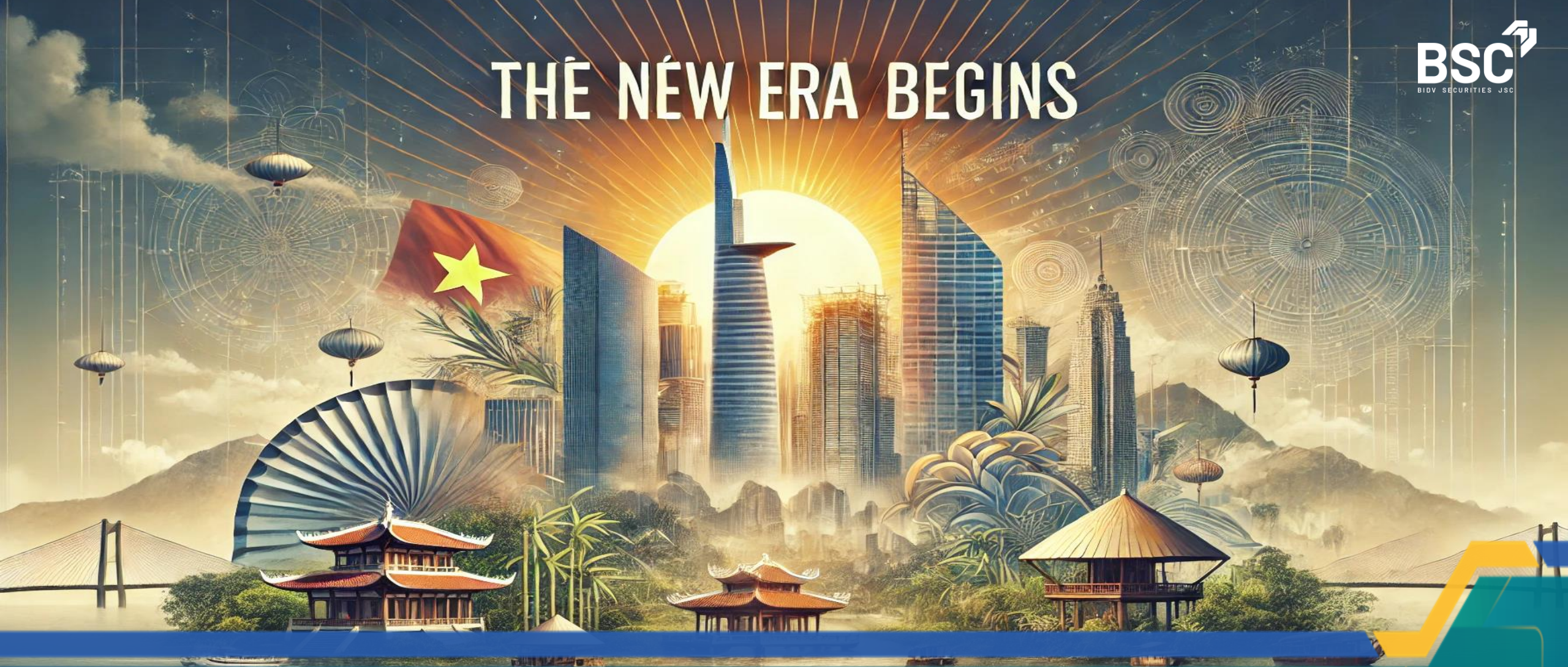


THE NEW ERA BEGINS



Thematic report

Enhancing the technology infrastructure of the Vietnamese stock market

03/2025

01 Enhancing the technology infrastructure of the Vietnamese stock market

1. Overview of the current structure of Vietnam's stock market system
2. Efforts to launch the KRX system
3. Some notable (expected) features
4. Settlement failure handling mechanism between securities firms and foreign institutional investors under the NPF solution
5. Key Highlights of the CCP Model
6. How has Vietnam been actively working toward a market upgrade in practice?
7. The SSC's solution package aimed at upgrading the stock market
8. Awaiting the SSC to materialize its plan for upgrading Vietnam's stock market in 2025

02 Securities sector

1. Financial metrics of leading securities company
2. Assessing the valuation of securities firms

03 Appendix

1. Selected research and reference reports
2. Capital market structure and clearing & settlement process in South Korea
3. Benefits of the CCP framework based on CCP Global's standards
4. Notable anticipated features of the KRX system (expected)

In charge of content



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7 yrs+



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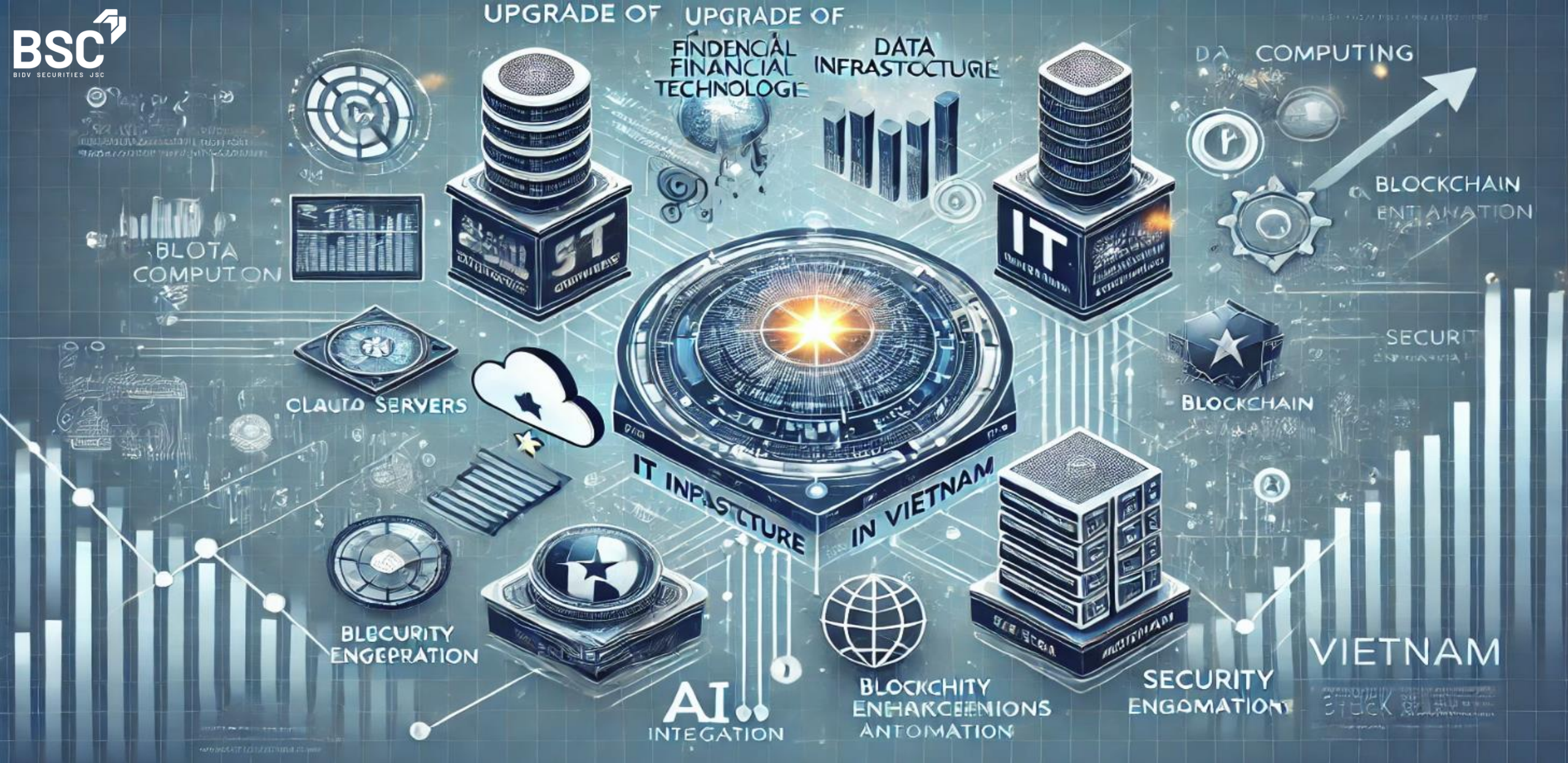
10 yrs+



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Enhancing the technology infrastructure of the Vietnamese stock market



Overview of the current structure of Vietnam's stock market system

SSC

State Securities
Commission
of Vietnam

KRX



CCP

TRUNG TÂM LƯU KÝ CHỨNG KHOÁN VIỆT NAM
VIETNAM SECURITIES DEPOSITORY

Settlement
(CS)

Registration
(DR)

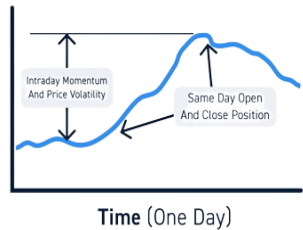
Custody
(DR)

Harmonize investor data, trading
accounts, and securities records,
with **seamless online integration**
into the systems of the SSC and
relevant stock exchanges.

Improving market liquidity and expanding
product and service offerings

New products include: stock short selling, allowance for selling unsettled securities (T+0), and equity option contracts

Day Trading



(1997 – 2003)

Volume: 14x
Value: 4x



(2014 – 2015)

Value: 26%



(2014)

Volume & Value:
short-term increase



(2017)



? → **Clearing member**

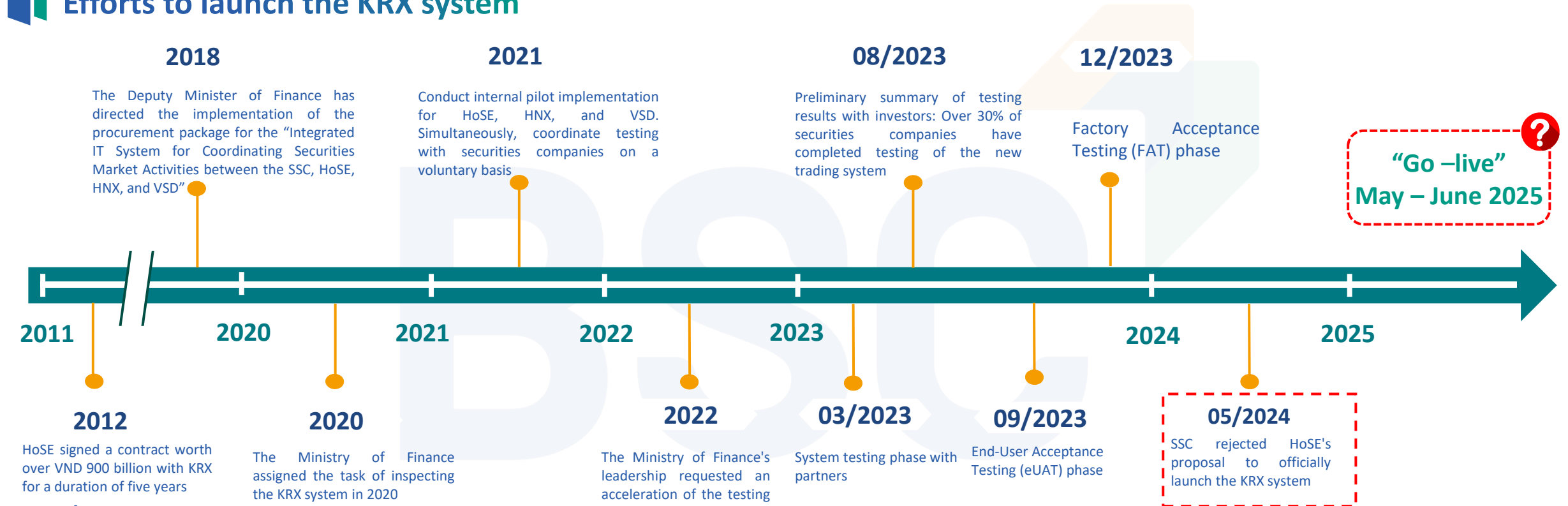
T + 2

→ **T + 1/ T+0 ?**



1 investor - 1 SID

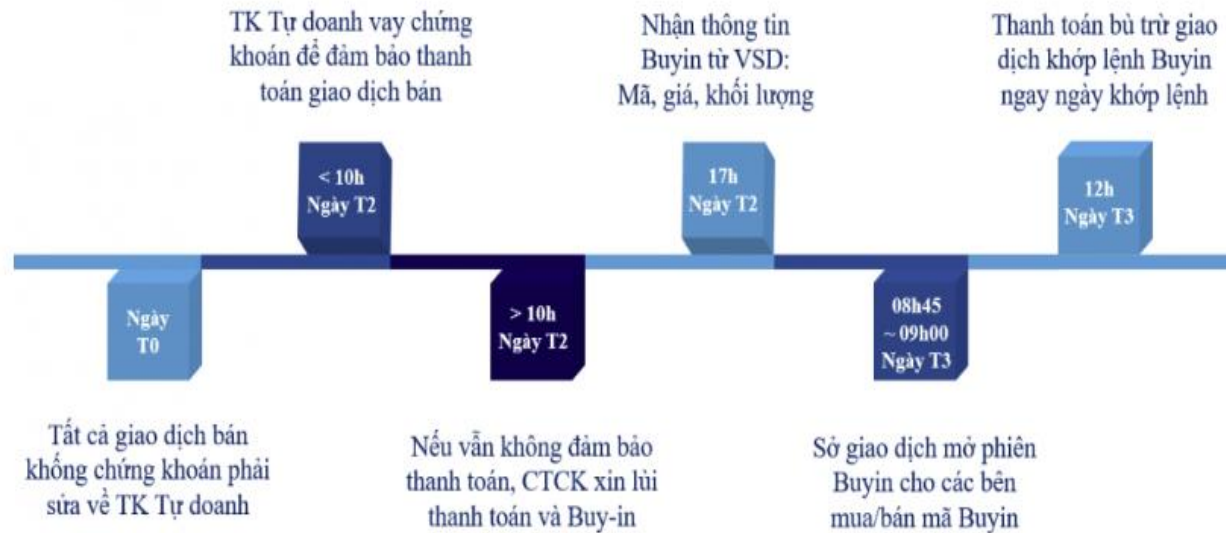
Efforts to launch the KRX system



Remarks:

- The KRX IT system project was initiated in 2012. According to HoSE's initial plan, the implementation was expected to take approximately 18 months, with the system scheduled to go live in Q1/2015. However, after multiple delays due to various reasons, the system has yet to be officially launched. As shared by HoSE leadership on February 5, 2025, the KRX project has, in essence: (1) met legal requirements regarding information security; (2) undergone market-wide testing; and (3) reached the final stages before official market rollout. If launched in 2025, it would mark a significant milestone for the next development phase of Vietnam's stock market. **Notably, on March 11, 2025, the State Securities Commission (SSC) announced a roadmap of solutions for market upgrading, which mentioned that the KRX system is expected to be operational by May or June 2025.**
- Although the **KRX system is not a mandatory criterion for market upgrade consideration**, its early implementation would lay the foundation for the introduction of new products and serve as a critical step toward launching the Central Counterparty (CCP) model for the equity market. This would help shorten the settlement cycle, increase market liquidity, and thereby improve the remaining criteria evaluated by FTSE and MSCI — accelerating the upgrade process.

Thời gian thanh toán trong giao dịch Buy-in



Mandatory Buy-in Transactions:

- Applied when a securities company (brokerage firm) fails to deliver sufficient securities for settlement with the Vietnam Securities Depository (VSD), after all other operational measures have been exhausted;
- Execution time: from 8:45 AM to 9:00 AM on trading days;
- Upon receiving a notice from VSD, the member is required to place a buy-in order on the designated date, with correct quantity, ceiling price, and specified account;
- Buy-in transactions will be conducted on a separate trading board;

→ This mechanism lays the groundwork for the introduction of short selling products and serves as a basis for executing securities settlement in cases of default or failure to deliver;

Adjustments to trading limits and CB rules in the Thai market

Thay đổi giới hạn trần và sàn cho SET, MAI và TFEX

Thị trường	Sản phẩm	Trần/Sàn
SET, MAI	Cổ phiếu, chứng quyền, ETF, Chứng chỉ lưu ký ...	+/- 30% +/- 15%
	Cổ phiếu nước ngoài	+/- 60% +/- 30%
TFEX	HĐTL chỉ số/ quyền chọn, HĐTL ngành, HĐTL cổ phiếu riêng lẻ	+/- 30% +/- 15%

3 giai đoạn ngắt mạch thị trường

Giai đoạn	Cũ		Mới	
	Index	Ngừng giao dịch*	Index	Ngừng giao dịch*
1	-10%	30	-8%	30
2	-20%	60	-15%	30
3	N/A	N/A	-20%	60
Lưu ý: giao dịch sẽ tiếp sau khi giai đoạn thứ ba được kích hoạt *Đơn vị: phút				

Lưu ý: Các quy định sửa đổi sẽ có hiệu lực từ ngày 18 tháng 3 đến ngày 30 tháng 6 năm 2020

Nguồn: Sở giao dịch chứng khoán Thái Lan

☐ Cũ ☒ Mới

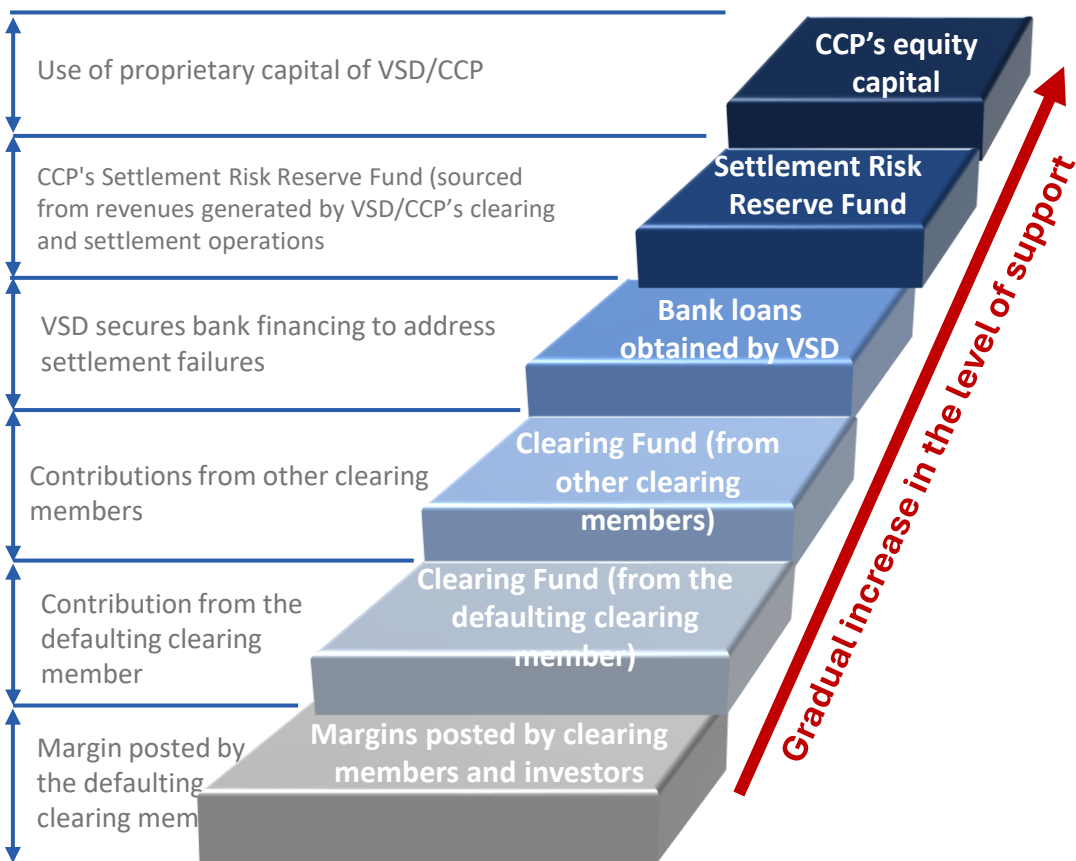
Circuit Breaker Mechanism:

- A mechanism that automatically halts trading during a session when the stock index declines to, or beyond, preset thresholds programmed into the system and maintains such levels for a specified duration;
- Serves as a market stabilization tool to prevent panic-driven mass sell-offs occurring simultaneously;

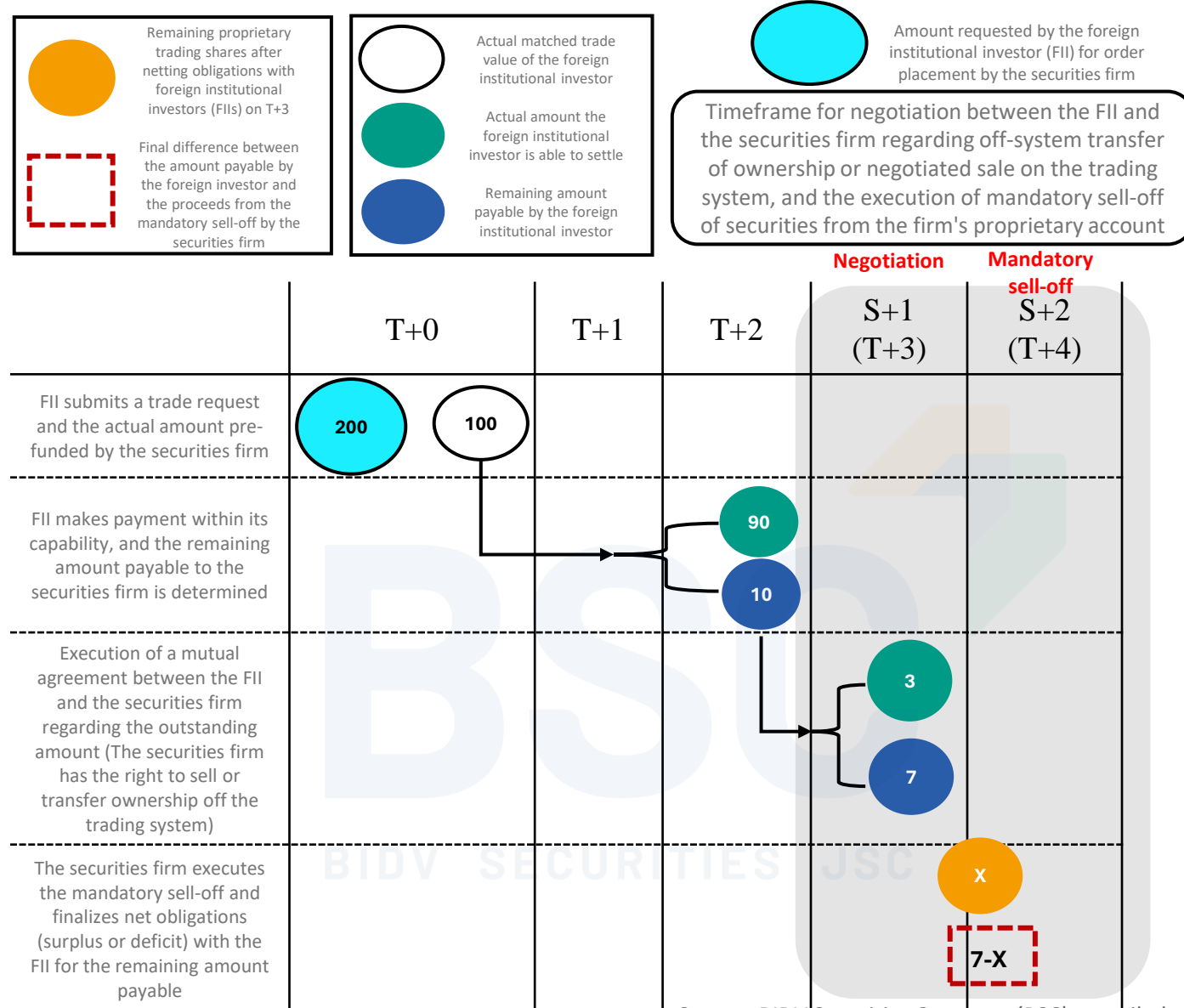
→ This provides a critical legal and operational framework for managing and operating the market in emergency situations — aligning Vietnam's practices with those of regional and global markets.



Default handling in the event of a member's cash settlement failure (risk management mechanism under the Central Counterparty – CCP model)



Flowchart for handling settlement shortfalls between Foreign Institutional Investors (FIIs) and securities firms under the "Non-Pre-Funding" (NPF) solution



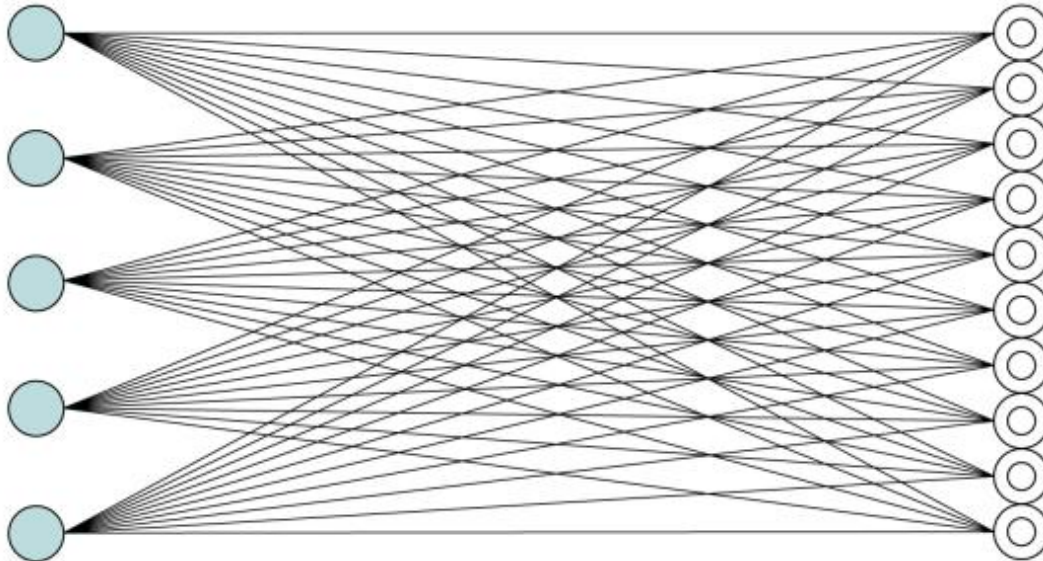
Source: BIDV Securities Company (BSC) compiled

- Under the NPF solution, the Vietnam Securities Depository and Clearing Corporation (VSDC) will implement payment support measures for clearing participants through the Settlement Support Fund, loans from the settlement bank, and borrowing from the State Bank of Vietnam.
- The default handling mechanism for clearing participants (CIs) and the clearing and settlement model involving a Central Counterparty (CCP) are considered optimal solutions for the system — particularly in addressing the future margin requirements for foreign investors.

■ Settlement model without a CCP

Number of selling members: 5

Number of buying members: 10

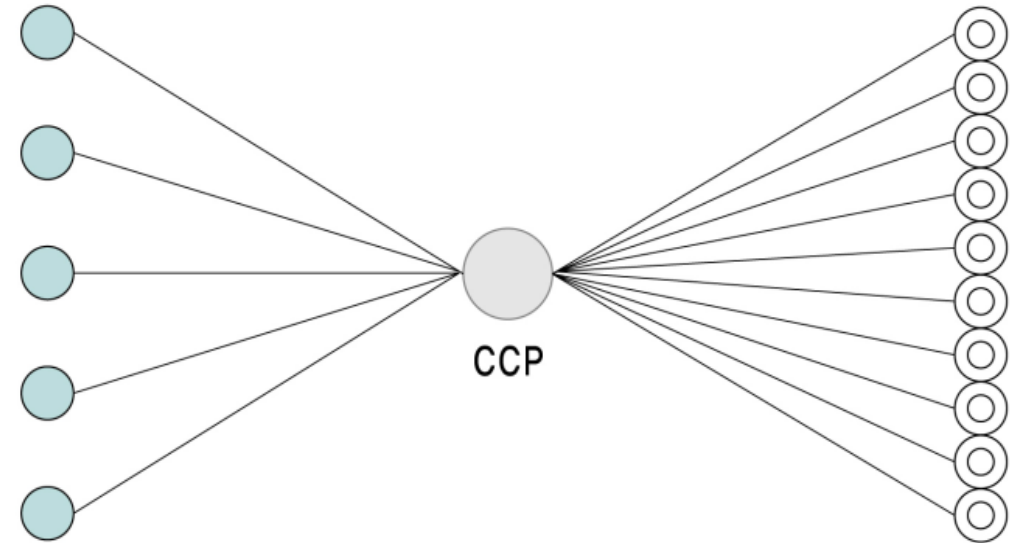


Up to 50 settlement transactions required

■ Settlement model with a CCP

Number of selling members: 5

Number of buying members: 10



Reduced to a maximum of 15 settlement transactions

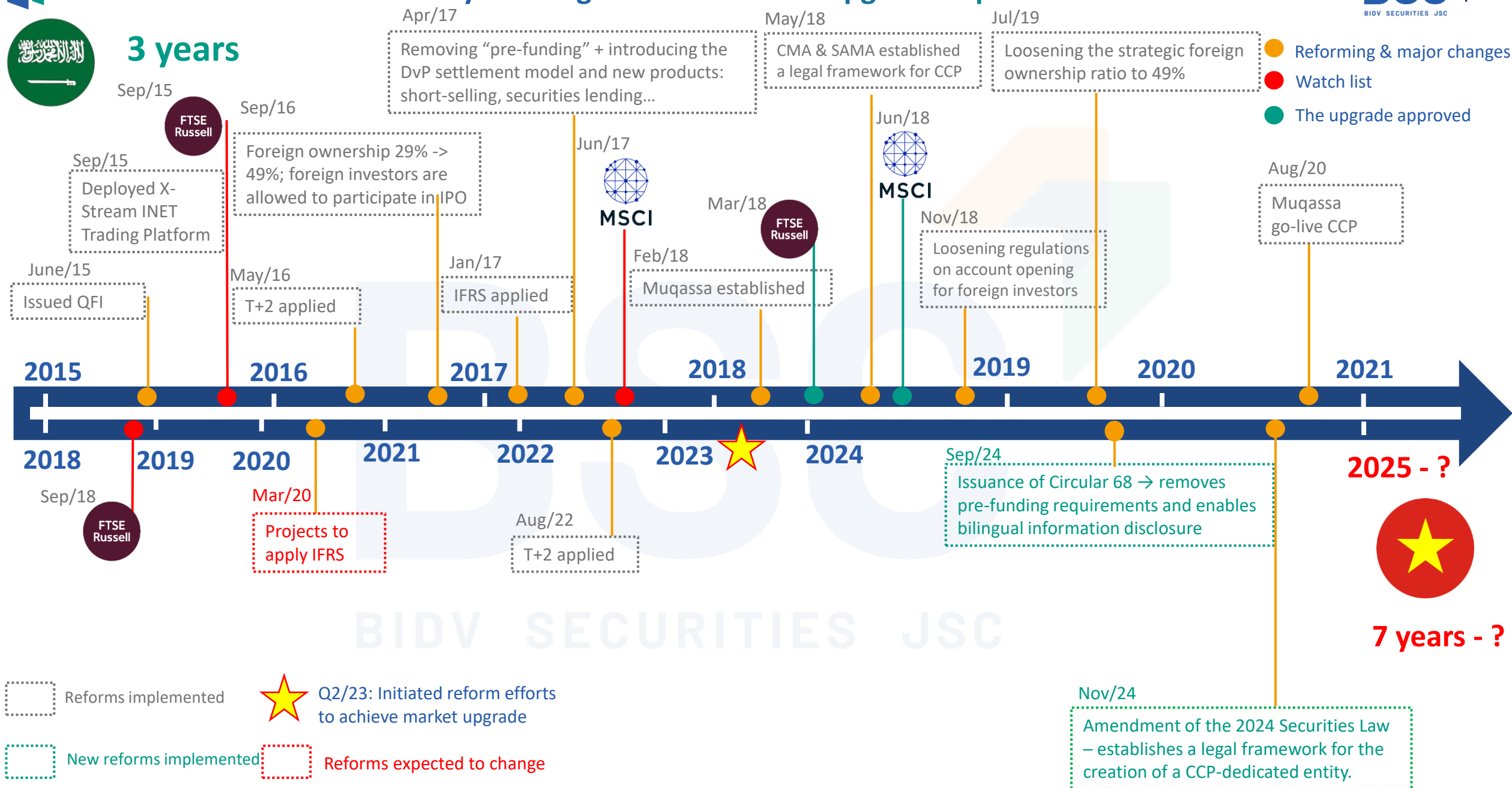
- The CCP introduces: **(1) a position substitution mechanism and (2) a payment guarantee function**, → which significantly differentiate the CCP model in the clearing and settlement of securities transactions.
- **The CCP will bring several benefits:** (1) Substantially increases investor purchasing power (compared to the current DvP method which requires 100% pre-funding); (2) Provides a basis for implementing short selling of securities pending delivery; (3) Resolves the pre-funding issue for foreign investors, thereby improving market liquidity.
- **To maximize its effectiveness and operational efficiency, the CCP model requires:** (1) a comprehensive legal framework; (2) robust technical infrastructure; (3) an appropriate risk management model; and (4) a mature cash equity market.



How has Vietnam been actively working toward a market upgrade in practice?



3 years



7 years - ?



The SSC's solution package aimed at upgrading the stock market

Proposal to retain foreign ownership room for foreign investors when conducting share buyback transactions from securities firms → The implementation of the KRX system will enable the retention of foreign room until T+3

Foreign room

Information disclosure

SSC plans to amend the information disclosure appendix by removing the requirement to disclose the identity of the authorized representative

The dialogue group consists of SSC, securities firms, custodian banks, investment funds, and experts

- tasked with resolving issues to ensure the best possible market experience for foreign investors
- supporting the market upgrade process

Establishment of a dialogue group

Policy solutions working group

Implementation of OTA

VSDC is expected to implement the Omnibus Trading Account (OTA), which will allow fund management companies to execute buy/sell orders simultaneously for all their managed funds, without having to place separate orders for each individual account. This initiative will simplify order placement for asset managers and foreign investors, offering greater convenience.

-> The implementation is expected to take place before August 2025

Amendment of regulations on FII account opening



SBV will amend certain legal regulations to simplify and shorten the account opening process for foreign investors engaging in indirect investment activities.

-> These amendments are expected to be issued in March 2025

09 actionable solutions toward market reclassification



State Securities Commission of Vietnam

Solution group related to Circular 68

NPF solution

SSC has held discussions with securities firms regarding **their consensus on handling the following issues**: (1) the list of securities eligible for the Non-Pre-Funding (NPF) mechanism, (2) the determination of minimum cash requirements, (3) the process for handling failed trades, and (4) the contractual framework with clients.

-> Minimizing inconsistencies in the implementation of the NPF model.

VSDC will implement the Straight Through Processing (STP) system for electronic trade communication between securities firms and custodian banks. At the same time, the STP system will be upgraded to adopt SWIFT-standard messaging -> improving convenience for servicing foreign investors.

-> Implementation is expected in March 2025

SSC has instructed the stock exchanges and VSDC to promptly implement the required tasks and report back to the SSC

-> KRX system expected to go live in April 2025

B

Technology infrastructure solution group

STP

KRX

CCP

Upcoming tasks to be implemented: (1) Establishing a subsidiary under VSDC dedicated to Central Counterparty (CCP) operations; (2) Finalizing the settlement procedures between VSDC and market participants; (3) Enabling commercial banks to become clearing members

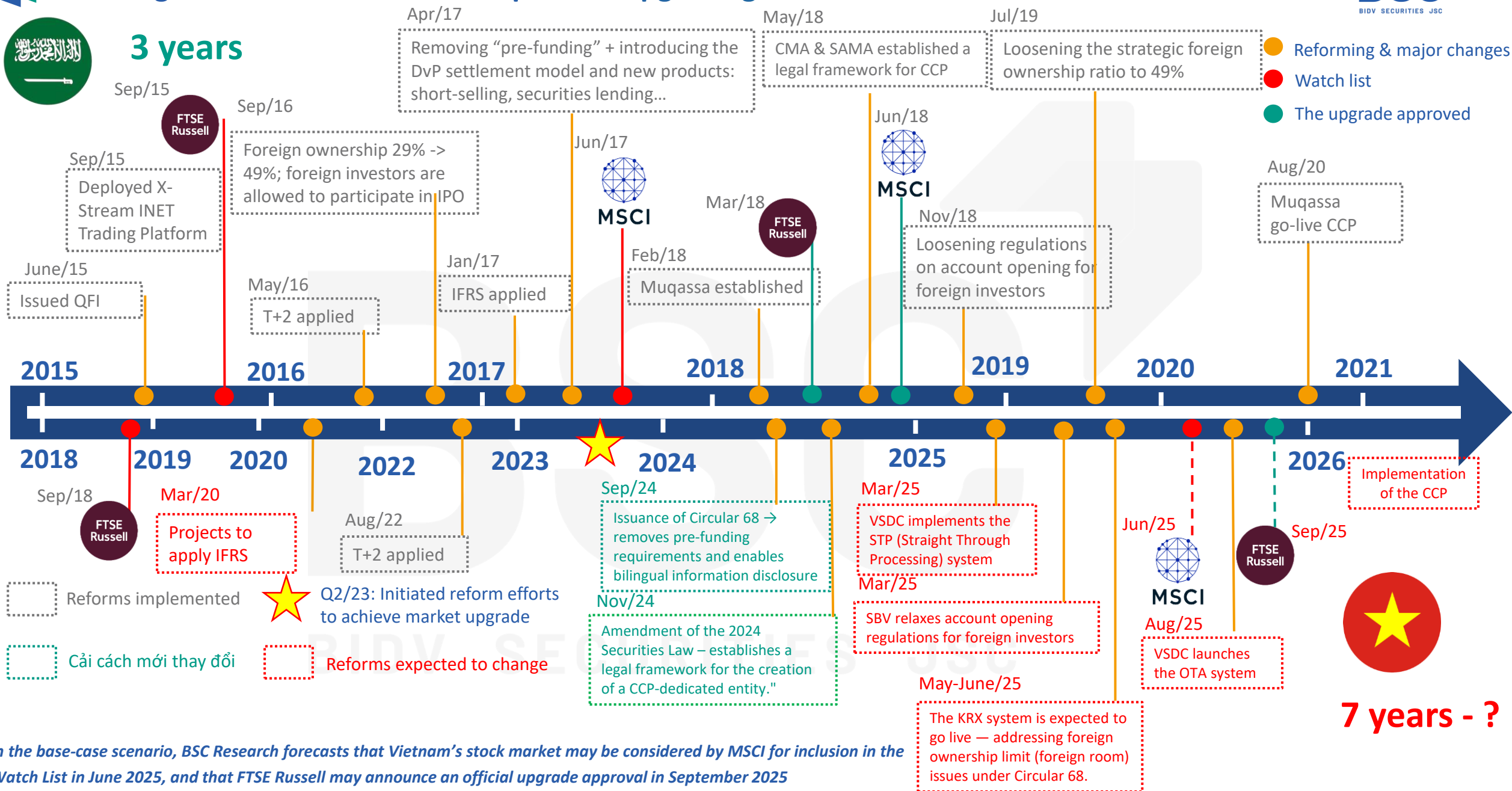
→ The CCP is expected to be operational in 2026.



Awaiting the SSC to materialize its plan for upgrading Vietnam's stock market in 2025



3 years



7 years - ?

In the base-case scenario, BSC Research forecasts that Vietnam's stock market may be considered by MSCI for inclusion in the Watch List in June 2025, and that FTSE Russell may announce an official upgrade approval in September 2025

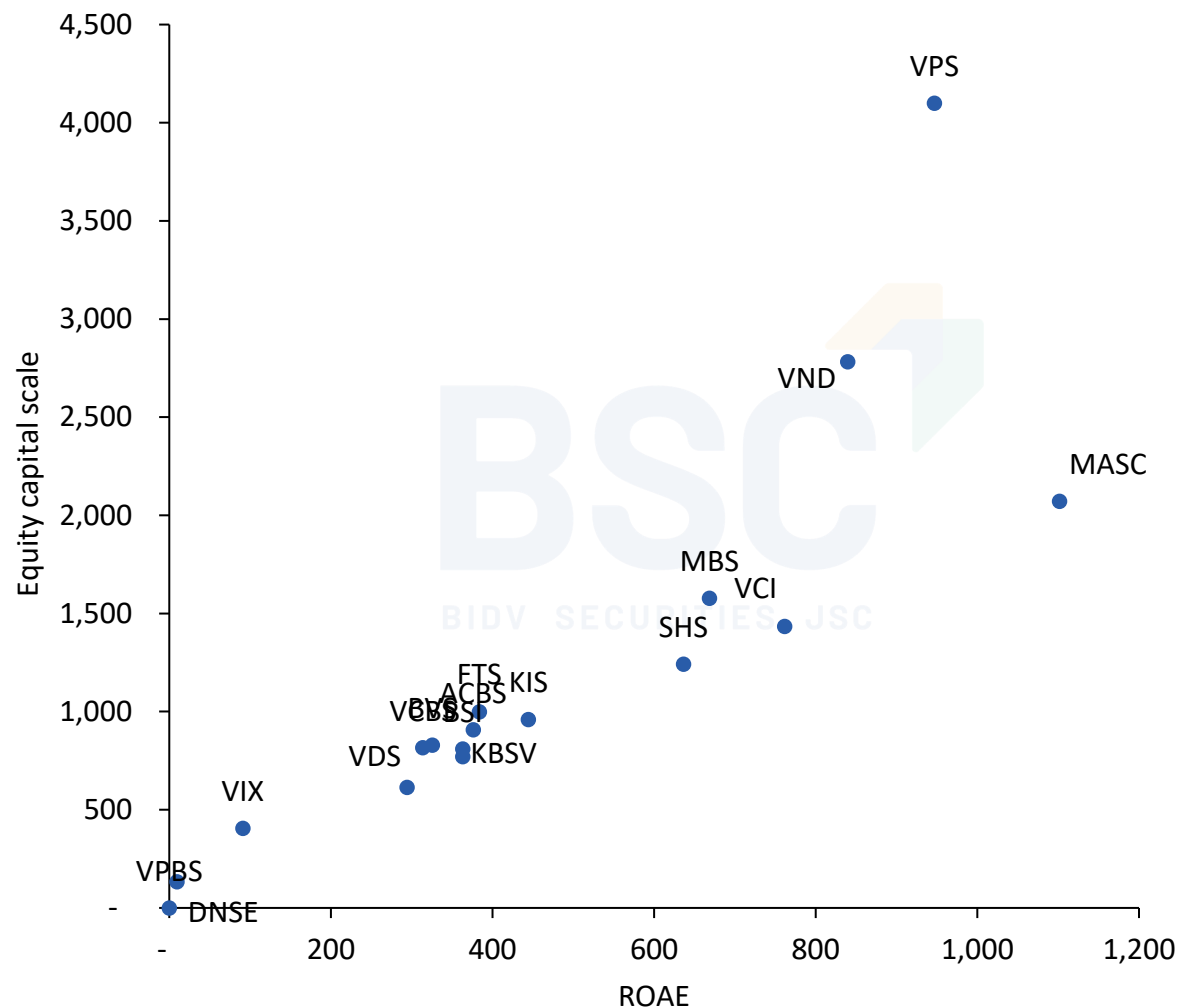


Securities sector stocks

Table: Key parameters of some securities companies

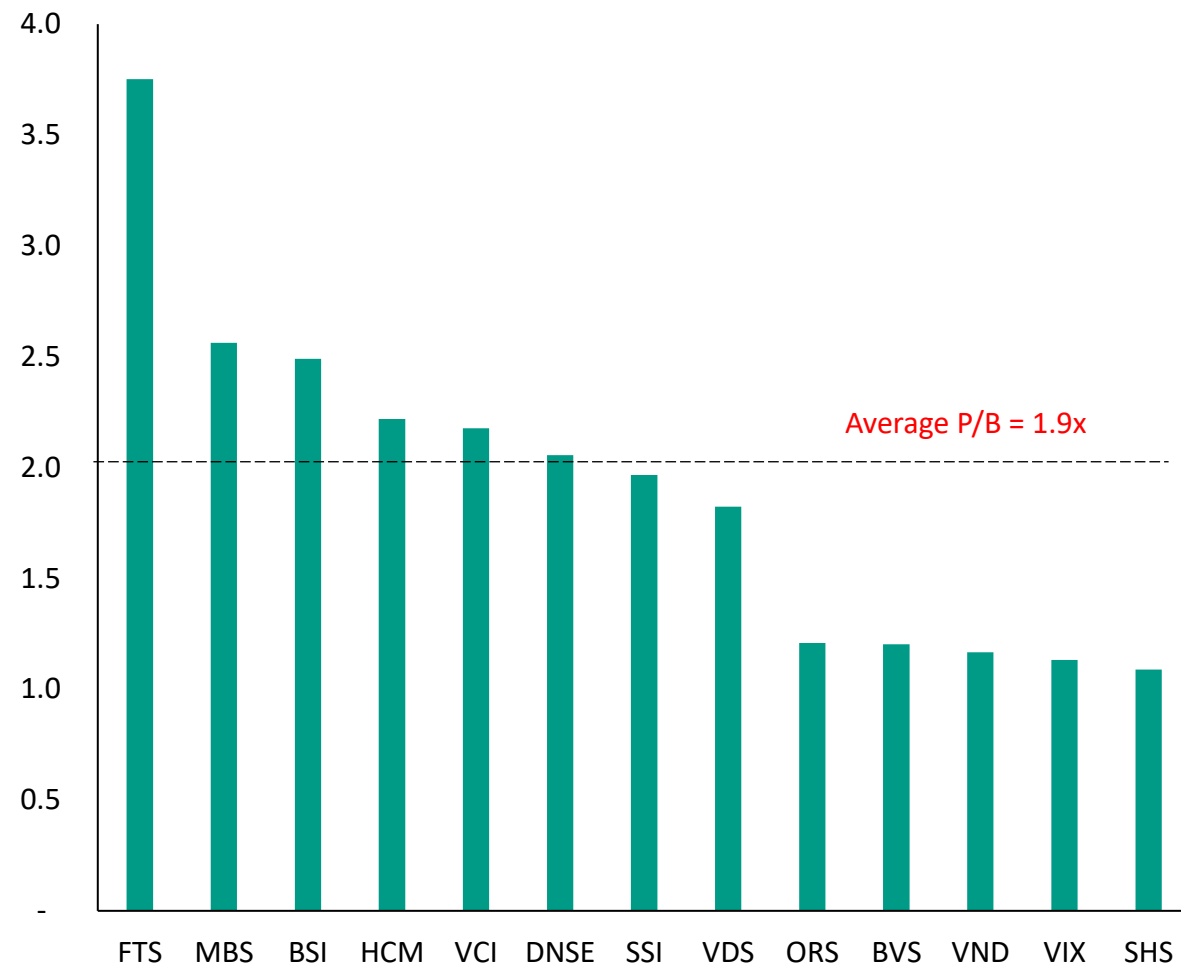
Ticket	Exchange	Mkt Price	Mkt Cap (VND bn)	Average Volume (mn per day)	Total Equity (VND bn)	Debt/Equity	Revenue (VND bn)	EBT (VND bn)	ROA (%)	ROE (%)	P/E	P/B
SSI	HOSE	26,700	52,435	30,342	19,639	0.82	8,529.3	3,543.5	4.0%	11.3%	18.2	2.0
TCBS	OTC	N/A	N/A	N/A	19,613	0.99	7,615.3	4,802.1	7.9%	15.4%	N/A	N/A
VND	HOSE	15,100	22,987	22,958	15,223	0.52	5,324.4	2,088.3	4.0%	9.5%	13.4	1.2
HCM	HOSE	32,150	23,174	10,677	7,208	1.96	4,276.2	1,295.6	4.2%	11.1%	22.3	2.2
VCI	HOSE	39,250	28,185	10,147	7,181	0.87	3,695.5	1,089.3	4.2%	9.0%	16.8	2.2
VPS	OTC	N/A	N/A	N/A	5,700	1.10	6,466.3	3,153.8	9.5%	24.8%	N/A	N/A
MBS	HOSE	30,900	17,700	5,037.2	5,728	1.49	3,120.4	930.6	4.0%	12.4%	23.8	2.6
FTS	HOSE	50,500	15,449	3,455.0	3,059	1.72	1,147.7	663.2	6.3%	14.6%	27.2	3.8
SHS	HOSE	15,000	12,197	14,118.6	8,132	0.37	1,991.3	1,239.3	8.0%	9.5%	12.6	1.1
BSI	HOSE	56,500	12,603	1,097.3	2,231	1.03	1,410.7	515.7	4.4%	8.5%	30.8	2.5
DSE	HOSE	25,100	8,283	1,013.5	3,300	0.96	807.4	227.5	2.0%	5.0%	45.6	2.1
VDS	HOSE	20,700	5,030	1,975.6	2,430	0.98	987.4	355.6	5.0%	11.1%	17.4	1.8
VIX	HOSE	12,450	18,158	62,370.0	14,585	0.36	1,837.8	815.1	4.6%	5.3%	27.4	1.1

Figure: Scale of equity capital and ROE profitability of securities companies



Source: BIDV Securities Company (BSC)

Figure: The current P/B valuation of securities companies averages around nearly 2 times



Source: BIDV Securities Company (BSC)

Note: Data as of 12/03/2025

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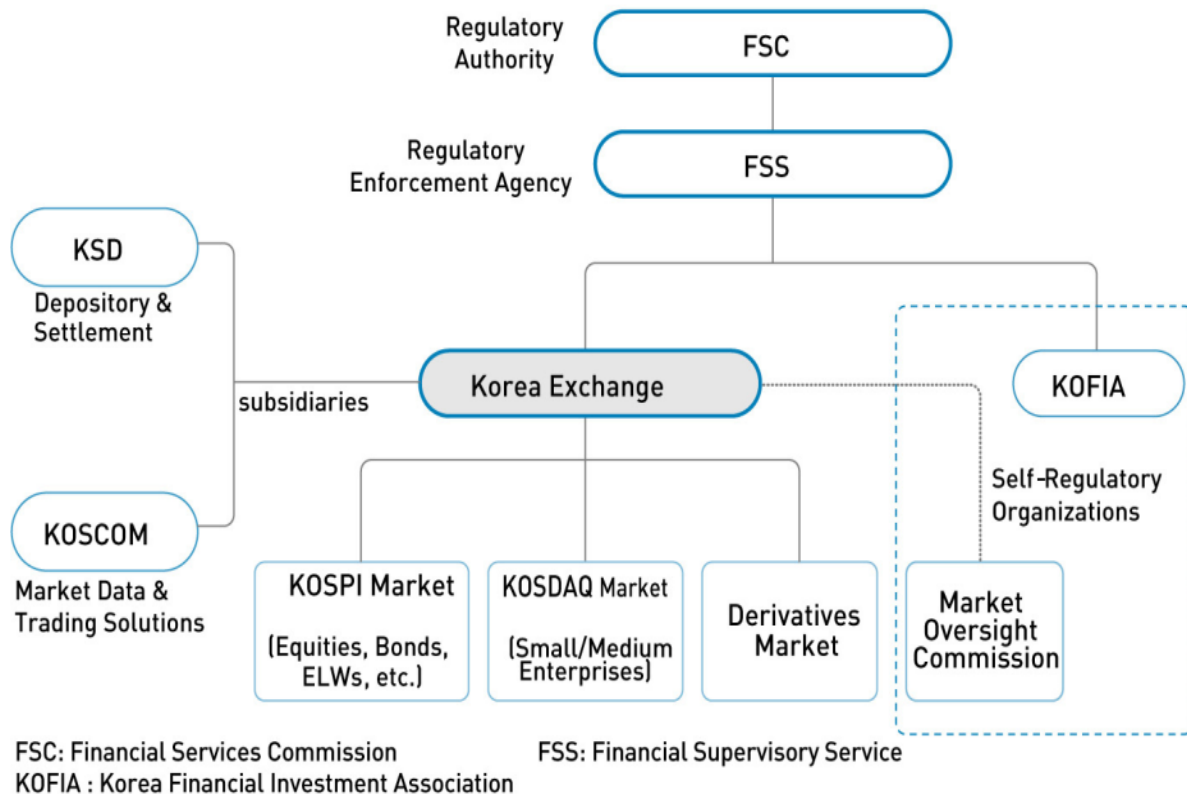
APPENDIX

A. Assessment reports by BSC Research related to the stock market upgrade theme

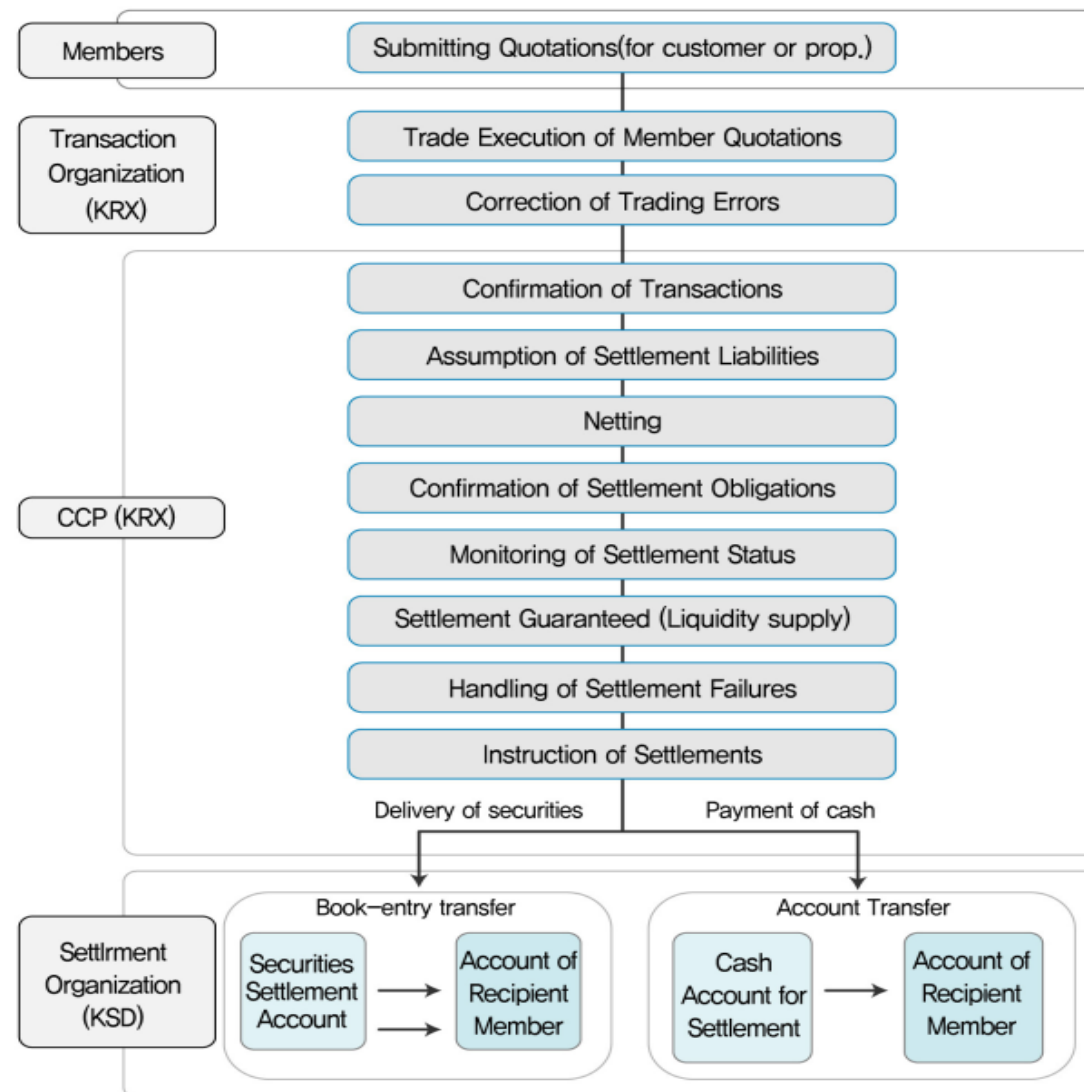
1. *Vietnam Stock Market Upgrade Report (March 2024): [Link](#)*
2. *Report on the Practical Implementation of Day-Trading in Selected Asian Countries (June 2024): [Link](#)*
3. *Sector Outlook 2025 – The Era of Emergence (December 2024): [Link](#)*
4. *Selected equity reports related to the stock market upgrade theme (BSC will provide continuous updates):*
 - + HPG – The Steel King ([Link](#)); MSN – Unlocking the Efficiency Phase ([Link](#));*
 - + VNM – Asserting Market Leadership ([Link](#)); VHM – The Forgotten Diamond ([Link](#))*



Structure of Korean Capital Market



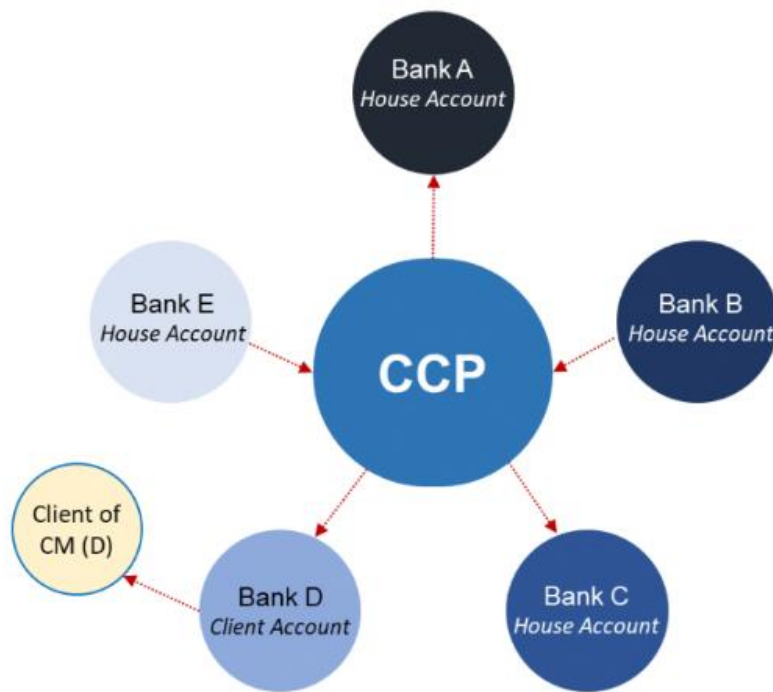
Clearing & Settlement Procedures in KRX Markets





CCP, CM and Client Relationship

(Centrally Cleared)



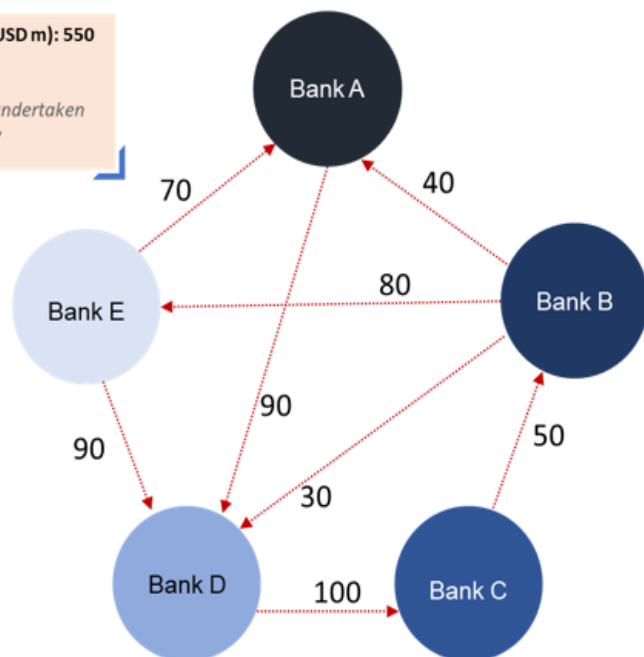
CM: Clearing Member | CCP: Central Counterparty

Bilateral Trading Ecosystem

(Non-cleared)

Gross exposures (USD m): 550

Assuming netting undertaken in a single currency

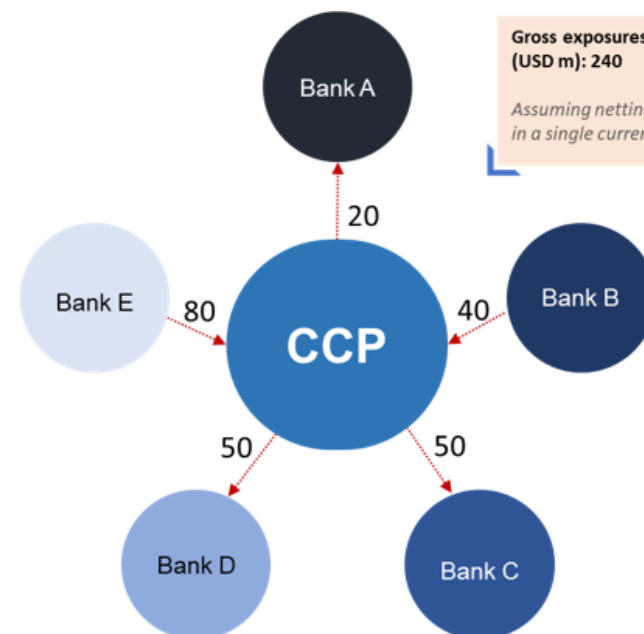


Multilateral Trading Ecosystem

(Centrally Cleared, After Netting)

Gross exposures after netting (USD m): 240

Assuming netting undertaken in a single currency



Cash equity market		
	Current System	New System
I. Market Board Display		
1. Periodic Auction Matching	Displays the three best bid and ask prices for each stock along with the corresponding bid/ask volumes.	The three displayed bid/ask prices represent the best projected remaining orders after matching.
2. Foreign Ownership Limit (Room)		
<i>Matched Transactions:</i>	Current Room decreases immediately when a foreign investor's buy order is matched.	Current Room decreases as soon as the foreign investor's buy order is entered into the system.
<i>Negotiated Transactions (foreign investor buying from domestic individual)</i>	Current Room decreases immediately when the negotiated trade is executed.	Current Room decreases as soon as the negotiated buy order from the foreign investor is entered into the system.
II. Trading Mechanism		
1. Negotiated Transactions	The seller inputs the negotiated trade order and the buyer confirms it.	Either the buyer or seller can initiate the transaction; the counterparty confirms or rejects it.
<i>Amendments/Cancellations for Unexecuted Orders</i>	Members may amend negotiated trades by canceling and re-entering a new order, provided they present the original investor order, receive agreement from the counterparty, and obtain approval from the exchange.	Investors are not allowed to amend or cancel negotiated trades once entered into the system.
2. Order Matching Transactions		
<i>Amendments/Cancellations</i>	Incorrect orders can be canceled and re-entered correctly.	Allows price/volume edits on unexecuted limit orders (LO) or the unexecuted portion during continuous trading, following these rules:
<i>Order Priority</i>	is determined based on the time the valid order is entered into the exchange's trading system	- Price edits or increases in volume change the time priority of the order. - Decreasing volume does not affect time priority.
3. ATO/ATC Periodic Matching Session		
<i>Order Priority</i>	ATO/ATC orders are prioritized over LO orders during matching.	ATO/ATC orders are not prioritized over LO orders during matching.
<i>Lot Size</i>	Only round lots are allowed.	Both round lots and odd lots are allowed.
4. Continuous Matching Session (LO)		
<i>Market Order</i>	- HNX: MAK, MOK, MTL - HSX: MP	- HNX: FAK, FOK, MTL - HSX: MTL
5. Odd-Lot Transactions	Allowed only during continuous matching and negotiated sessions.	Allowed in periodic matching, continuous matching, and negotiated transactions.
6. Trading of Securities under Trading Restrictions (PCA)	Only allowed in the afternoon session (1:00 PM – 3:00 PM) via matching and negotiation.	- Periodic matching every 15 minutes. - No amendments/cancellations allowed during the last 5 minutes of each matching session.

Derivatives market		
	Current System	New System
1. Trading Time	Clients can trade on the next trading day after VSD approves the account opening.	Clients can trade immediately after VSD approves the account opening.
2. Change in Contract Code Naming Rules	Naming Convention: <ul style="list-style-type: none"> - Underlying asset (VN30/GB05/GB10) - Product type (F) - Expiry date (YYMM) * Example: VN30F2405 – VN30 index futures contract expiring in May 2024	Naming Convention: <ul style="list-style-type: none"> - Security type: Derivatives = 4 - Derivatives group: Futures = 1 - Underlying asset: VN30 = 11, GB05 = B5, GB10 = BA - Expiry year: 2024 = E, 2025 = F, ... - Expiry month: January = 1, February = 2, ..., September = 9, October = A, November = B, December = C - Derivative identifier: Futures = 000
3. Margin Principle	Clients must deposit margin to VSD before placing orders.	Margin is applied after order placement.
4. Close-out Order		Close-out Order: The close-out order is a special type of order specifically designed for blocked accounts, allowing them to reduce violating positions through offsetting orders without rejection from the trading system. The execution of this order may reduce the required margin, position limits, or open interest (OI) limits.