may notify, of the total shareholding of the company:

Provided that the Commission may in the official Gazette notify any class or classes of persons to hold such number of shares of the central depository as the Commission deems appropriate:
Provided further that any sale or purchase of shares of the central depository shall be subject to the prior approval of the Commission;
(e) no promoter, director, majority shareholders, senior management officer or employee of such a company
   (i) has been convicted of fraud, breach of trust or an offence involving moral turpitude or removed from service for misconduct or has been adjudicated as insolvent;

   (ii) has been associated with any illegal banking business, deposit taking or financial dealings;

   (iii) has been a sponsor, director, chief executive or a senior management officer of any defaulting entity;

   (iv) has ever been a defaulter of any commercial bank or financial institution, including non-banking financial institution, securities exchange and clearing house or has suspended payment or has compounded with his creditors;

   (v) has ever been a defaulter or non-payer of verified unsettled claims of its customer as a TRE certificate holder of securities exchange; and

   (vi) fulfill the fit and proper criteria as may be prescribed;

(f) the promoters of such company are persons of experience and integrity and have special knowledge of matters which the company may have to deal with as a central depository company; and

(g) it satisfies such other conditions as may be prescribed.”

In addition to the requirements of the Securities Act, 2015, Regulation 5 of the Central Depositories (Licensing & Operational) Regulations, 2016 specified the condition of licensing to act as central depository, which are also among the company’s primary goal and objectives:

“(a) ensure availability and maintenance of necessary infrastructure for the establishment and operation of book-entry systems for the transfer of securities;

(b) make adequate arrangements, including insurance cover, for indemnifying the beneficial owners of the securities for any loss that may be caused to such beneficial owners by the wrongful act, negligence or default of the depository or any of its employees for a minimum amount as may be annually determined by the central depository based on predetermined criteria as approved by the Commission from time to time;
(c) put in place adequate systems, procedures and necessary capacity to have a wide network of CDS elements;

(d) put in place adequate monitoring, inspection and enforcement mechanism for CDS elements including any outsourcing arrangements as allowed under these regulations;

(e) establish and maintain connectivity with the clearing house(s) and CDS elements and enter into service level agreement(s) with the securities exchange(s) and clearing house(s);

(f) have a documented business continuity plan including a disaster recovery site;

(fa) continuously improve the quality and efficiency of its systems and procedures, and attain relevant internationally recognized certifications;

(fb) put in place necessary controls and safeguards to ensure cyber security, access to confidential information and alteration, destruction, disclosure or dissemination of records and data;

(g) put in place necessary arrangements, for resolving disputes and redressal of grievances of CDS elements, beneficial owners of securities, customers or any other person;

(h) comply with the code of corporate governance for listed companies to the extent consistent with the provisions of the Act, rules and regulations made thereunder;

(i) ensure that its memorandum and articles of association contain no provision inconsistent with the provisions of the Act and these regulations and that no change is made in its memorandum and articles of association except with the prior written approval of the Commission;

(j) ensure that its directors shall not register or allow the transfer of any of its shares without prior written approval of the Commission;

(k) shall facilitate access to its depository function by securities exchange, clearing house or other central depository;

(l) shall not carry on any activity other than that of a central depository unless the activity is incidental to the functions of the central depository:

Provided that a central depository directly or by forming subsidiary(ies) may carry-out such activity which is not
incidental to functions of a central depository, as may be allowed by the Commission and subject to such conditions as may be imposed:

(la) prescribe a code of conduct for its employees and ensure compliance with the same; and

(m) any further condition as may be imposed by the Commission from time to time.”

For achievement of these goals and objectives of the company, various steps are taken which includes:

- State-of-the-art Central Depository System is in place;
- Periodic audit of company's systems and processes, by external auditors, audits by regulator and internal auditors.
- Compliance with Listing Companies (Code of Corporate Governance) Regulations, 2019 on which statutory auditors also issue review report.
- An independent internal audit department to conduct audit of operational activities as compared to goals and objectives designed.
- A comprehensive risk management system has been developed and implemented by the company;
- Audit Committee is in place to oversee risk and related matters on behalf of Board of the Company
- Monitoring and inspection mechanism of all CDS Elements is in place
- A business continuity plan / disaster recovery plan is in place and routinely tested and ensured against the ISO 222301 standard
- A customer support services department is in place to respond to client's queries and to resolve any disputes
- Completion of operations with required output and within specified deadlines / timelines
- Safety and confidentiality of information possessed by the company etc. which is ensured against the ISO 27001 standard

The Business Continuity Management Program of CDC consists of three scenarios which are tested at least on a yearly basis: System Unavailability, Workspaces Unavailability and Staff Unavailability. The outcomes of the tests are reported to the Security Management Committee and Audit Committee of the Board. The progress and the achievements are reported on a regular basis and presented to Management Committees and to the Board of CDC.

The Business Continuity Management approach of CDC, which follows the ISO 22301 standard, aims at providing products and services with utmost reliability. It gives the highest importance to the resilience of its
business to safeguard against incidents and disasters and the unavailability of core processes and resources. This includes the definition of mission critical areas where services must be resumed within a Recovery Time Objective (RTO) of 2 hours.

<table>
<thead>
<tr>
<th>Key Consideration 3</th>
<th>An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.</th>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>The efficiency and effectiveness are measured at different levels by the Board, Board Committees and Management Committees at regular intervals and as the need arises. Input for Performance Grid and its objectives set at the beginning of the year are used to evaluate the performance of Senior Management Officers against the set targets.</td>
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<td>CDC being a public unlisted Company is required to and is subject to regular statutory audits and reviews. The results of these audit are published along with auditors’ opinion in annual financial statements of the company, which are also readily available to general public on CDC’s website.</td>
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<td>Furthermore, the company has established an independent Compliance Department and Internal Audit Department, which performs audit of company’s Regulatory, Operations and IT Systems of CDC and reports independently to Regulatory Affairs Committee and Audit Committee respectively.</td>
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<td>Apart from above, Chief Compliance Officer is also responsible to ensure compliance of all laws and regulations. CDC also performs assessment based on feedback and comments received from CDS Elements / investors and all relevant feedback are assessed and accordingly addressed.</td>
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<td>Furthermore, system based audits/ reviews are conducted to ensure and assess CDS’s operational efficiency. CDC has also developed a detailed BCP, and it carries out periodic BCP / DR drills on working days as well as on non-working days to test the adequacy and preparedness of the organization to effectively respond in case of major disruption or disaster situation.</td>
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<td>Audits of CSD carried out by external parties are as under:</td>
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<td>- Annual Financial Audit carried out by Statutory Auditor’s</td>
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<td>- Audit by Statutory Auditors to ensure that the compliance function had appropriate resources including the human resource and implemented effective compliance procedures and reporting mechanism which can be reasonably expected to ensure compliance with the applicable laws and detect and report any non-compliance in a timely manner.</td>
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<td>- Audit by Statutory Auditors to ensure that an adequate</td>
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internal control system commensurate with the size and nature of services performed by the central depository was implemented during the period

- Operational, Regulatory and IT System Audit by external auditors approved by SECP on annual basis
- BCP/ISMS Audits
- Penetration Testing Assignments
- ISAE 3402 report, that provides substantive information on the operation of internal controls and procedures implemented at CDC along the ISAE 3402 standard.

**Key conclusions**

CDC has comprehensive processes to ensure that it fulfills the needs of its participants efficiently and effectively. Furthermore, the systems, operations and support services is regularly reviewed and updated based on feedback from all participants.

**Assessment of Principle 21**

Observed

**Recommendations and comments**

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**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.*

**Key Consideration 1**

An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.

**Description**

Communication procedures and standards

CDC, being a significant element of the capital market of Pakistan, has always strived to implement state-of-the-art Enterprise and Security management tools to protect critical information of CDS Elements and its customer and also serve them with the best services to accomplish custody of clients assets and its safety.

Chapter 7 of the CDC Regulations deals with Communication with CDS Elements. For that purposes CDS Elements shall have to

“(a) comply with the Hardware Specifications and the Software Specifications for the purpose of establishing and maintaining an interface with the CDS in accordance with the Procedures; and

(b) ensure that no person other than the CDS Element itself or an Authorized Person has access to that interface with the CDS.”
Moreover, CDC has established and implemented various policies pertaining to communication, procedures and standards, including Network Security Policy, Access Control Policy, Information Handling Policy, Information Security Policy, Email Access and Usage Policy. These policies have been developed as per Information Security Management Systems (ISMS) based on ISO / IEC 27001:2013 standards. CDC follows commonly accepted communication procedures and standards to provide efficient communication services for its services.

CDC uses the reference data standards, such as the International Securities Identification Number (ISIN), for identifying securities and Unique Identification Number (UIN) issued by NCCPL to trace Sub-Account Holders/IAS Account Holders within CDS.

On the technical front, CDS is primarily a web-based system which works over standard TCP/IP protocol. Whereas CDC interacts with other FMIs through the internationally accepted protocols of Remote Procedure Calls (RPC) and standard remote database links.

This is accomplished through a variety of latest evolving communication modes and channels, including but not limited to high speed LAN, dark fiber, leased lines, Wi-Fi, Internet DSL and the like. Considering the criticality of business data, these methods of communication are all established based on appropriate authorization and authentication mechanisms to allow only the legitimate users to access the business services and ensuring communication to be encrypted by appropriate standards and protocols over these channels, such as internationally accepted Virtual Private Networks (VPNs) over both SSL and IPSEC, Secure Socket Layer (SSL) over the Internet and the like.

These communication standards and data formats are widely accepted and long-standing usage by its CDS Elements are an accepted industry standard for recording of transactions processed.

### Key conclusions

The company follows international standards and best practices to ensure data security and efficiency in data transmission. Efficient automated systems and various other modules are used for services performed by the company.

### Assessment of Principle 22

**Observed**

### Recommendations and comments

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**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.

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<th>Key Consideration 1</th>
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<td>An FMI should adopt clear and comprehensive rules, policies and procedures that are fully disclosed to participants. Relevant rules and key policies and procedures should also be publicly disclosed.</td>
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</table>

CDC activities are governed under CD Act 1997, Securities Act 2015, CDC Regulations and Procedures.

As per section 51(2) of the Securities Act, 2015, Regulations prepared under Section 35 of the CD Act, 1997 and Section 51 of the Securities Act, 2015 will be placed on CDC’s website for seven days eliciting public comments before submitting it to the SECP for its consideration and approval. Relevant excerpts are as under:

“Section 51(2) The power to make regulations conferred by this section on the central depository shall, for eliciting public opinion thereon, be subject to condition of previous publication of the said regulations along with their rationale on the website of central depository for a period of seven days starting from the date of its placement on website:

Provided that, on an application by the central depository, the Commission may waive the condition of placement of proposed regulations on the website of the central depository in cases requiring the immediate implementation of a proposed regulation.”

Procedures and Guidelines are also formed in consultation with other stakeholders through one on one meeting and focus group discussions. CDC Regulations, Procedures and related Forms and Guidelines Regulations are accessible through our website and are additionally Communicated/ circulated, disclosed, explained, elaborated to CDS Elements, Remote Education Programs, Element Training Programs, Awareness Sessions, Presentations and Newsletters to the CDS Elements.

Moreover, a well-defined Notice Management System (NMS) is also in place to disseminate specific information to CDC Elements. Information sent directly through NMS in the form of circular or notice can be retrieved by accessing Central Depository System (CDS).
In addition to this, governance arrangements are also disclosed in published audited financial statements of the company, which are also published on company's website. [www.cdcpakistan.com](http://www.cdcpakistan.com)

**Key Consideration 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.

**Description**

CDC's website contains information about the system’s design and operations:

- the ‘About us’ section provides a general description of CDC’s business, mission, history, legal framework, linkages

- in the ‘Business’ section, the CDS Elements and general public can find relevant information about the various services CDC offers.

Moreover, detailed information about System design and operations is described in document form as a User Manual which can be retrieved directly from CDC Website by the CDS Elements for reference. These include easy to understand systems operating tutorials. CDS Elements are also trained for system related procedures at the time on their induction into CDS.

Regulations pertaining to admission of Participants, Account Holders, Eligible Pledgee and Issuers are disclosed and detailed in Chapter 4 and 5 of CDC Regulations which specify the eligibility criteria to become Participants, Account Holders, Eligible Pledgee and Issuers. This includes the Regulatory requirements, Technical and Performance requirements, Business Integrity requirements, Capacity requirements, Processing capacity and Operational capabilities requirements. CDC further facilitates its participants' understanding of the CDC Regulations and Procedures through various means including but not limited to periodic Element Training Program, Awareness Sessions, Remote Education Programs, Circulars, Notices, Newsletter, Facebook messages etc.

Moreover, while initiating any major change, we first approach the stakeholders to have their input before finalizing system specifications. CDC also organizes sessions with CDS Elements to communicate new plans, regulatory changes, new system launch, views & comments gathering from them. Any regulatory announcements are well prescribed into the formal procedure, guideline, timetable, step-by-step process, making them easy to follow. Adequate training for CDS Elements is also conducted, if necessary, for their requisite understanding and ability to proceed.
CDS Elements rights, obligations are covered in CD Act 1997, Securities Act, 2015, CDC Regulations, Procedures and disclosures made in service agreements which are available on CDC’s website. Furthermore, the company also informs CDS Elements through circulars, notices and Company’s website. Also training and mock sessions w.r.t systems design and operations are also given to CDS Elements.

Any adjustment in such matter and along with other related information about systems design and operations required at Element level are timely disseminated to CDS Elements through circulars, notification, notices and are also placed on CDC website. As per Regulation 3.6.4, 3.7.3, 3.8.5, 3.9.3 and 12A.18 any changes in Regulations Procedures, Fees and Schedule Designated Time Schedule and amendments in Terms and Conditions shall be promptly notified to the concerned CDS Elements prior to implementing those changes. Relevant excerpts are as under:

“3.6.4 The CDC shall promptly notify all CDS Elements and the Commission of the making of any State of Emergency Regulations.

3.7.3 The CDC shall give such notice as is reasonable in the circumstances to CDS Elements prior to implementing changes to the Procedures.

3.8.5 The CDC shall promptly notify the concerned CDS Elements of any changes to the Fees and Deposits Schedule prior to implementing those changes.

3.9.3 The CDC shall promptly notify the concerned CDS Elements of any changes to the Designated Times Schedule prior to implementing those changes.

12A.18 Amendment to the Terms and Conditions”

As per Section 50(4) of the Securities Act and 3.5 of CDC Regulations, compliance of CDC Regulations underlying Procedures and Terms and Conditions is binding on all CDS Elements. Relevant excerpts are as under:

“Section 50(4) A central depository shall formulate and implement appropriate procedures under its regulations, compliance of which shall be mandatory on all CDS elements.

Key Consideration 3

An FMI should provide all necessary and appropriate documentation and training to facilitate participants’ understanding of the FMI’s rules, policies and procedures and the risks they face from participating in the FMI.
| Description | CDC applies admission criteria for CDS Elements, which are necessary to ensure that CDS Elements have the necessary Technical, Performance, Business Integrity, Capacity requirements, Processing capabilities and the know-how of the CDS System.  

CDC maintains a proactive relationship with its CDS Elements and in order to facilitate CDS Element's understanding of CDC Regulations and Procedures, CDC offers trainings to ensure that CDS Elements correctly understand the applicable Regulations and procedures as well as the risks they potentially incur through their participation in CDS which are categorized into three areas:

- Pre-Induction Training
- Periodic Training (Element Training Program)
- As & when required training (due to change of employee at client’s end or any new development at CSD end)

Daily operational queries are furthermore treated by our Customer Support Department. CDS Elements can make calls and get clarification/explanation on any issues faced from time to time. CDS Elements can also send their queries on our designated email. In addition to provision of training, an ongoing facilitation process has been developed by the company, which includes provision of technical and IT related support to facilitate CDS Elements.

CDC further facilitates its participants' understanding of the CDC Regulations and Procedures through various means including but not limited to periodic Awareness Sessions, Remote Education Programs, Circulars, Notices, Newsletter, Facebook messages, etc.

CDC also organizes sessions with CDS Elements to communicate new plans, regulatory changes, new system launch, views & comments gathering from them. Any regulatory announcement are well prescribed into the formal procedure, guideline, timetable, step-by-step process, making it easy to follow. Moreover, adequate training for CDS Elements is also conducted, if necessary, for their requisite understanding and ability to proceed.

In light of above, CDC has in place explicit, transparent and non-discriminatory Regulations based on objective criteria. CDC has adopted and implemented effective arrangements and procedures to monitor on a continuous basis the compliance of participants with CDC Regulations.

The website of the Company is comprehensive which not only provides relevant information to all the stakeholders but also educates general public about the Company's operations.

Moreover, employees are provided with proper orientation at the start of their job pertaining to various employee related policies and
procedures. Subsequently, every year employees are required to read and ensure compliance with the Code of Conduct and other security documents. All supporting documents, Employee Handbook and the Code are available on public domain for ready reference of employees.

**Key Consideration 4**
An FMI should publicly disclose its fees at the level of the 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.

**Description**
CDC publicly discloses the fees and charges associated with the services provided for depository and settlement services. Regulation Chapter 3.8 of the CDC Regulations read with Schedule of Fees and Deposit outlines the fees charged by CDC to its CDS Elements and their clients for following services:

- an annual fee for the terminals, account maintenance, payable by the CDS Elements, IAS Account Holder, Sub-Account Holders at an interval defined in the Schedule of Fees and Deposits; and

- further fees for transactions (e.g., Issuance fees, subscription fees, transaction fees, custody fees, redemption, cancellation fees etc.)

- Certain slab wise or general incentives are also offered to CDS Elements for certain type of services.

All fees and charges incentive models are publicly available on the Website and applied to all CDS Elements on an equal basis.

CDC has publicly disclosed comprehensive fees schedule covering charges for CDS elements and applicable tariff on investors on its official website. For the process of fee change, all members are well informed before the effective date and same is publicly announced on CDC website.

In consideration for the facilities and services provided to the CDS Elements by CDC, each CDS Element is required to pay fees and charges, and the time by which, or period within which, the fees and charges must be paid in accordance with the Fees and Deposits Schedule as defined in Regulation 3.8 of CDC Regulations.

All fees and tariff are initially reviewed and recommended by the Board Committee and approved by the Board of Directors. With the approval of the Board, public comments are solicited as per the requirement of the section 52 of the Securities Act, 2015 and sent to the Commission for its approvals. Once approved tariff are rollout from the date notified by the Commission or gazette Notification, as the case may be.
| Key Consideration 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 risk and activity data on transaction volumes and values |
| Description | Monthly statistics/ figures of assets under custody, their Value and Volume, number of CDS Elements, Sub-Accounts, Investor Accounts, and Governance Structure as well as transactional volumes are made publicly available on our websites. Quarterly newsletter and financial statements are also published by the company, which includes market related information, values and volume; CDS Elements members admitted during the period, company's business related statistics and key developments and achievements and financial affairs of the Company, as the case may be. Furthermore, CDC regularly publishes on its website announcements in relation to Customer Information and specific services. Announcements are in general made in English. The company has updated and accordingly implemented the applicable regulations with respect to assuming the role of CSD. Furthermore, the company shall amend its self-assessment with time, as per CPSS-IOSCO disclosure framework, as and when required, and shall disclose the same as and when required. |
| Key conclusions | CDC has clearly defined CDC Regulations which are readily available to general public and also published on Company’s website. The company is operating transparently. Furthermore, trainings sessions for better understating of Regulations and systems are conducted for CDS Elements. The CDC has also established a customer support services department for facilitation of market participants and investors. The company shall complete and amend its self-assessment with time as per CPSS-IOSCO disclosure framework, as and when required, and shall disclose the same. |
| Assessment of Principle 23 | Observed |
| Recommendations and comments | |
**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.*

CDC is not a TR. Accordingly, Principle 24 does not apply.

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<tr>
<th>Assessment of Principle 24</th>
<th>Not applicable</th>
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<td>Recommendations and comments</td>
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