



# Clearing and Settlement procedure

# Introduction

The clearing and settlement process involves two primary tasks:

- ▶ trade comparison
- ▶ settlement

# Clearing

- ▶ A procedure when an organization acts as an intermediary and assumes the role of a buyer and seller for transactions in order to reconcile orders between transacting parties.
- ▶ Clearing includes all activities from the time a commitment is made for a transaction until it is settled.
- ▶ Processes included in clearing are reporting/monitoring, risk margining, netting of trades to single positions, tax handling, and failure handling.

# WHY?

- ▶ Clearing is necessary for the matching of all buy and sell orders in the market.
- ▶ It provides smoother and more efficient markets,
  - 1) parties can make transfers to the clearing corporation, rather than to each individual party with whom they have transacted.
  - 2) The agency reports discrepancies to traders in case the reports do not match, who then try and resolve them.
  - 3) It ensures that trades are settled in accordance with market rules by managing post trading and pre-settlement credit exposures.

# Settlement

Settlement takes place once clearing process is performed.

- The settlement agency receives cash from buyers and securities from sellers and, at the end of the process, gives the securities to the buyer and the cash to the seller.
- The timing of payment will depend on the settlement time of the transaction.

# Settlement period

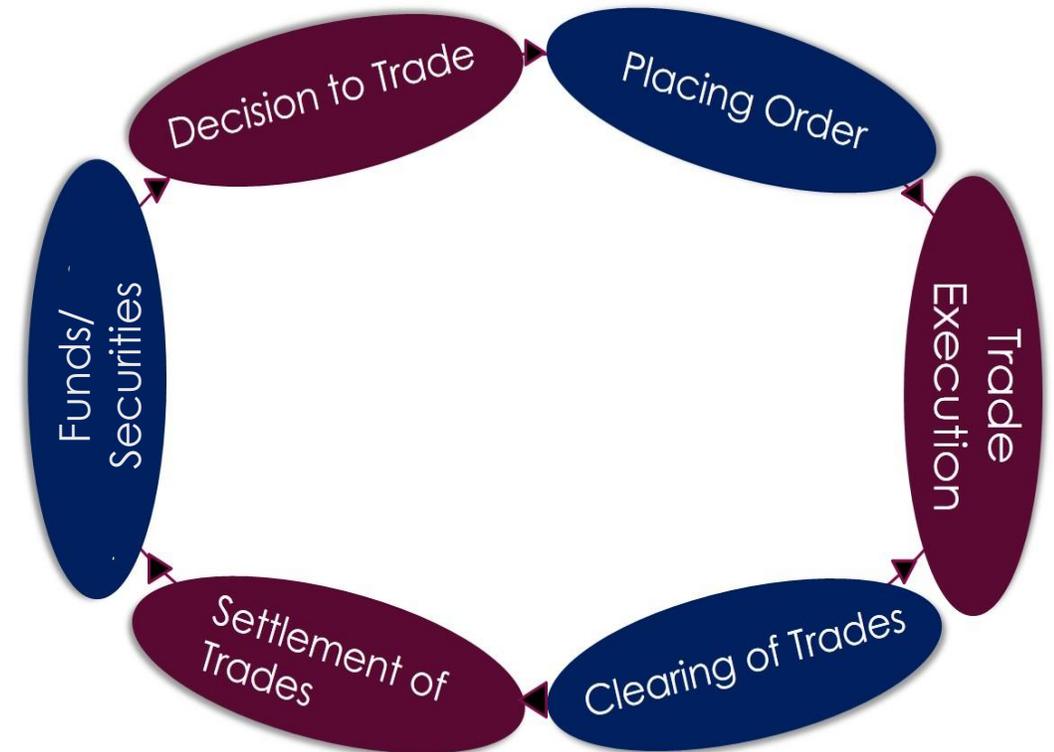
- ▶ The period of time between the settlement date and the transaction date that is allotted to the parties of a transaction to satisfy the transaction's obligations.
- ▶ The buyer must make payment within the settlement period, while the seller must deliver the purchased security within this period.
- ▶ Depending on the type of security traded, the exact length of the settlement period will differ. The settlement period is often quoted as T+1, T+2 or T+3; which means the transaction date plus one, two or three days.
- ▶ For stocks, the settlement period is three days (T+3) after the transaction. For certificates of deposit and commercial paper it is (T+1), while for forex transactions it is (T+2).

# Clearing and settlement Procedure

LAXMI NARAYANA

# Transaction Cycle

- ▶ A person holding assets (securities/funds), either to meet his liquidity needs or to reshuffle his holdings in response to changes in his perception about risk and return of the assets, decides to buy or sell the securities
- ▶ He finds out the right broker and instructs him to place buy/sell order on an exchange
- ▶ The order is converted to a trade as soon as it finds a matching sell/buy order
- ▶ The trades are cleared to determine the obligations of counterparties to deliver securities/funds as per settlement schedule
- ▶ Buyer/seller delivers funds/securities and receives securities/ funds and acquires ownership over them



# Settlement Process

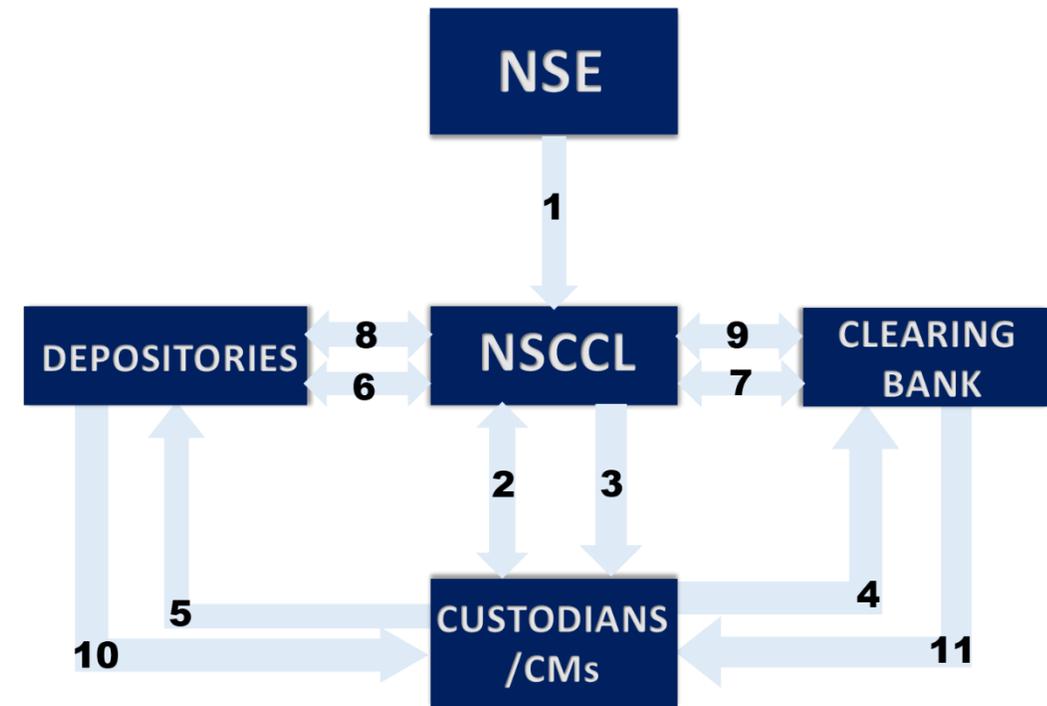
- ▶ The National Securities Clearing Corporation Ltd. (NSCCL) determines the funds/securities obligations of the trading members and ensures that the trading members meet their objectives
- ▶ Principle of Novation: NSCCL becomes the legal counterparty to the net settlement obligations of every member
- ▶ NSCCL is obligated to meet all settlement obligations, regardless of member defaults, without any discretion
- ▶ Once a member fails on any obligations NSCCL cuts off trading and initiates recovery
- ▶ The clearing banks and depositories provide the necessary interface between the custodians/clearing members

# Core Functions involved in this process

- ▶ **Trade Recording**- Key details about the trades
- ▶ **Trade Confirmation**- Counterparties agree upon the terms of trade
- ▶ **Determination of Obligation** – determine what they owe/dues
- ▶ **Pay-in of Funds and Securities**- Funds/securities are brought in to NSCCL
- ▶ **Pay out of Funds and securities**-Release of pay-out of funds/securities
- ▶ **Risk Management**- For an efficient settlement system

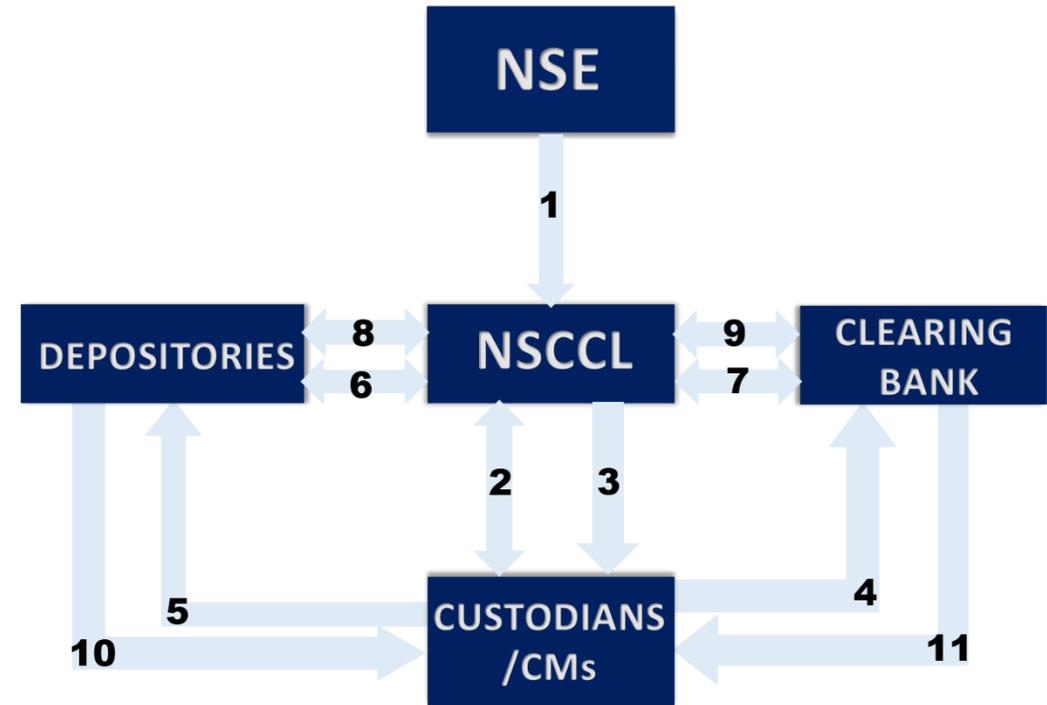
# Settlement process of NSE

1. Trade Details from Exchange to NSCCL
2. NSCCL notifies the consummated trade details to CMs/custodians who affirm back. Based on the affirmation, NSCCL applies multilateral netting and determines obligations
3. Download of obligation and pay-in advice of funds/securities
4. Instructions to clearing banks to make funds available by pay-in time
5. Instructions to depositories to make securities available by pay-in-time
6. Pay-in of securities (NSCCL advises depository to debit pool account of custodians/CMs and credit its account and depository does it).



# Settlement process of NSE

7. Pay-in of funds (NSCCL advises Clearing Banks to debit account of custodians/CMs and credit its account and clearing bank does it)
8. Pay-out of securities (NSCCL advises depository to credit pool account of custodians/CMs and debit its account and depository does it)
9. Pay-out of funds (NSCCL advises Clearing Banks to credit account of custodians/CMs and debit its account and clearing bank does it)
10. Depository informs custodians/CMs through DPs  
Clearing Banks inform custodians/CMs



# Entities involved in clearing & settlement

VINODH REDDY CHENNU

# Entities involved in clearing & settlement

- ▶ Clearing Members
- ▶ Clearing Banks
- ▶ Depositories
- ▶ Clearing Corporation

# Clearing Member

- ▶ Primarily, the Clearing Member performs the following functions:
  1. **Clearing** - Computing obligations of all his TM's i.e. determining positions to settle.
  2. **Settlement** - Performing actual settlement. Only funds settlement is allowed at present in Index as well as Stock futures and options contracts
  3. **Risk Management** - Setting position limits based on upfront deposits / margins for each TM and monitoring positions on a continuous basis.

# Types of Clearing members

- ▶ **Trading Member Clearing Member (TM-CM)**  
A Clearing Member who is also a TM. Such CMs may clear and settle their own proprietary trades, their clients' trades as well as trades of other TM's & Custodial Participants.
- ▶ **Professional Clearing Member (PCM)**  
A CM who is not a TM. Typically banks or custodians could become a PCM and clear and settle for TM's as well as of the Custodial Participants.
- ▶ **Self Clearing Member (SCM)**  
A Clearing Member who is also a TM. Such CMs may clear and settle only their own proprietary trades and their clients' trades but cannot clear and settle trades of other TM's.

# Clearing Member Eligibility Norms

- ▶ Net worth of at least Rs.300 lakhs. The net worth requirement for a CM who clears and settles only deals executed by him is Rs. 100 lakhs.
- ▶ Deposit of Rs. 50 lakhs to NSCCL which forms part of the security deposit of the CM
- ▶ Additional incremental deposits of Rs.10 lakhs to NSCCL for each additional TM in case the CM undertakes to clear and settle deals for other TMs.

# Clearing banks

Funds settlement takes place through clearing banks. For the purpose of settlement all clearing members are required to open a separate bank account with National Securities Clearing Corporation Limited (NSCCL) designated clearing bank for F&O segment.

## **NSCCL has empanelled 13 clearing banks namely**

1. Axis Bank Ltd.,
2. Bank of India,
3. Canara Bank,
4. Citibank N.A,
5. HDFC Bank,
6. Hongkong & Shanghai Banking Corporation Ltd.,
7. ICICI Bank,
8. IDBI Bank,
9. IndusInd Bank,
10. Kotak Mahindra Bank,
11. Standard Chartered Bank,
12. State Bank of India and
13. Union Bank of India.

# Depositories

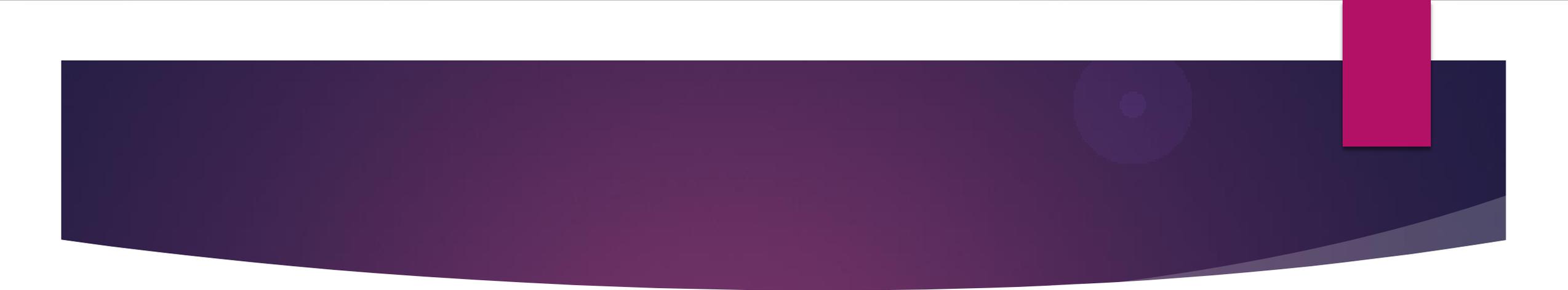
- ▶ Depository helps in the settlement of the dematerialized securities. It holds dematerialized securities of the investors in the beneficiary accounts. Each clearing member is required to maintain a clearing pool account with all the depositories. Separate accounts are required to be opened for the settlement of trades on different stock exchanges.

# Clearing Corporation

- ▶ The clearing corporation is responsible for post-trade activities such as risk management and clearing and settlement of trades executed on a stock exchange.

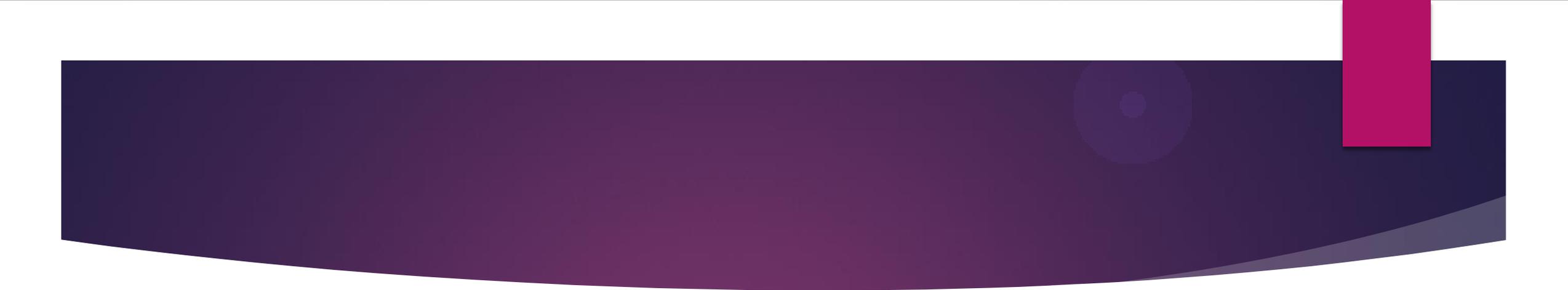
# RISK MANAGEMENT

Sri Lalithya Magani



Risks in clearing and settlement are majorly categorised into 3 types:

- ▶ Third party risk: Risk of failure by a settlement bank or other intermediary
- ▶ Operational risk: Risk of breakdowns in the clearing and settlement operational system.
- ▶ Counterparty risk: Settlement failure by individual participants in clearing and settlement

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- ▶ The main sources of counter party risk are:
    - ▶ price volatility
    - ▶ unsynchronized payment and delivery;
    - ▶ Illiquidity
  - ▶ Given the three sources of risks, counterparty risk can be further classified into:
    - ▶ replacement cost risk
    - ▶ principal risk
    - ▶ Liquidity risk.

# Replacement cost Risk

- ▶ As the price moves away from the original contract price, the replacement of original trade may become costly .
- ▶ This cost must be borne by one of the counterparties
- ▶ Thus, one of the counterparties faces replacement cost risk with price volatility between the date of transaction and the date of settlement.<sup>5</sup>

# Principal Risk

Principal Risk: The possibility an investment will be worth less when it is sold than when it was purchased. Principal risk is high for common stocks.

- ▶ With payment and delivery unsynchronized, there exists the risk that a seller of a security may deliver without receiving a corresponding payment or that a buyer may make payment without receiving a corresponding delivery.
- ▶ In this situation, the full principal value of the security can be at risk.
- ▶ Thus, one of the counterparties faces principal risk

# Liquidity risk

Liquidity Risk: The risk stemming from the lack of marketability of an investment that cannot be bought or sold quickly.

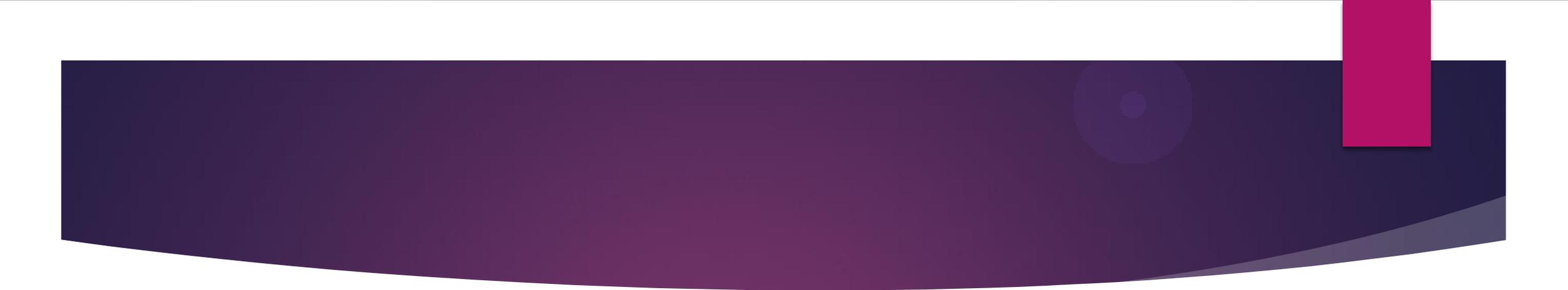
- ▶ If the buyer fails its payment, the seller may have to borrow funds or liquidate his assets to make up for the shortfall and,
- ▶ if the seller fails its delivery, the buyer may have to borrow the security from a third party.
- ▶ However, the cost of borrowing funds or securities is subject to market liquidity. Thus, one of the counterparties always faces liquidity risk

# Risk Management

- ▶ Since the major risk is the counterparty risk, a number of safeguards are employed to safeguard it:
  - ▶ Membership standards and monitoring program of financial performance
  - ▶ Financial safeguards: position limits, netting, market-market
  - ▶ Guarantee funds
  - ▶ Post-default program.

# SETTLEMENT OF FUNDS

Ragha Ravali

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- ▶ **Funds settlement** refers to the transfer of funds from buyer to seller and the transfer of an asset's title from seller to buyer.

### **Why it Matters?**

- ▶ It reduces market risk by ensuring that trades are executed properly.
- ▶ Increases investor confidence in the markets by ensuring that their trades are completed on time.

# Entities involved in the process

## **NSCCL**

--- Obtains the trade details from the exchange and applies multilateral netting and determines obligations

## **Clearing members/custodians**

---Maintain a dedicated clearing account with one of the designated clearing banks to effect pay-in and pay-out operations.

## Clearing banks

Clearing banks are a key link between the clearing members and Clearing Corporation to effect settlement of funds

- ▶ Every clearing member is required to open a dedicated clearing account with one of the designated clearing banks.
- ▶ Based on the clearing member's obligation as determined through clearing, the clearing member makes funds available in the clearing account for the pay-in and receives funds in case of a pay-out.
- ▶ The funds are paid-in/paid-out on T+2 day to the members' clients' and the settlement is complete in 2 days from the end of the trading day.

# Settlement Cycle

- ▶ Informing Obligations to Clearing Members and Custodians
- ▶ Margin Payment
- ▶ Settlement Dues
- ▶ Non Settlement Dues
- ▶ Failure to Pay Settlement Dues or Non-Settlement Dues or Margin money.

# Informing Obligations to Clearing Members and Custodians:

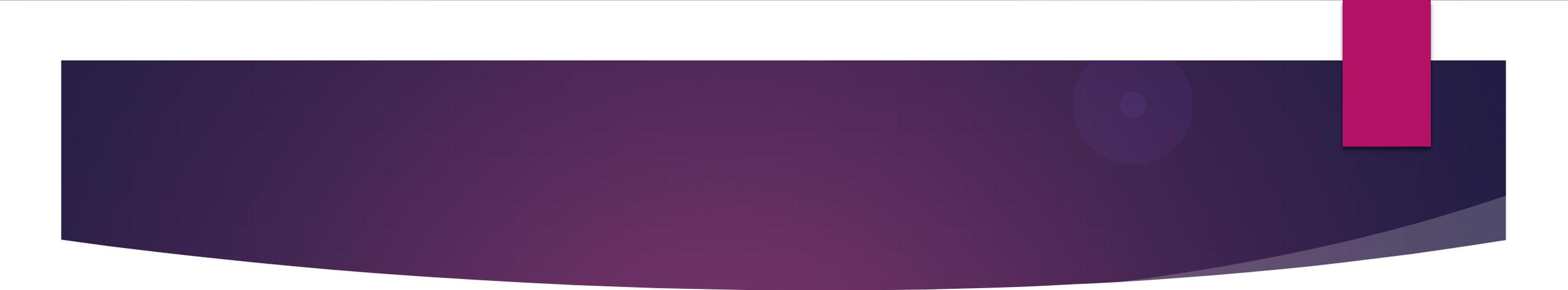
- ▶ The Clearing Agency informs the clearing members/custodians the net fund to pay or to receive in respect of their respective positions specified by the Exchange from time to time in the relevant Regulations.
- ▶ NSCCL determines obligations after receiving the affirmation from the clearing members/custodians.

## **Margin Payment:**

- ▶ The clearing members and custodians, if required, pay to the Clearing Agency the margin money payable by them.
- ▶ The Clearing Agency releases the margin money due to the clearing members and custodians based on the information provided by the Exchange.

## **Settlement Dues:**

- ▶ The clearing members and custodians shall pay to the Clearing Agency the dues for every settlement of their cleared positions.
- ▶ The clearing Agency shall pay to the clearing members and custodians money payable to them for every settlement.



▶ **Non Settlement Dues:**

The clearing members and custodians pay to the Clearing Agency the non-settlement dues which may include fees, charges, fines ,penalties etc.

▶ **Failure to Pay Settlement Dues or Non-Settlement Dues or Margin Money :**

A clearing member, failing to discharge his funds obligations relating to settlement dues, margin money or non-settlement dues at the notified time, render him liable for withdrawal of trading facility or such other actions including disciplinary actions.

# Settlement of Securities in DEMAT

Dinesh Kumar P

## Dematerialization

- ▶ Introduced in India through the enactment of the Depositories Act, 1996.
- ▶ It is not mandatory
- ▶ One may keep its holding partly in physical form and partly in DEMAT form.
- ▶ Although, investors have an alternative to hold securities and settle trades in physical forms, they need a DEMAT account as, in practice almost all trades on stock exchanges are now being settled in DEMAT form only.

## **Need for Dematerialization**

- ▶ Bad deliveries due to signature difference
- ▶ Mistakes in completion of transfer deeds.
- ▶ Tearing and mutilation of securities.
- ▶ Fake certificates
- ▶ Fraudulent interception of certificate in transit.
- ▶ Transfer stamp duty.
- ▶ Extra consumption of time by the companies.
- ▶ Postal delays and charges

## Depository

- ▶ A depository is an organization, which holds the beneficial owner's securities in electronic form ,through a registered Depository Participant.
- ▶ A depository functions somewhat similar to a commercial bank.
- ▶ To avail the services offered by a depository, the investor has to open an account registered through a depository participant.

## Depository participant (DP)

- ▶ An agent of the depository who is authorised to offer depository services to investors.
- ▶ Financial institutions, banks, custodians and stockbrokers complying with the requirements prescribed by SEBI/depositories can be registered as a depository participant.

## DEMAT-participants

- ▶ Investors
- ▶ The issuing company
- ▶ The depository participants
- ▶ The depository
  - NSDL( National Securities Depository Limited)
  - CDSIL( Central Depository of Securities India Limited)

### **If you are a buyer:**

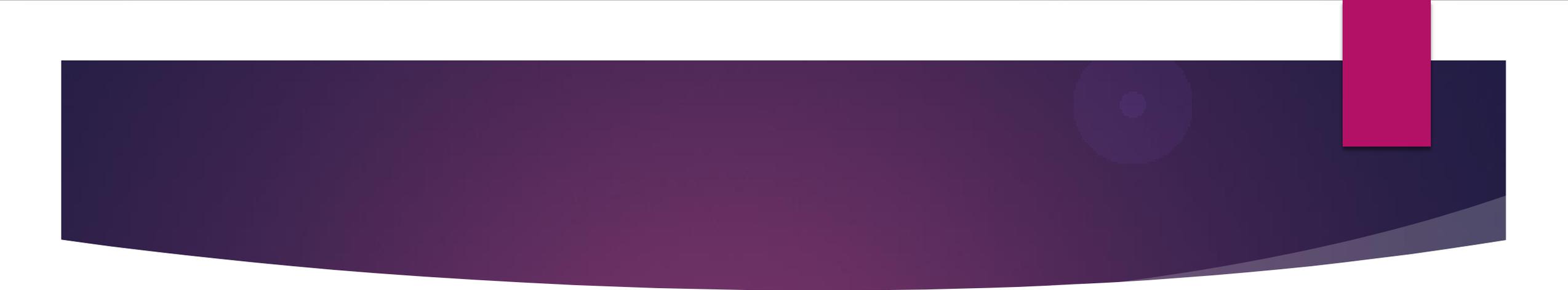
- ▶ Purchase securities in stock exchanges linked to NSDL through a broker and make payment to the broker.
- ▶ Broker arranges payment to the clearing house of the stock exchange.
- ▶ Securities are credited to the broker's clearing account.
- ▶ Broker can directly transfer these securities to your account.
- ▶ Broker gives instructions to your depository participant to debit his clearing account and credit your depository account.
- ▶ Upon your confirmation the securities are credited.

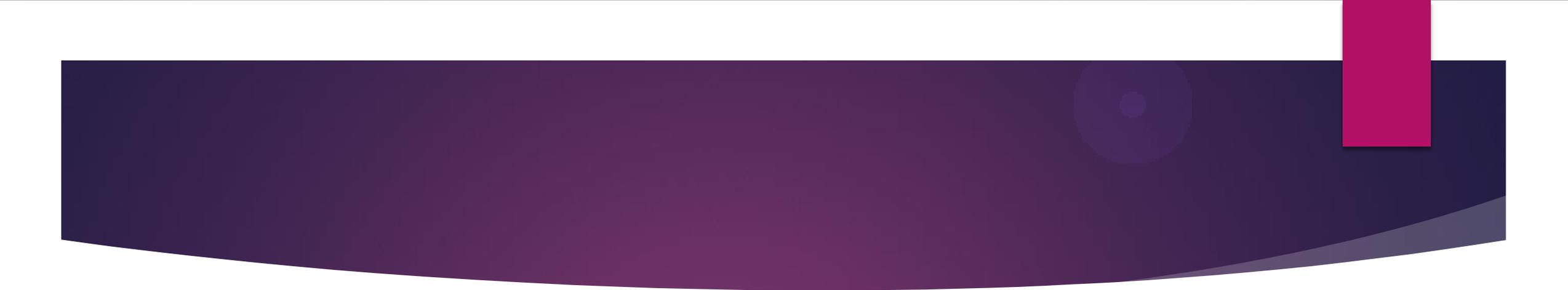
### **If you are seller:**

- ▶ Sell your DEMAT securities in any of the Stock Exchanges linked to NSDL through a broker.
- ▶ You give instructions to your depository participant for debiting your depository account and crediting your broker's clearing account atleast a working day prior to the pay-in date.
- ▶ On pay-in day the broker gives instructions to his depository participant for delivery of securities to the clearing corporation.
- ▶ Broker receives payment from the clearing corporation which is transferred to your account.

# Settlement of Securities in Physical Mode

Vinod Kumar

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- Prior to modern financial market technologies and methods such as depositories and securities held in electronic form, securities settlement had involved the physical movement of paper instruments, or certificates and transfer forms.
  - Physical settlement securities still exist in modern markets today mostly for private securities as opposed to those of publicly traded securities, however, payment of money today is typically made via electronic funds transfer.
  - Physical/paper settlement involves higher risks, in as much as paper instruments, certificates, and transfer forms are subject to risks electronic media are not more or less such as loss, theft, counterfeit, and forgery.

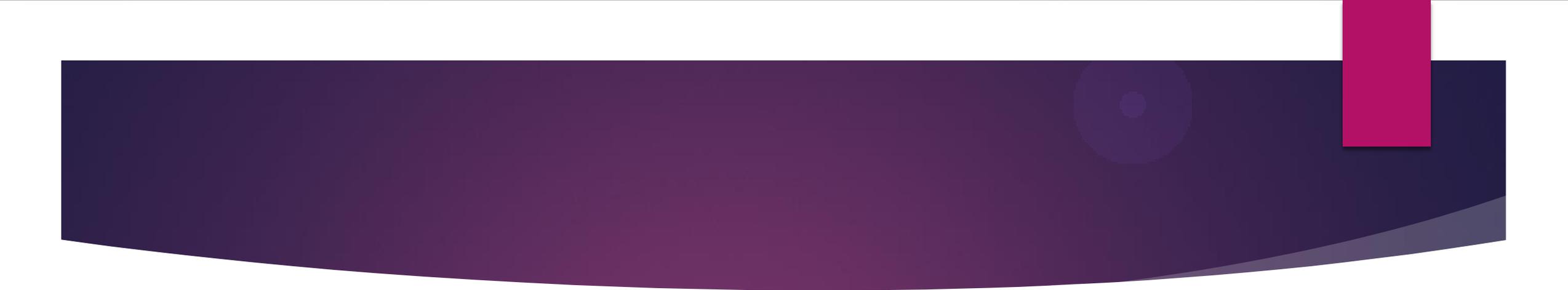


- ▶ Delivery of Securities Not Eligible in Demat Mode

- ▶ Delivery of securities arising out of the transactions done on the Exchange, not eligible to be settled in the demat mode, shall be settled through the Clearing Agency by processes and or procedures, as the Exchange/Clearing Agency may prescribe in the relevant Regulations.

- ▶ Delivery of Documents

- ▶ Delivery of all documents and papers in respect of all the transactions shall be made as prescribed by the Clearing Agency from time to time, and the clearing members and custodians shall be bound to give and take delivery of securities accordingly.

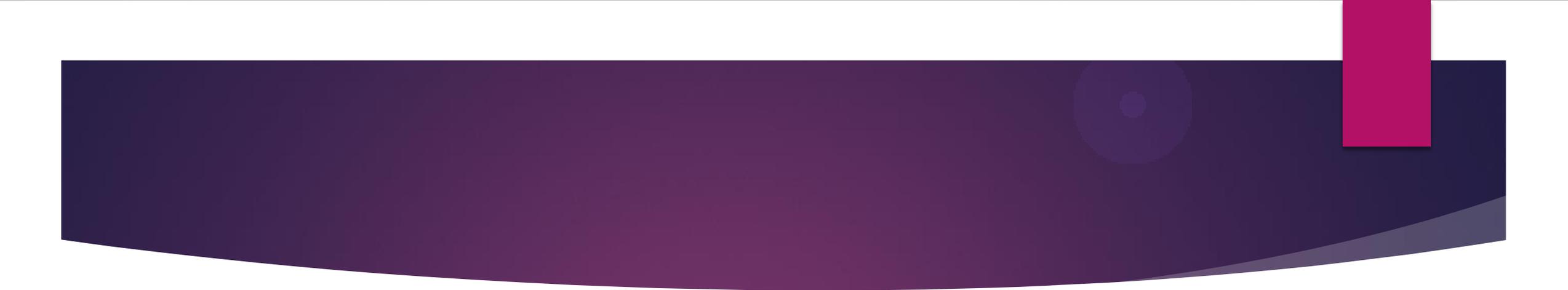


- ▶ Good and Bad Delivery

- ▶ The Exchange or Clearing Agency may specify, taking into consideration the guidelines relating to Good or Bad delivery issued by SEBI, the documents that shall constitute good delivery for performance of settlement obligations by clearing members or custodians.

- ▶ Disputed Documents

- ▶ When documents tendered for delivery in settlement of contracts are considered to be defective in their title, ownership, genuineness, regularity or validity or not in order for any other reason, the disputes shall be resolved through dispute settlement mechanism.



- ▶ Dispute Resolution

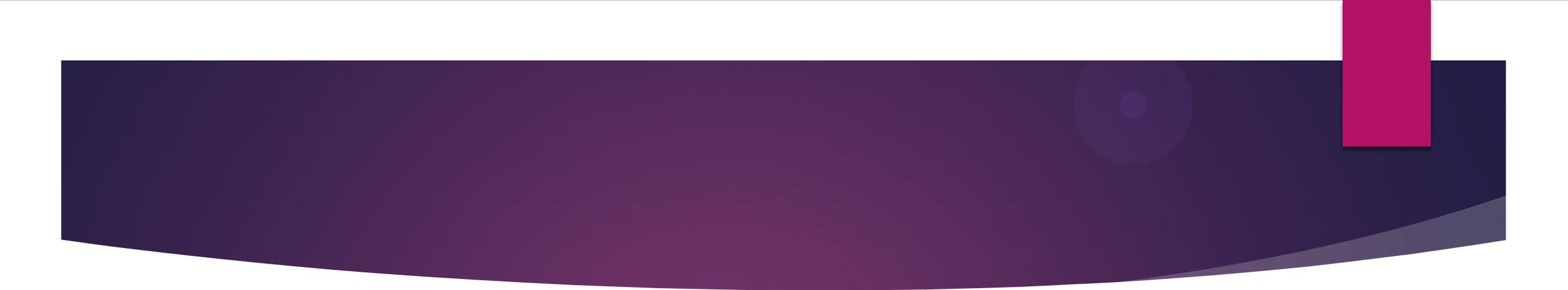
- ▶ If the objection raised or defects pointed out by the buying trading member or the concerned company are not accepted by the selling trading member, a reference may be made by the aggrieved trading member to the Dispute Resolution Committee.

- ▶ Re-consideration of Decision by Disputes Resolution Committee

- ▶ The decision of the Dispute Resolution Committee may be referred back by the Exchange to the Dispute Resolution Committee for its re-consideration.

- ▶ Reference to Arbitration

- ▶ The clearing members, custodians, sub-brokers, authorised persons, participants, authorised users, or clients may make a reference to arbitration, as may be provided in these Bye-laws and Regulations of the Exchange or Clearing Agency.

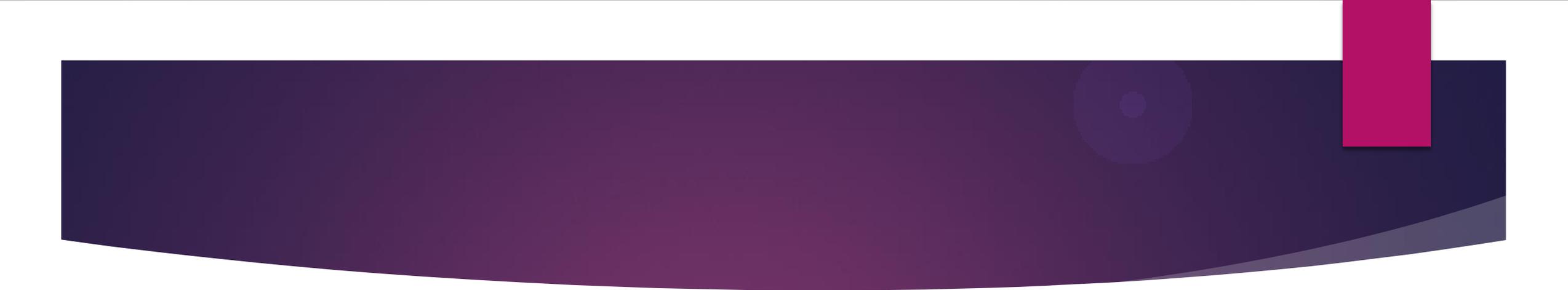
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- ▶ Rights and Liabilities of Trading Members or Clearing Members, Custodians and Their Sub-brokers and Clients
    - ▶ All rights and liabilities of clearing members, trading members and their sub-brokers and clients, and custodians in respect of performance of contracts relating to delivery in physical mode shall be as per the provisions, as may be specified in the relevant regulations.
  
  - ▶ Delivery in Part
    - ▶ The buying trading members shall accept such portion of the securities as may be specified in the delivery orders, provided it is in lots of trading unit.
    - ▶ The Exchange or Managing Director may buy in the undelivered portion on behalf of the buying trading members in accordance with the provisions contained in the Bye-laws and Regulations relating to closing-out.

# Failure in settlement process

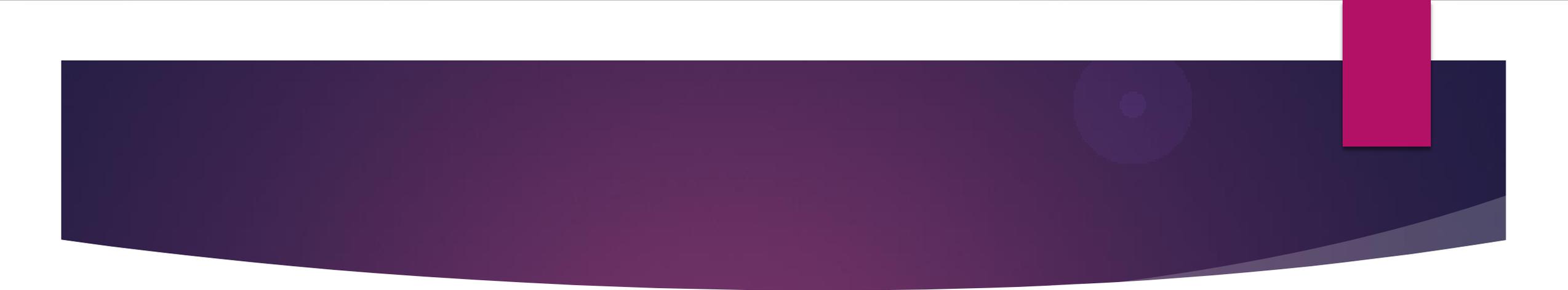
Amandeep  
Singh

# Failure in settlement process

Each market must have **clear rules** assuring investor protection by **safe guarding participants** from the financial risks of a failed settlement and ensuring that listed companies are required to follow sound policies on corporate governance, transfer of economic benefits and shareholder rights

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- ▶ **No trade** executed on the exchanges **fails**. All trades executed on the exchanges are settled by the Clearing Cooperation who provide guarantee of financial settlement.
  - ▶ Failure at the **stage of confirmation** by custodians is insignificant, however, in such cases, the obligation devolve on the broker and the trades are subjected to usual risk containment measures including margins and exposure limits.

- ▶ Failure at **delivery stage** is **less than 0.5%** of delivery.
- ▶ The Clearing Cooperation identifies the short deliveries and **debits** the Clearing Member on the pay-out day by an amount equivalent to the securities **not delivered**, and **valued at the closing price** on the settlement day.
- ▶ This is known as **valuation debit**.
- ▶ For short deliveries NSCCL conducts a **buying-in auction** on the **T+2 day**, after completion of the pay-out, through the NSE trading system.

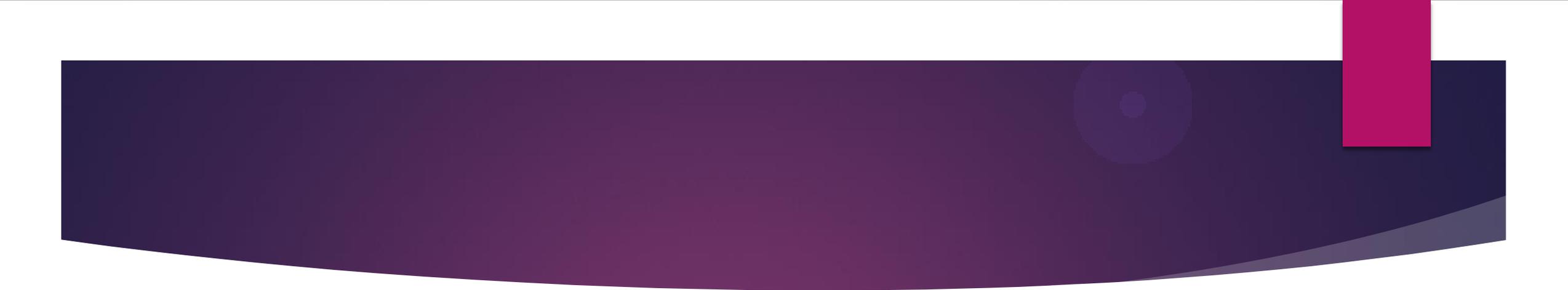
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- ▶ If the buy-in auction price is more than the valuation price, the Clearing Member is liable for the difference
  - ▶ If the buy-in auction price is less than the valuation price, the difference is credited to the **Investor Protection Fund** and not passed on to defaulting broker.
  - ▶ All shortages not bought-in are deemed **closed out**.

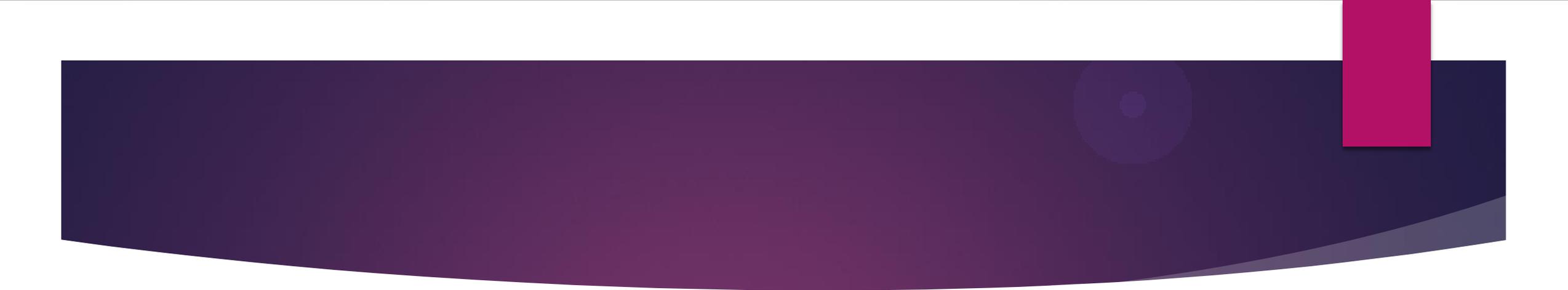
# Conclusion

Sayeeda Afreen

# Overview of process:

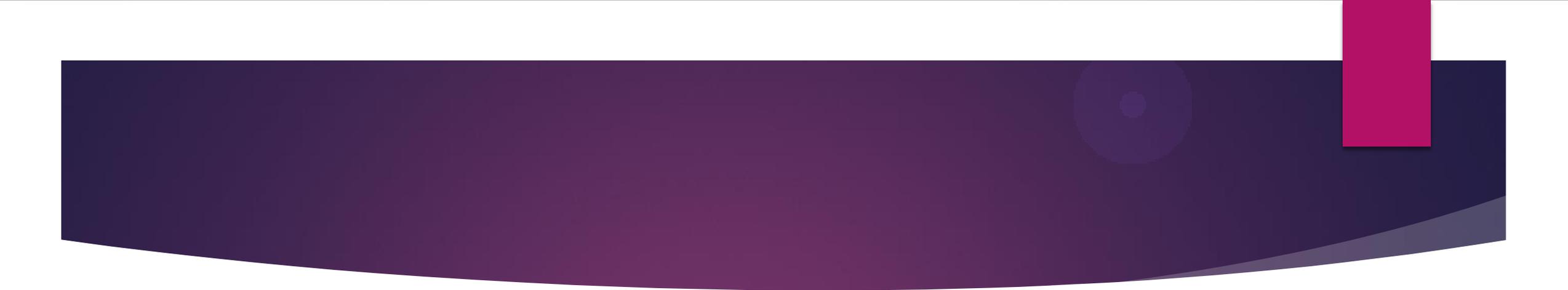
- ▶ (1) Trade details from Exchange to NSCCL (real-time and end of day trade file).
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- ▶ (4) Instructions to clearing banks to make funds available by pay-in time.

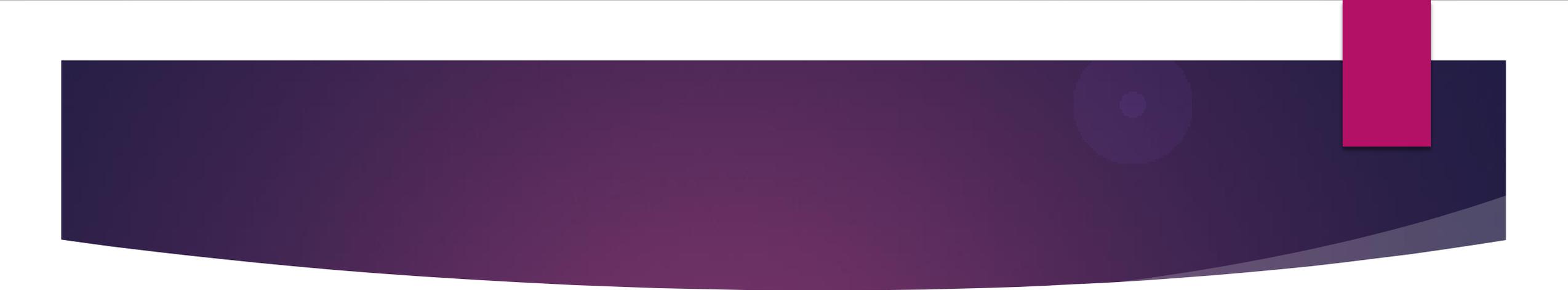
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- ▶ (5) Instructions to depositories to make securities available by pay-in-time
  - ▶ (6) Pay-in of securities (NSCCL advises depository to debit pool account of custodians/CMs and credit its account and depository does it).
  - ▶ (7) Pay-in of funds (NSCCL advises Clearing Banks to debit account of custodians/CMs and credit its account and clearing bank does it).
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  - ▶ (10) Depository informs custodians/CMs through DPs.
  - ▶ (11) Clearing Banks inform custodians/CMs.

# Process in India:

- ▶ The clearing and settlement mechanism in Indian security markets has witnessed significant changes and several innovations during last decade.
- ▶ T+2 rolling settlement has now been introduced to all securities .The members receive their funds/securities in accordance with the pay-in/pay-out schedules notified by the respective exchanges.

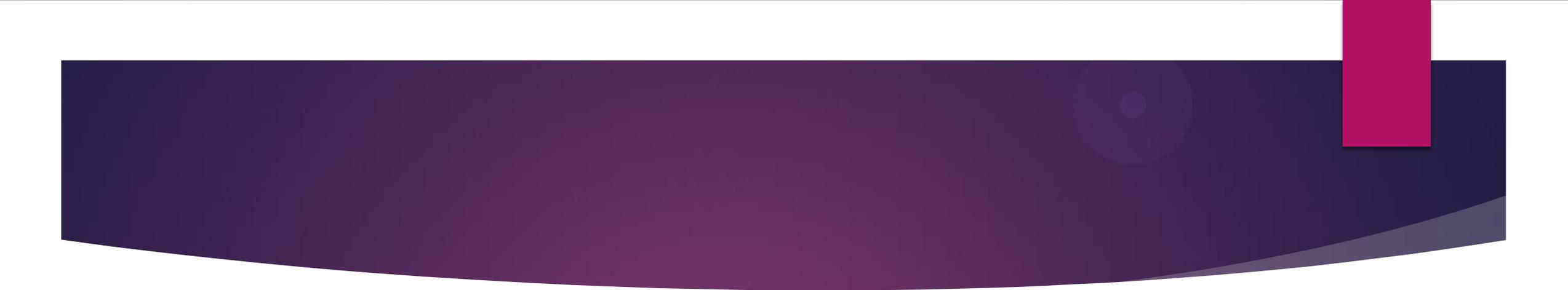
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- ▶ The obligations of members are downloaded to members/custodians by the clearing agency.
  - ▶ The members/custodians make available the required securities in their pool account with depository participants(DPs) by the prescribed pay-in time for securities.
  - ▶ The depository transfers the securities from the pool accounts of members/custodians to the settlement account of the clearing agency .

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- ▶ The securities are transferred on the pay-out day by the depository from the settlement account of the clearing agency to the pool accounts of members/custodians.

# Settlement cycles in major countries:

Settlement Cycle	Major Countries
T+0	Chile, Israel, Saudi Arabia
T+1	China
T+2	Egypt, Germany, Hong Kong, India, Jordan, Korea, Russia, Taiwan, Turkey
T+3	Canada, US, UK, Ireland, France, Netherlands, Belgium, Austria, Denmark, Finland , Italy
T+5	South Africa

Source: Aite Group



Thank You