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Different order life-cycles

Two-side retail order scenario

1- Imagine that ten retail clients want to trade in an equity market. Four of them are sellers, and six of them are buyers. Each buyer wants to buy 2000 equities with a price of 20 dollars for each equity. Each seller wants to sell 3000 equities with a price of 20 dollars for each equity. They make their orders with the following sequence:

seller1 -> seller2-> buyer1 -> buyer2 -> buyer3 -> seller3 -> seller4-> buyer4 -> buyer5 -> buyer6
The initial balances of the retail clients' clearing bank and demat accounts are as follows:

Side	Bank account balance
Seller1	0
Seller2	0
Buyer1	4000
Buyer2	4000
Buyer3	4000
Seller3	0
Seller4	0
Buyer4	400
Buyer5	4000
Buyer6	4000

Side	Demat account balance
Seller1	3000
Seller2	3000
Buyer1	0
Buyer2	0
Buyer3	0
Seller3	3000
Seller4	3000
Buyer4	0
Buyer5	0
Buyer6	0

2- Orders are created by the seller and buyer retail clients and then submitted to a broker. If each order passes all checks, it is routed from the broker to an exchange.

3-After processing orders in the exchange, eight trades, which are pairs of buy and sell orders, have been created. The trades with their quantities are as follows:

Side	Quantity
Seller1	2000
Seller1	1000
Seller2	1000
Seller2	2000
Seller3	2000
Seller3	1000
Seller4	1000
Seller4	2000

Side	Quantity
Buyer1	2000
Buyer2	1000
Buyer2	1000
Buyer3	2000
Buyer4	2000
Buyer5	1000
Buyer5	1000
Buyer6	2000

4-Trades are settled in a clearing corporation.

5-The results of the trade settlement stage are sent from the exchange to the broker.

6-The monetary and equity-related obligations of the broker are discharged against its retail clients. After doing so, the buyers have their equities, and sellers have their money. Both sides' balances are as follows:

Side	Bank account balance
Seller1	60000
Seller2	60000
Buyer1	0
Buyer2	0
Buyer3	0
Seller3	60000
Seller4	60000
Buyer4	0
Buyer5	0
Buyer6	0

Side	Demat account balance
Seller1	0
Seller2	0
Buyer1	2000
Buyer2	2000
Buyer3	2000
Seller3	0
Seller4	0
Buyer4	2000
Buyer5	2000
Buyer6	2000

One-side institutional order scenario

1- Imagine that five retail clients and an institutional client want to trade in an equity market. Five retail clients are sellers, and the institutional client is a buyer. The institutional client wants to buy 1000 equities with a price of 20 dollars for each equity. Each retail seller wants to sell 200 equities with a price of 20 dollars for each equity. they make their orders with the following sequence:

retail seller1 -> retail seller2 -> retail seller3 -> retail seller4 -> retail seller5 -> institutional buyer1

The initial balances of all clients' clearing bank and demat accounts are as follows:

Side	Bank account balance
Retail seller 1	0
Retail seller 2	0
Retail seller 3	0
Retail seller 4	0
Retail seller 5	0
Institutional buyer 1	20000

Side	Demat account balance
Retail seller 1	200
Retail seller 2	200
Retail seller 3	200
Retail seller 4	200
Retail seller 5	200
Institutional buyer 1	0

2- Orders are created by the seller and buyer clients and then submitted to a broker. If each order passes all checks, it is routed from the broker to an exchange.

3- The institutional client deposits the required money for the trades settlement stage with a custodian.

4-After processing orders in the exchange, five trades, which are pairs of buy and sell orders, have been created. The trades with their quantities are as follows:

Side	Quantity
Retail seller 1	200
Retail seller 2	200
Retail seller 3	200
Retail seller 4	200
Retail seller 5	200

Side	Quantity
Institutional buyer 1	200
Institutional buyer 1	200
Institutional buyer 1	200
Institutional buyer 1	200
Institutional buyer 1	200

5- Next, trades are sent from the exchange to the broker of the buyer and seller sides.

6- At this stage, the institutional client can see the result of conducting trades.

7- After conducting trades, the institutional client decides to allocate its trades to ten retail clients. Since they have paid the institutional client the costs of buying equities beforehand, they do not need to pay any extra money. The initial balances of the ten retail buyers' clearing bank and demat accounts are as follows:

Side	Bank account balance
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0

Side	Demat account balance
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0

Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0
Allocation detail retail buyer 8	0
Allocation detail retail buyer 9	0
Allocation detail retail buyer 10	0

Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0
Allocation detail retail buyer 8	0
Allocation detail retail buyer 9	0
Allocation detail retail buyer 10	0

8- The institutional client submits allocations details to both its broker and custodian.

9- The broker of the institutional client generates some contracts based on the allocation details and send them to the custodian of the institutional client.

Side	Bank account balance
Retail Seller 1	100
Retail Seller 1	100
Retail Seller 2	100
Retail Seller 2	100
Retail Seller 3	100
Retail Seller 3	100
Retail Seller 4	100
Retail Seller 4	100
Retail Seller 5	100
Retail Seller 5	100

Side	Demat account balance
Allocation detail retail buyer 1	100
Allocation detail retail buyer 2	100
Allocation detail retail buyer 3	100
Allocation detail retail buyer 4	100
Allocation detail retail buyer 5	100
Allocation detail retail buyer 6	100
Allocation detail retail buyer 7	100
Allocation detail retail buyer 8	100
Allocation detail retail buyer 9	100
Allocation detail retail buyer 10	100

10- The custodian affirms the correct contracts and sends the analysis result to the broker.

11- The broker converts the affirmed contracts to trades and send them to the custodian.

12- Since, from this point onward, the custodian is totally responsible for settling trades, the custodian submits the trades to the clearing corporation for settlement.

13- The clearing corporation settles the received trades. After settlement, the clearing corporation sends the settlement result to both the buy-side custodian and the exchange.

14- The exchange sends the settlement result to the sell-side broker.

15- The monetary and equity-related obligations of the broker and custodian are discharged against their clients. After doing so, the buyers have their equities, and sellers have their money. Both sides' balances are as follows:

Side	Bank Account balance
Retail seller 1	2000
Retail seller 1	2000

Side	Demat Account balance
Retail seller 1	0
Retail seller 1	0

Retail seller 2	2000
Retail seller 2	2000
Retail seller 3	2000
Retail seller 3	2000
Retail seller 4	2000
Retail seller 4	2000
Retail seller 5	2000
Retail seller 5	2000
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0
Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0
Allocation detail retail buyer 8	0
Allocation detail retail buyer 9	0
Allocation detail retail buyer 10	0

Retail seller 2	0
Retail seller 2	0
Retail seller 3	0
Retail seller 3	0
Retail seller 4	0
Retail seller 4	0
Retail seller 5	0
Retail seller 5	0
Allocation detail retail buyer 1	100
Allocation detail retail buyer 2	100
Allocation detail retail buyer 3	100
Allocation detail retail buyer 4	100
Allocation detail retail buyer 5	100
Allocation detail retail buyer 6	100
Allocation detail retail buyer 7	100
Allocation detail retail buyer 8	100
Allocation detail retail buyer 9	100
Allocation detail retail buyer 10	100

Two-side institutional order scenario

1- Imagine that two institutional clients want to trade in an equity market. One institutional client is the seller, and the other is a buyer. The institutional buyer wants to buy 1500 equities with a price of 20 dollars for each equity. The institutional seller wants to sell 1500 equities with a price of 20 dollars for each equity. they make their orders with the following sequence:

institutional seller -> institutional buyer

The initial balances of institutional clients' clearing bank and demat accounts are as follows:

Side	Bank account balance
Institutional buyer	30000
Institutional seller	0

Side	Demat account balance
Institutional buyer	0
Institutional seller	1500

2- Orders are created by the seller and buyer institutional clients and then submitted to a broker. If each order passes all checks, it is routed from the broker to an exchange.

3- The buyer institutional client deposits the required money for the trades settlement stage with a custodian.

4- The seller institutional client deposits the required equities for the trades settlement stage with a custodian.

5- After processing orders in the exchange, one trade, which is a pair of buy and sell orders, has been created. The trade with its quantities is as follows:

Side	Quantity
Institutional buyer	1500

Side	Quantity
Institutional seller	1500

6- Next, trades are sent from the exchange to the broker of the buyer and seller sides.

7- Then, the buyer and seller institutional clients can see the result of conducting the trade.

8- After conducting the trade, the buyer institutional client decides to allocate its trade to fifteen clients. Since they have paid the buyer institutional client the costs of buying equities beforehand, they do not need to pay any extra money. The initial balances of the fifteen retail buyers' clearing bank and demat accounts are as follows:

Side	Bank account balance
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0
Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0

Side	Demat account balance
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0
Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0

13- The broker of the seller institutional client generates some contracts based on the allocation details and send them to the custodian of the seller institutional client.

Side	Quantity
Institutional buyer	250
Institutional buyer	250
Institutional buyer	250
Institutional buyer	250
Institutional buyer	250
Institutional buyer	250

Side	Quantity
Allocation detail retail seller 1	250
Allocation detail retail seller 2	250
Allocation detail retail seller 3	250
Allocation detail retail seller 4	250
Allocation detail retail seller 5	250
Allocation detail retail seller 6	250

14- The buy-side custodian affirms the correct contracts and sends the analysis result to the buy-side broker.

15- The sell-side custodian affirms the correct contracts and sends the analysis result to the sell-side broker.

16- The buy-side broker converts the affirmed contracts to trades and send them to the buy-side custodian.

17- The sell-side broker converts the affirmed contracts to trades and send them to the sell-side custodian.

18- Since, from this point onward, the buy-side custodian is partially responsible for settling trades, the buy-side custodian submits the trades to the clearing corporation for settlement.

19- Since, from this point onward, the sell-side custodian is partially responsible for settling trades, the sell-side custodian submits the trades to the clearing corporation for settlement.

20- The clearing corporation matches the received trades from both buyer and seller institutional clients. After successfully matching trades, the clearing corporation settles the matched trades and sends the settlement result to both the buy-side and the sell-side custodians.

Side	Quantity
Allocation detail retail buyer 1	100
Allocation detail retail buyer 2	100
Allocation detail retail buyer 3	50
Allocation detail retail buyer 3	50
Allocation detail retail buyer 4	100
Allocation detail retail buyer 5	100
Allocation detail retail buyer 6	100
Allocation detail retail buyer 7	100
Allocation detail retail buyer 8	50
Allocation detail retail buyer 8	50
Allocation detail retail buyer 9	100
Allocation detail retail buyer 10	100
Allocation detail retail buyer 11	100
Allocation detail retail buyer 12	100
Allocation detail retail buyer 13	50
Allocation detail retail buyer 13	50
Allocation detail retail buyer 14	100
Allocation detail retail buyer 15	100

Side	Quantity
Allocation detail retail seller 1	100
Allocation detail retail seller 1	100
Allocation detail retail seller 1	50
Allocation detail retail seller 2	50
Allocation detail retail seller 2	100
Allocation detail retail seller 2	100
Allocation detail retail seller 3	100
Allocation detail retail seller 3	100
Allocation detail retail seller 3	50
Allocation detail retail seller 4	50
Allocation detail retail seller 4	100
Allocation detail retail seller 4	100
Allocation detail retail seller 5	100
Allocation detail retail seller 5	100
Allocation detail retail seller 5	50
Allocation detail retail seller 6	50
Allocation detail retail seller 6	100
Allocation detail retail seller 6	100

21- The monetary and equity-related obligations of the buy-side and sell-side custodians are discharged against their clients. After doing so, the buyers have their equities, and sellers have their money. Both sides' balances are as follows:

Side	bank account balance
Allocation detail retail buyer 1	0
Allocation detail retail buyer 2	0
Allocation detail retail buyer 3	0
Allocation detail retail buyer 3	0
Allocation detail retail buyer 4	0
Allocation detail retail buyer 5	0
Allocation detail retail buyer 6	0
Allocation detail retail buyer 7	0
Allocation detail retail buyer 8	0
Allocation detail retail buyer 8	0
Allocation detail retail buyer 9	0
Allocation detail retail buyer 10	0
Allocation detail retail buyer 11	0
Allocation detail retail buyer 12	0
Allocation detail retail buyer 13	0
Allocation detail retail buyer 13	0
Allocation detail retail buyer 14	0
Allocation detail retail buyer 15	0
Allocation detail retail seller 1	2000
Allocation detail retail seller 1	2000
Allocation detail retail seller 1	1000
Allocation detail retail seller 2	1000
Allocation detail retail seller 2	2000
Allocation detail retail seller 2	2000
Allocation detail retail seller 3	2000
Allocation detail retail seller 3	2000
Allocation detail retail seller 3	1000
Allocation detail retail seller 4	1000
Allocation detail retail seller 4	2000
Allocation detail retail seller 4	2000
Allocation detail retail seller 5	2000
Allocation detail retail seller 5	2000
Allocation detail retail seller 5	1000
Allocation detail retail seller 6	1000
Allocation detail retail seller 6	2000
Allocation detail retail seller 6	2000

Side	demat account balance
Allocation detail retail buyer 1	100
Allocation detail retail buyer 2	100
Allocation detail retail buyer 3	100
Allocation detail retail buyer 3	100
Allocation detail retail buyer 4	100
Allocation detail retail buyer 5	100
Allocation detail retail buyer 6	100
Allocation detail retail buyer 7	100
Allocation detail retail buyer 8	100
Allocation detail retail buyer 8	100
Allocation detail retail buyer 9	100
Allocation detail retail buyer 10	100
Allocation detail retail buyer 11	100
Allocation detail retail buyer 12	100
Allocation detail retail buyer 13	100
Allocation detail retail buyer 13	100
Allocation detail retail buyer 14	100
Allocation detail retail buyer 15	100
Allocation detail retail seller 1	0
Allocation detail retail seller 1	0
Allocation detail retail seller 1	0
Allocation detail retail seller 2	0
Allocation detail retail seller 2	0
Allocation detail retail seller 2	0
Allocation detail retail seller 3	0
Allocation detail retail seller 3	0
Allocation detail retail seller 3	0
Allocation detail retail seller 4	0
Allocation detail retail seller 4	0
Allocation detail retail seller 4	0
Allocation detail retail seller 5	0
Allocation detail retail seller 5	0
Allocation detail retail seller 5	0
Allocation detail retail seller 6	0
Allocation detail retail seller 6	0
Allocation detail retail seller 6	0