



# Modernizing Securities Markets: CDSC's Innovation and Technology Journey

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HEAD, DEPOSITORY

CDS AND CLEARING LIMITED, NEPAL



# Brief Introduction of CDSC

***"Convenient,  
Dependable  
and Secured  
Services"***

- CDS and Clearing Limited (CDSC) is a subsidiary company of Nepal Stock Exchange Limited (NEPSE) with 51.3 % share of NEPSE and 49.7% share of Nepal Government.
- Established in year 2011.
- Sole Depository Company of Nepal.
- Regulator –Securities Board of Nepal(SEBON)
- It has authorized capital of NPR. 500 Mil. and paid-up capital of NPR. 300 Mil.
- Full dematerialized trading and settlement started in January 2016.
- More than 90% securities in dematerialized form.

# Legal Framework of CDSC

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Company Act, 2006

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Securities Act, 2006

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Central Depository Services Regulation, 2010

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Central Depository Services Byelaws, 2011

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Transaction Clearing and Settlement Byelaws, 2012

Electronic Transactions Act, 2008

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Other acts such as Nepal Rastra Bank Regulations, Privacy Act, Procurement Act, etc.

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<b>Total Turnovers (USD)</b>	68 Million
<b>Total number of Traded Shares</b>	21,905,311
<b>Total number of Transaction</b>	81,985
<b>Total Scrips Traded</b>	322
<b>Total Market Cap (USD)</b>	32 Billion

# Market Capitalization

2025-05-04



# Functions of CDSC

- ▶ Core Depository functions
- ▶ Clearing and Settlement functions
- ▶ IPO Management
- ▶ National Numbering Agency (ANNA member since)

# Mix of secure, centralized, and regulated technology platforms.

## 1. Centralized Database Systems

- Maintain electronic records of who owns what securities.
- Replaces physical certificates with **dematerialized (demat)** forms.

## 2. Clearing and Settlement Systems

- Handle the confirmation, clearing, and settlement of trades.
- Typically operate on **T+2** basis (settlement two days after the trade date).

## 3. Secure Communication Networks and API platforms

- Use of encrypted connections (e.g., VPNs or leased lines) to interact with brokers, stock exchanges, and banks. APIs for real time communication

## 4. Account Management Systems

- Open and manage **beneficial owner accounts (demat accounts)** for investors.
- Allow functions like transfer, pledge, or dematerialization of securities.

## 5. Backup and Disaster Recovery Systems

- Ensure data redundancy and system recovery in case of failure.

## 6. User Interfaces & Portals

- Web-based platforms used by participants (e.g., brokers, DPs) to access the depository.

## 7. Regulatory Compliance Tools

- Generate reports and logs as required by securities market regulators.
- Maintain KYC and AML standards.

# Innovation

- ▶ Mero Share Platform- Feb 2017
- ▶ CASBA Platforms- Feb 2018
- ▶ CKYC application- 2023
- ▶ Fintech Solutions integrated



Before implementation of CASBA, allotment used to take more than 45 days.

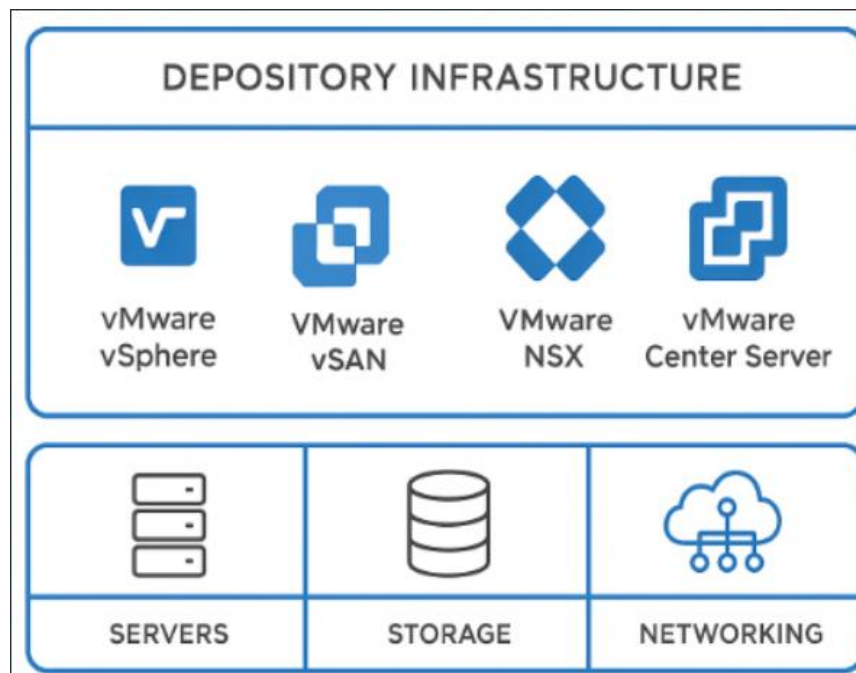
First in history, allotment of Aarambha Micro Finance was completed within 37 hours after closing of IPO.

# Depository IT Infrastructure

To meet high demands for availability, performance, scalability, and regulatory compliance, we are using virtualized infrastructure.

- Security and Compliance
- High Availability & Disaster Recovery
- Efficient Data Storage & Management
- Scalability for Growth
- Performance Monitoring


At this stage, our technology stack does not incorporate artificial intelligence (AI) solutions or distributed ledger technologies (DLT), including blockchain or similar decentralized systems.





# API Integration

- ▶ As a depository, we provide stock brokers with secure API access to investor holdings data, settlement data enabling real-time visibility and seamless integration with their trading and internal systems.
- ▶ Depository APIs to Depository Participants (DPs) enable seamless integration for real-time account management, transaction processing, regulatory reporting, streamlining the operations between DPs and the central depository system.
- ▶ Depository APIs to payment partners enable seamless integration for investment-linked payments



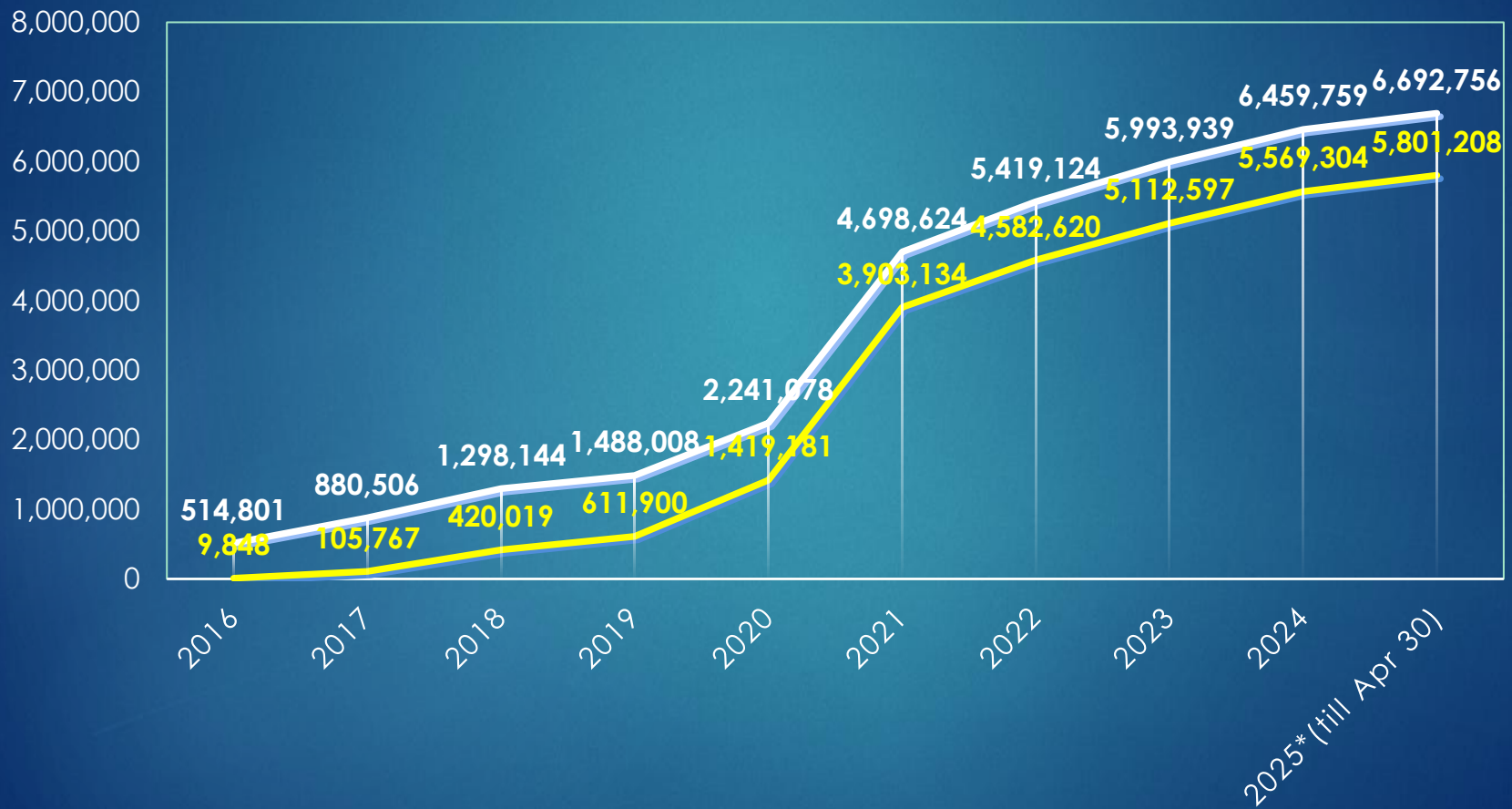
No. of Registered Companies	252
Registered Mutual Fund	45
Debenture	75
No. of Registered Clearing Members	92
No. Licensed Depository Participants	118
No. of Demat Account	6,738,082

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## Current Status of CDSC

# DEMAT ACCOUNT VS MEROSHARE USERS (LAST 10 YEARS)

— Demat Account — Meroshare Users



# Way Forward

- ▶ Embracing digital transformation through technologies like blockchain and AI to enhance efficiency and transparency.
- ▶ Strengthening cybersecurity and ensuring regulatory compliance which is crucial to maintain trust and resilience.
- ▶ Diversifying services like e-voting, Data Analytics & Market Intelligence which can unlock new growth opportunities
- ▶ Enhancing interoperability and user experience will solidify the depository's role as a future-ready market infrastructure





***Thank  
You***