FINANCIAL OPPORTUNITIES FORUM

Today's topic:

# Stock Exchanges: A Toll Bridge to Capital Markets

Upcoming FOFs:

Tuesday, November 18, 2025

Thursday, December 11, 2025

All archives available at: ppfasfof.com


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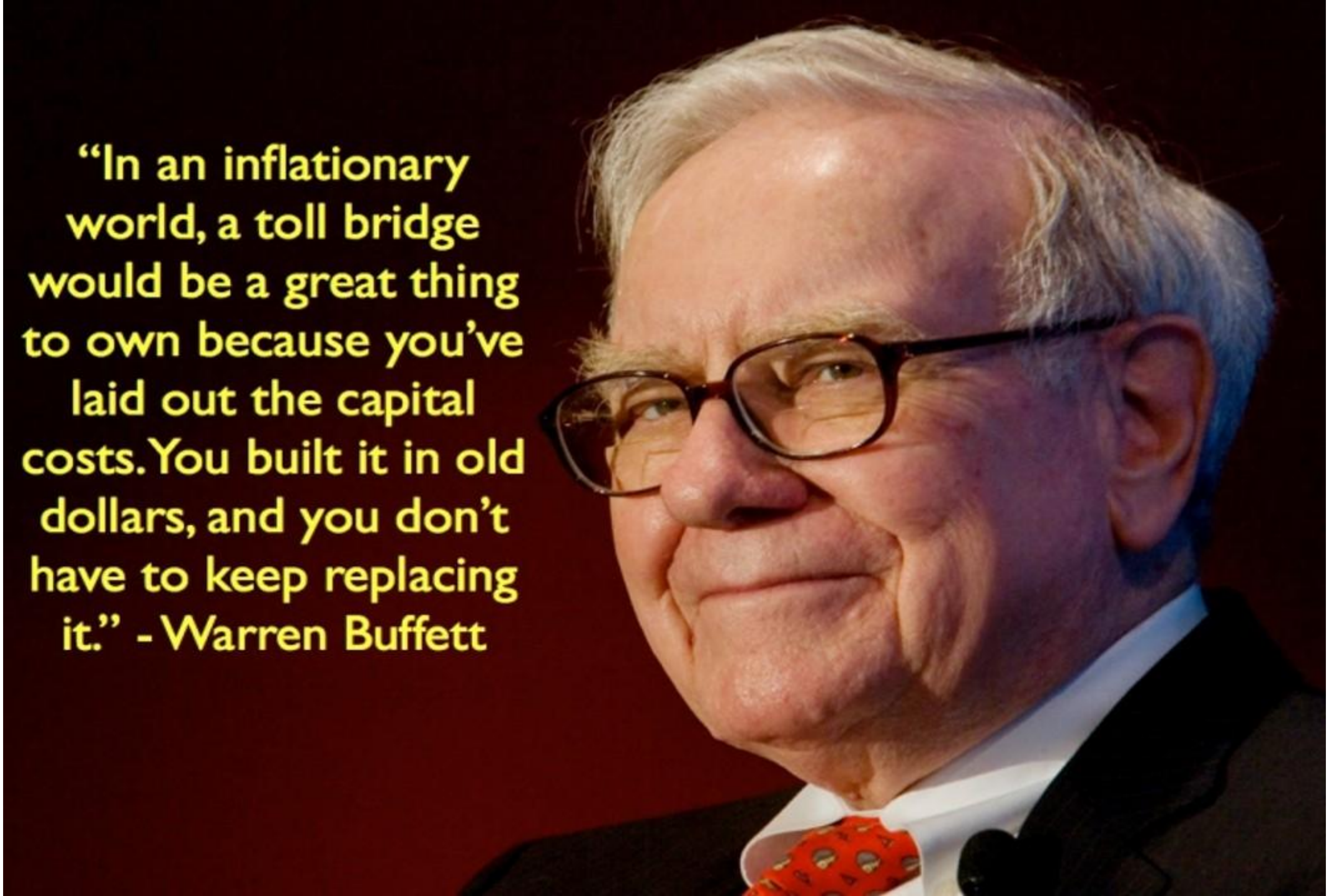

“In an inflationary world, a toll bridge would be a great thing to own because you’ve laid out the capital costs. You built it in old dollars, and you don’t have to keep replacing it.” - Warren Buffett

# I Don't Want to be a Toll Bridge, I Want to be Its Meaning

*Posted on October 21, 2012 by fundooprofessor*


CAPITAL
MARKETS
EXCHANGE FEES

# STOCK EXCHANGES

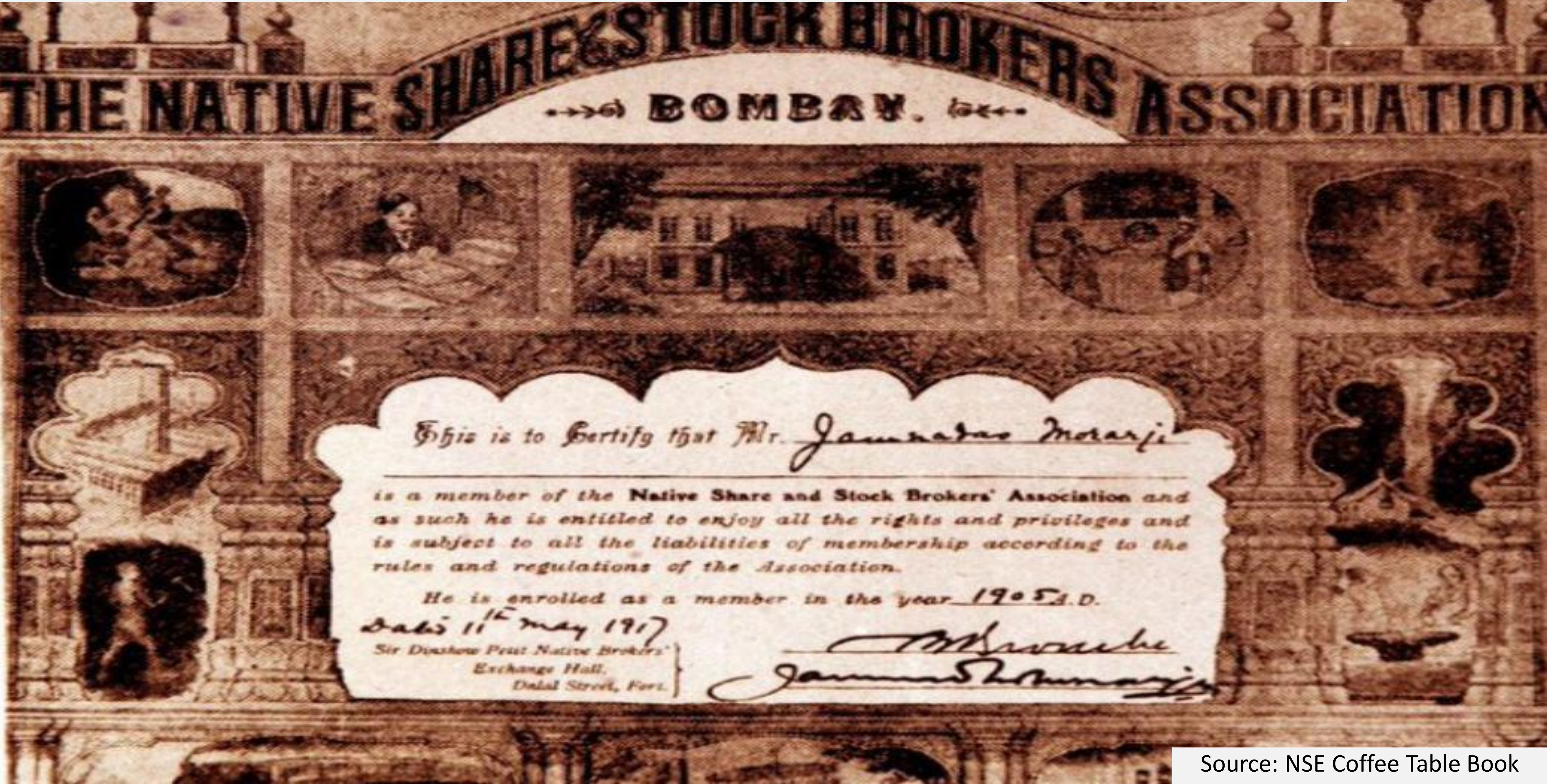
## A Toll Bridge to Capital Markets

# BRIEF HISTORY OF STOCK EXCHANGES

# It all started in **the 1850s** under a Banyan Tree

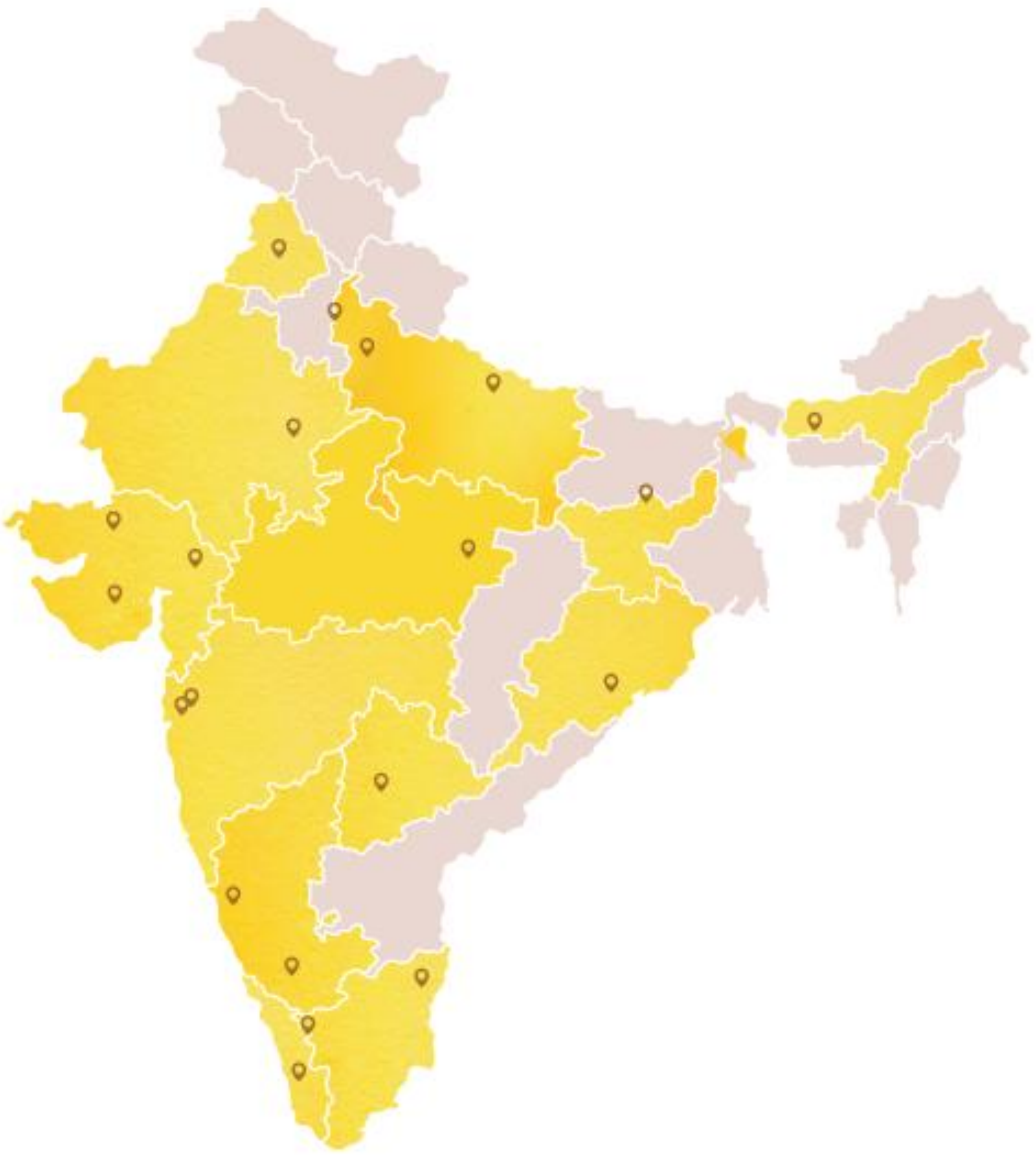
Source: NSE Coffee Table Book

# **1875** - The Native Shares and Stock Brokers' Association




Source: NSE Coffee Table Book

# **Till 1992** - >20 Regional stock exchanges were formed



*Map for representative purposes only*

Source: NSE Coffee Table Book

# The floor trading era – largely inefficient & Manual

# HISTORY OF STOCK EXCHANGES IN INDIA

**1992** – A huge **security scam** broke out

A need for a National and professionally run stock exchange was felt

# **1992-94** - The National Stock Exchange was incorporated


(From left to right): Shri S S Nadkarani, Chairman, SEBI, IDBI and NSE; Shri S H Khan, Chairman, NSE and IDBI; Dr. Manmohan Singh, Finance Minister, India; Dr. C Rangarajan, Governor, RBI and Dr. R H Patil, Founding-Managing Director, NSE, during the inauguration of NSE in 1994.

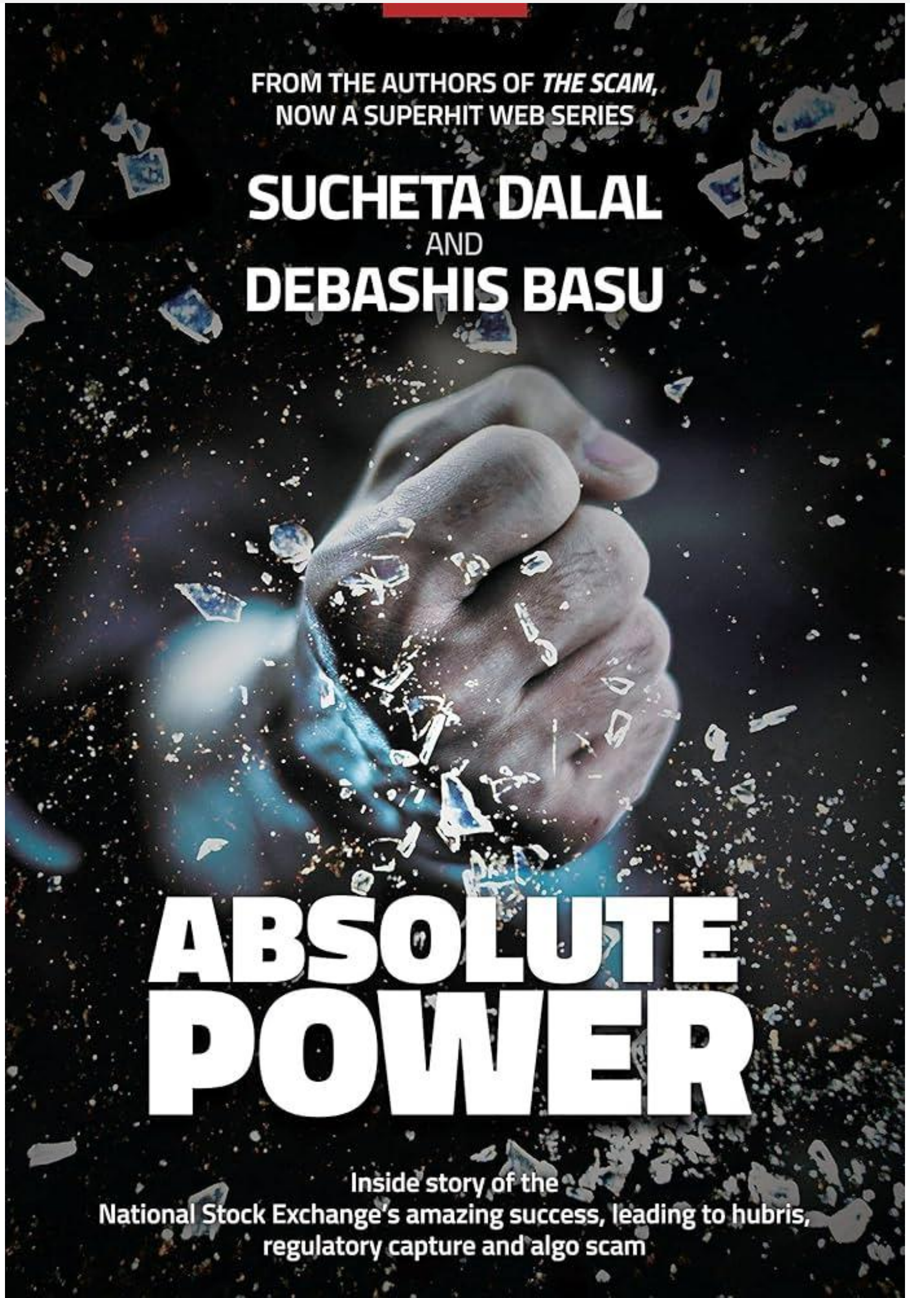
Source: NSE Coffee Table Book

# HISTORY OF STOCK EXCHANGES IN INDIA

- **2000-01** – Introduction of Internet trading and derivatives trading

- **2010 onwards** – Pickup in **Algo trading** and **High Frequency Trading (HFT)**

# **2015** - The colo scam was brought to light by an anonymous letter



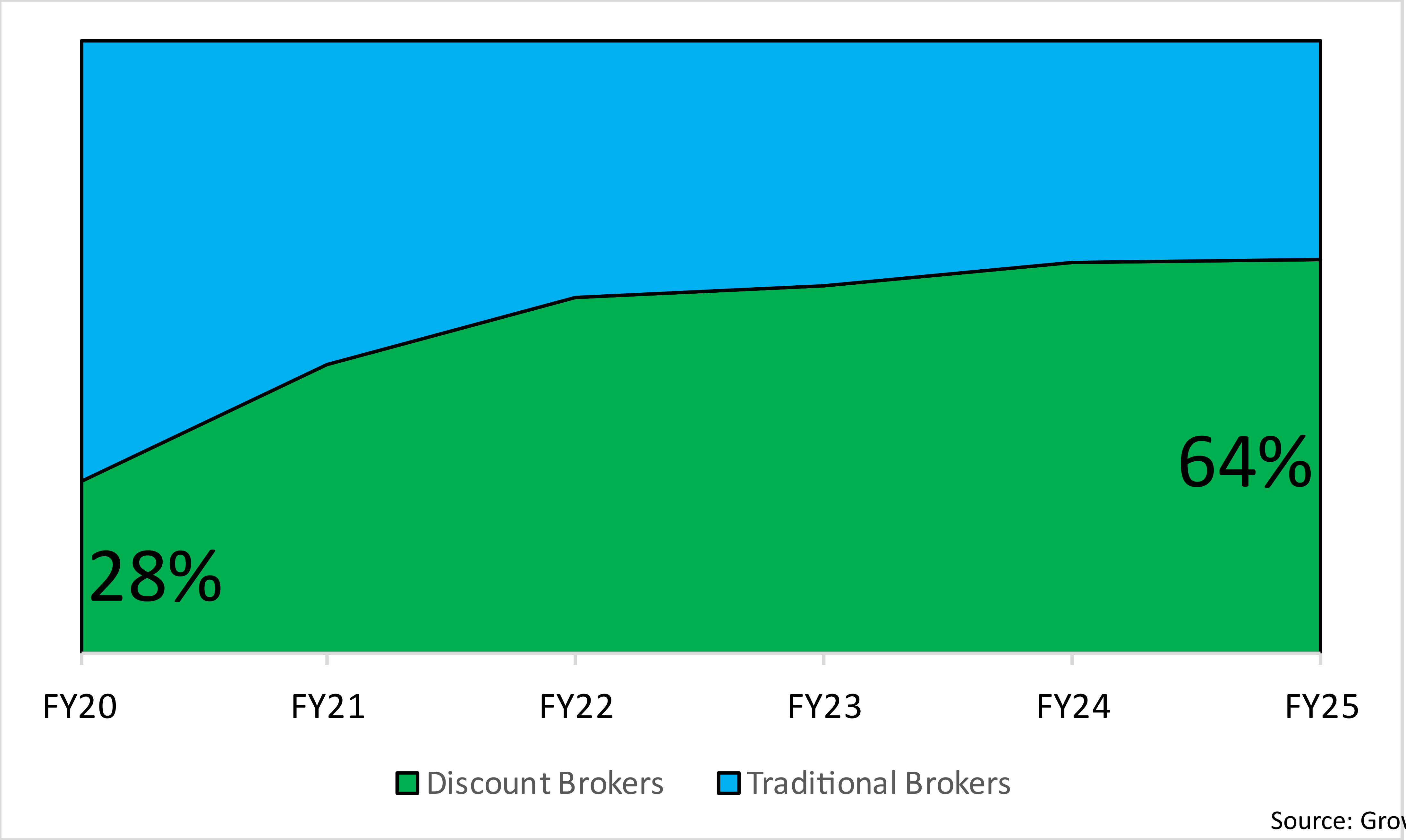
# HISTORY OF STOCK EXCHANGES IN INDIA

- **2016** onwards – Introduction of **Weekly Options**

- **2020** onwards – **Retail Revolution** (an inflection point)

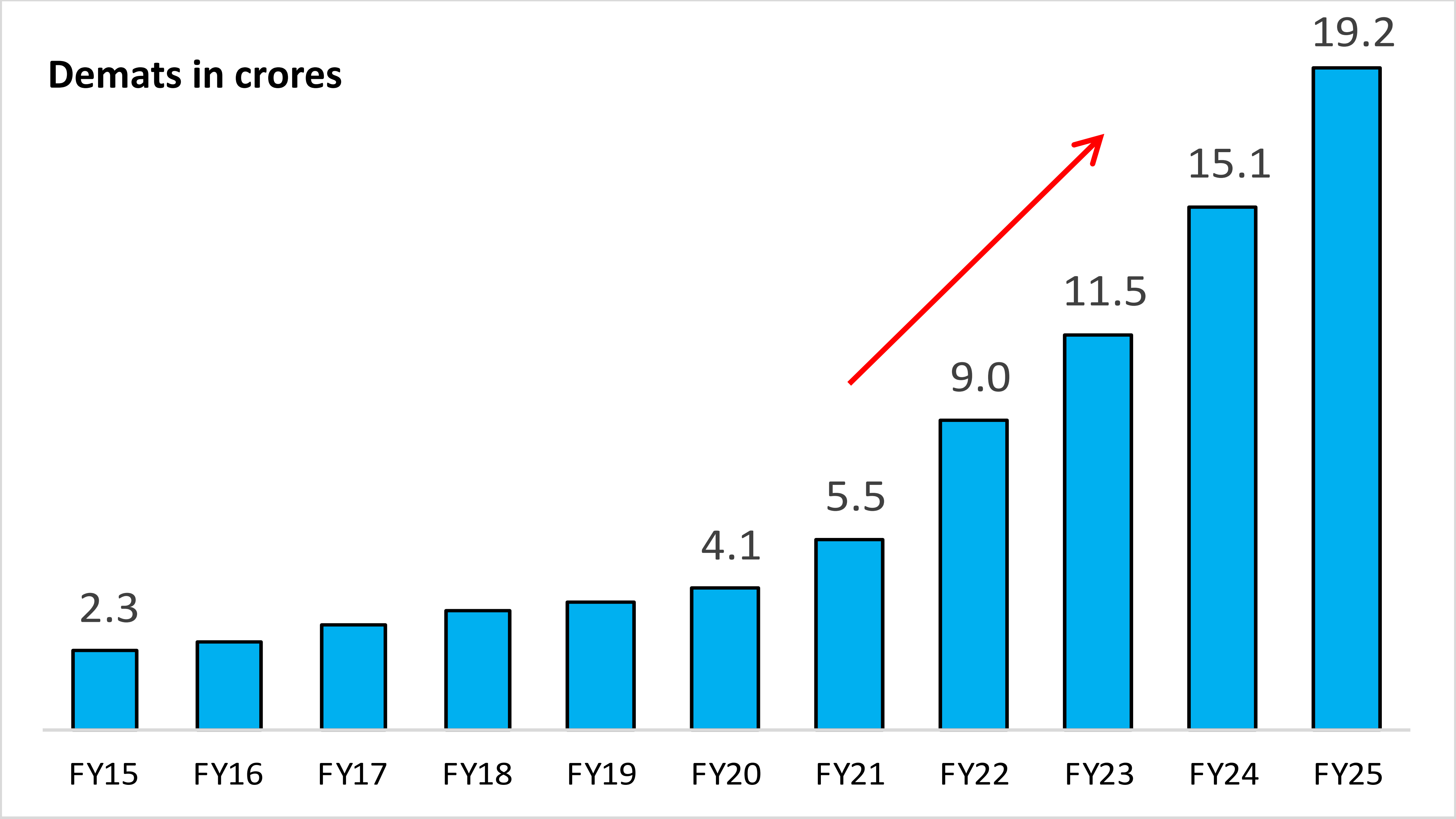
  a. Virtual KYC enabled by SEBI
  b. Discount Brokers
  c. Covid 19 lockdown
  d. Existence of cheap options to trade

# The rise of discount brokers after FY20…




Source: Groww DRHP

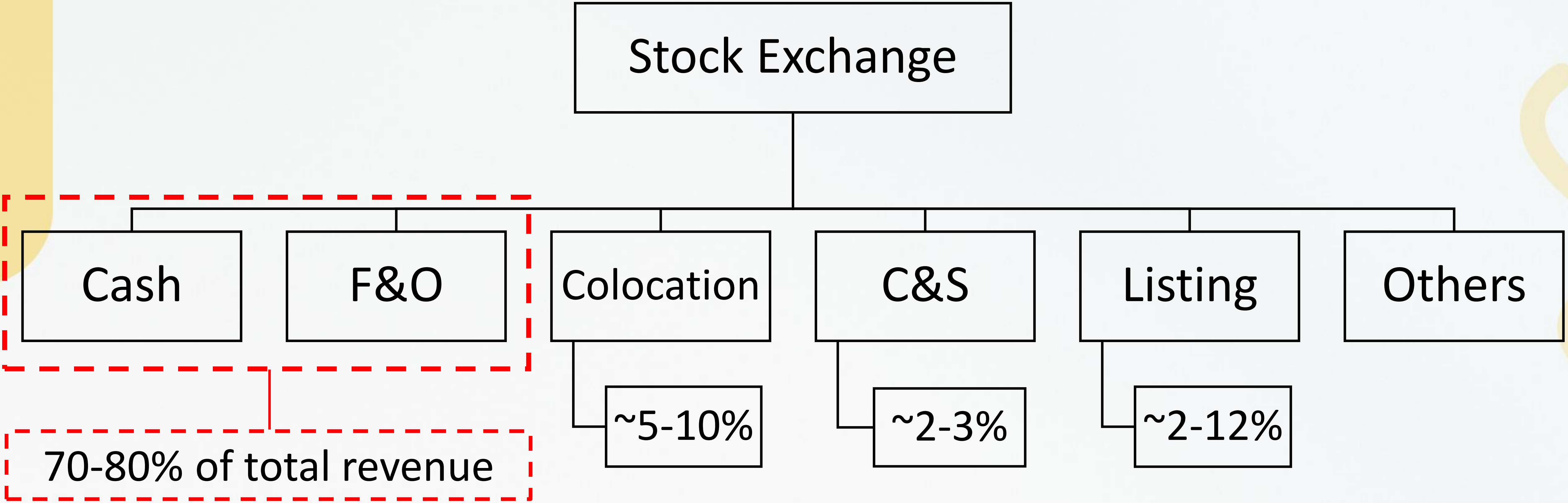
# …coupled with the steep rise in number of demat A/cs




Source: SEBI

# KEY SERVICES

# KEY SERVICES – AN OVERVIEW



# KEY PRODUCTS – KEY TERMS IN OPTIONS

1. Meaning and its different types of underlying, expiries
2. Notional vs Premium (and margins)
3. ADTO
4. Premium to notional ratio (details on the next slide)
5. How exchanges make money? (linked to Premiums)

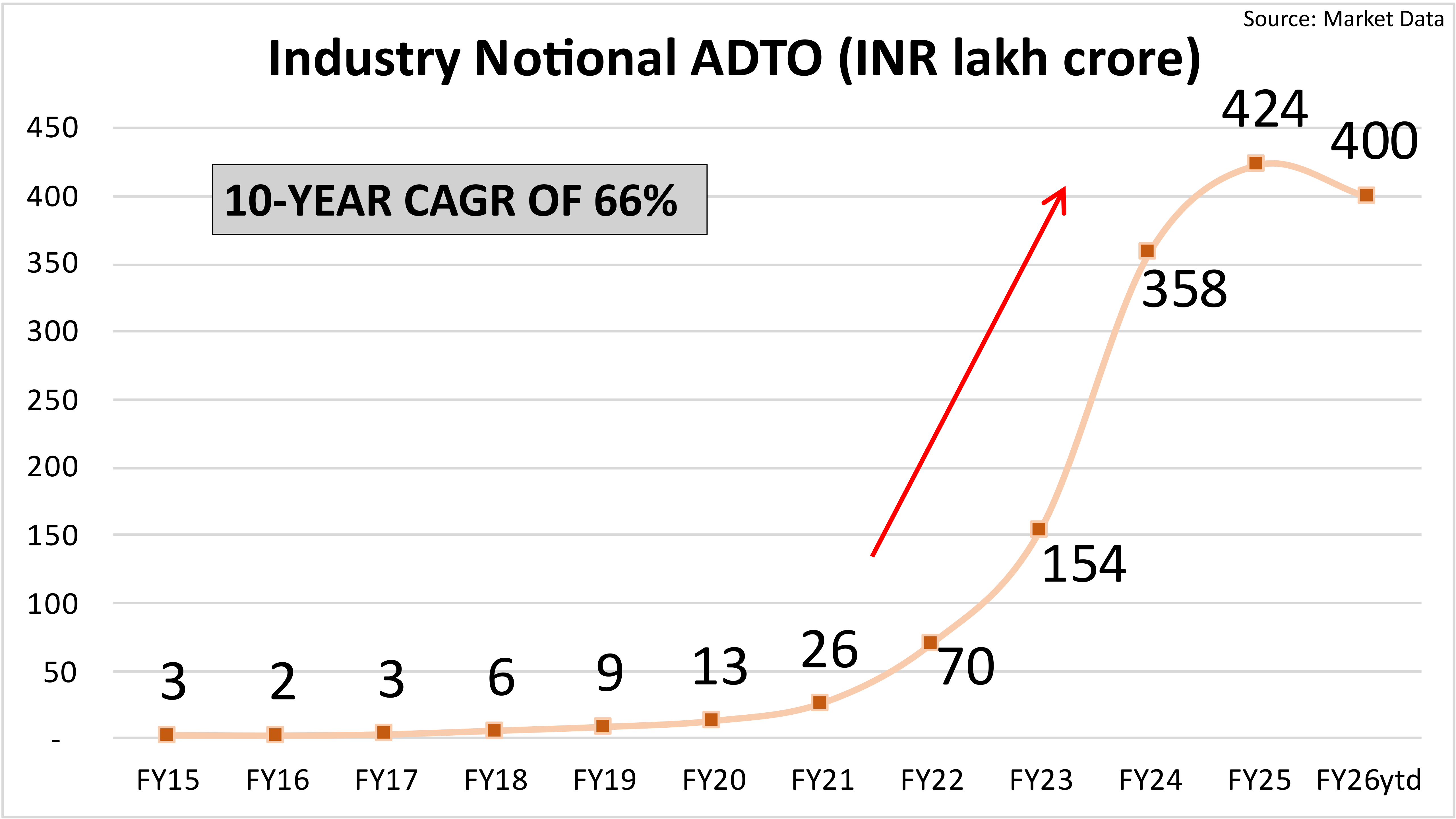
Source: Annual Reports

| Sr No | Market watchlist on 13th October, Mon | | Premium to Notional |
|---|---|---|---|
| 1 | NIFTY 50 (INDEX) | 25,227 | |
| 2 | NIFTY $14^{th}$ OCT CALL OPTION | 87 | ~34 bps<br>(1 day to expiry (DTE)) |
| 3 | TCS (STOCK) | 3,007 | |
| 4 | TCS CALL OPTION (OCT EXPIRY) | 53 | ~176 bps (15 DTE) |
| 5 | TCS CALL OPTION (NOV EXPIRY) | 96 | ~319 bps (43 DTE) |

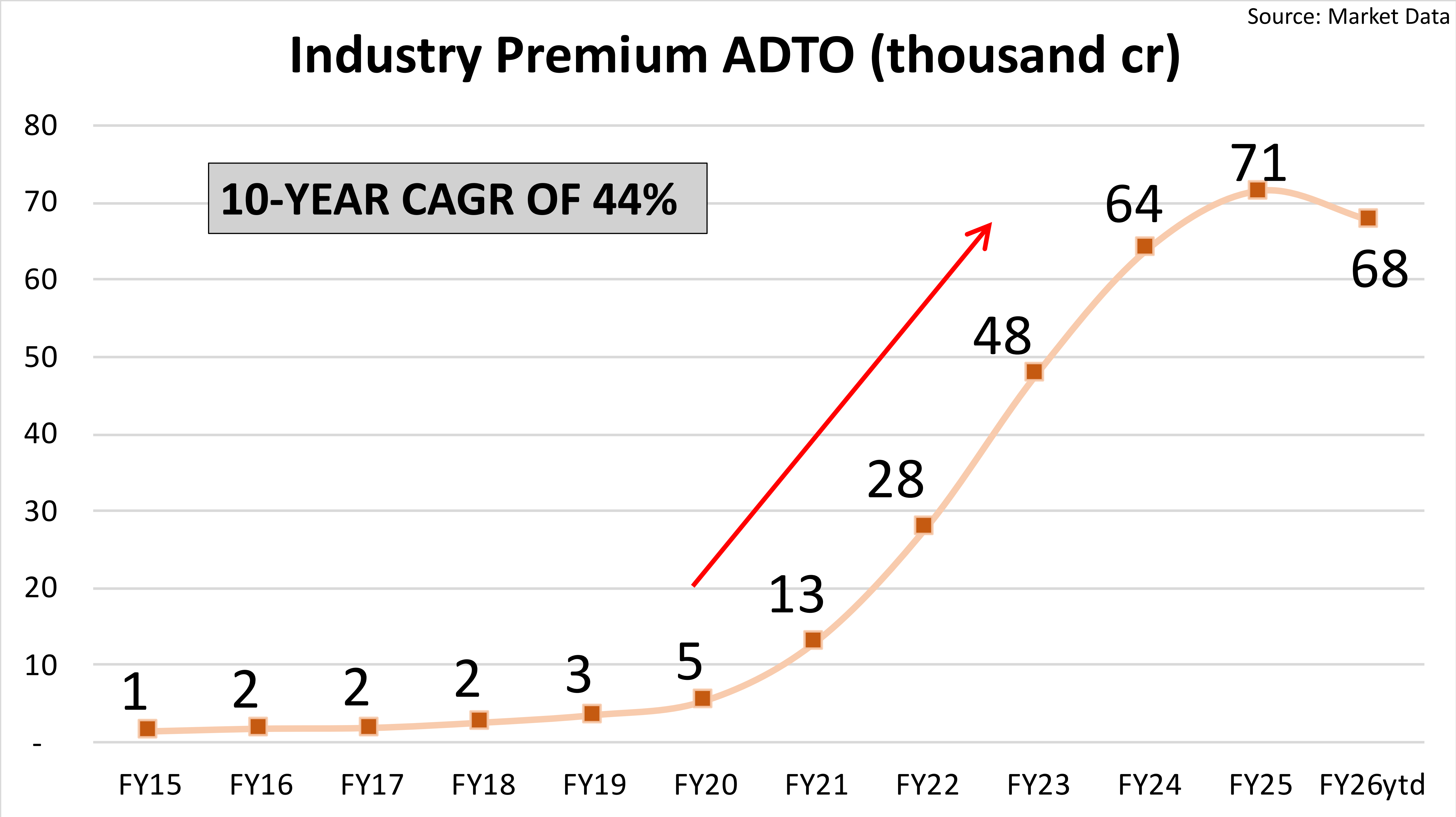
Source: Market Data

# AN EXAMPLE FOR ADTO

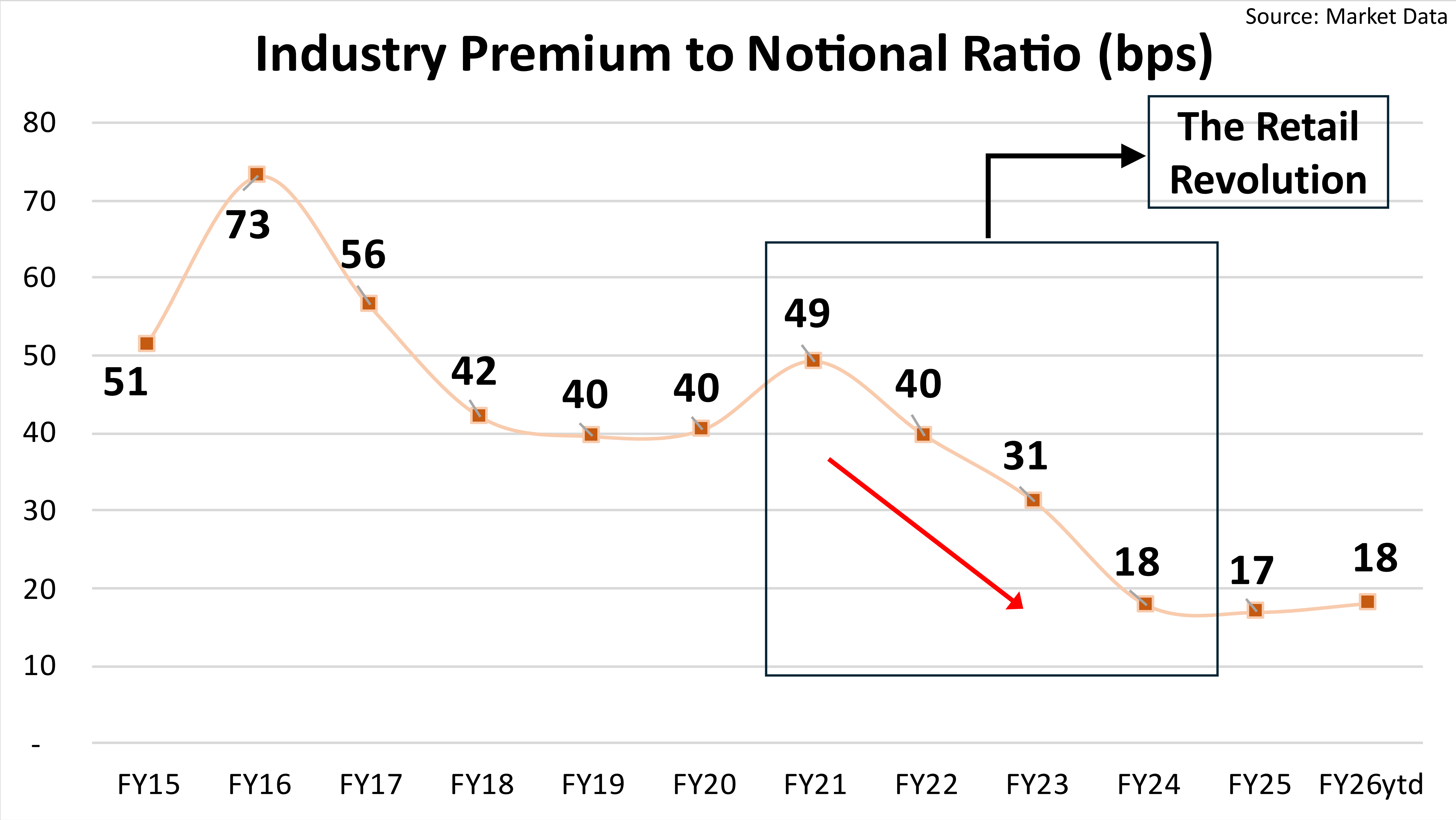
| **Particulars** | **Period A** | **Period B** |
| --- | --- | --- |
| Total Premium | INR 1,000 | INR 1,100 |
| No. of trading days | 10 | 11 |
| | | |
| Premium per day | INR 100 | INR 100 |



Source: Market Data
Industry Notional ADTO (INR lakh crore)
10-YEAR CAGR OF 66%
450
400
350
300
250
200
150
100
50
-
3
2
3
6
9
13
26
70
154
358
424
400
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
FY26ytd

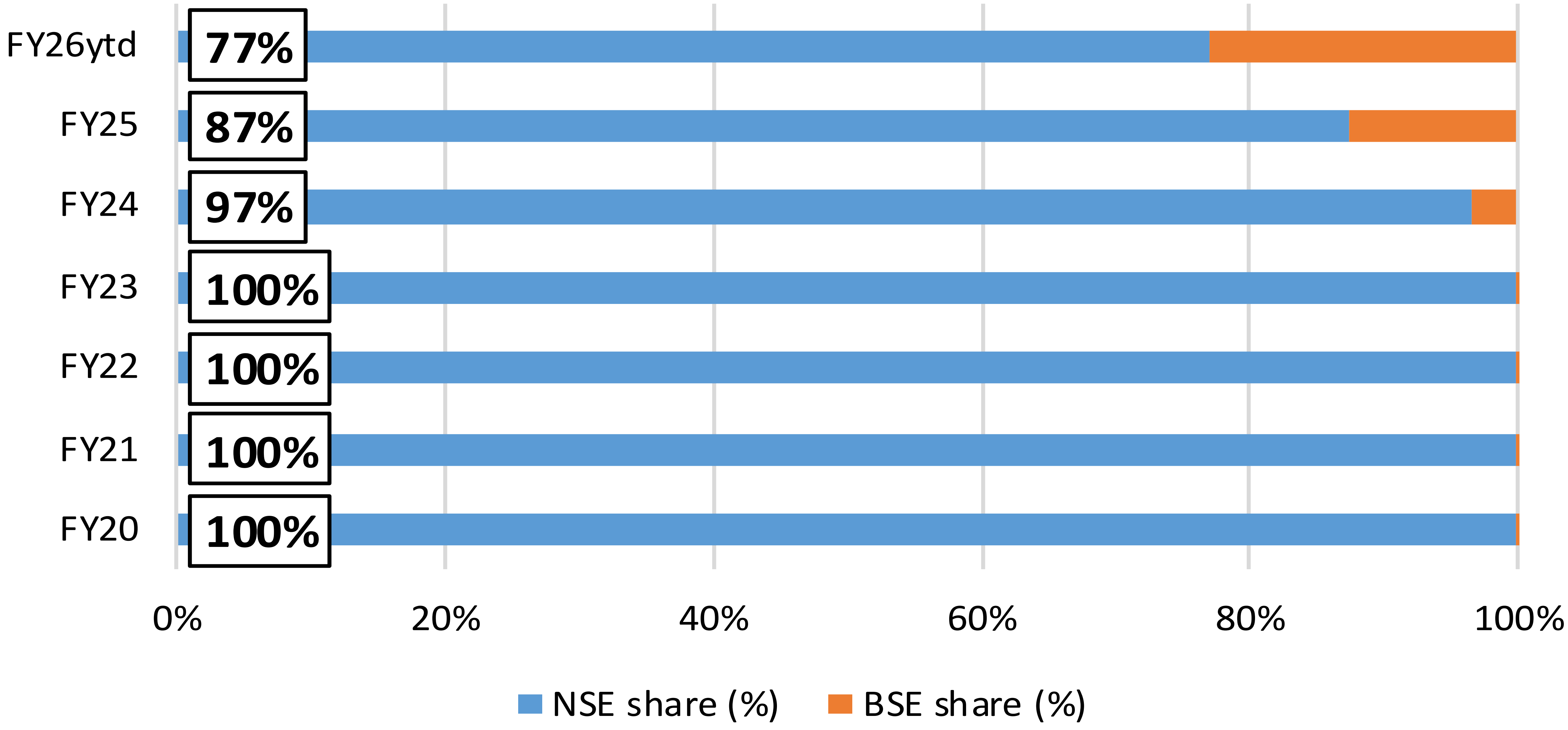


Source: Market Data
Industry Premium ADTO (thousand cr)
10-YEAR CAGR OF 44%
80
70
60
50
40
30
20
10
-
1
2
2
2
3
5
13
28
48
64
71
68
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
FY26ytd



Source: Market Data
Industry Premium to Notional Ratio (bps)
The Retail Revolution
80
70
60
50
40
30
20
10
-
51
73
56
42
40
40
49
40
31
18
17
18
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
FY26ytd

# BSE gained options market share recently




Source: Market Data

# OPTIONS – MAIN PRODUCTS – BEFORE 20-NOV-24

<table>
<tr><th>Exchange</th><th>Option</th><th>Weekly</th><th>Monthly/Qtrly</th></tr>
<tr><td rowspan="4">NSE</td><td>Nifty 50</td><td rowspan="6" colspan="2">✓</td></tr>
<tr><td>Bank Nifty</td></tr>
<tr><td>Nifty Midcap</td></tr>
<tr><td>Fin Nifty</td></tr>
<tr><td rowspan="2">BSE</td><td>Sensex</td></tr>
<tr><td>Bankex</td></tr>
<tr><td>Both</td><td>Stock Options</td><td>X</td><td>✓</td></tr>
</table>

Weekly index options formed ~70% of total industry premiums

Source: Websites

# OPTIONS – MAIN PRODUCTS – AFTER 20-NOV-24

<table>
<tr><th>Exchange</th><th>Option</th><th>Weekly</th><th>Monthly/Qtrly</th></tr>
<tr><td rowspan="4">NSE</td><td>Nifty 50</td><td>✓</td><td rowspan="7">✓</td></tr>
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<tr><td>Bankex</td><td>X</td></tr>
<tr><td>Both</td><td>Stock Options</td><td>X</td></tr>
</table>

Market Concentration depicted on the next slide

Source: Websites


INDUSTRY OPTION PREMIUM (~70k cr ADTO)
NIFTY and SENSEX WEEKLIES (~65-70%)

# OPTIONS – SEBI CIRCULAR DATED 1 OCTOBER 24

1. Upfront collection of Option Premium from buyers
2. Removal of Calendar spread treatment on Expiry Day
3. Intraday monitoring of position limits
4. Contract size (a.k.a. lot size) for index derivatives
5. Rationalization of Weekly Index derivatives products
6. Increase in tail risk coverage on the expiry day

FOF

Source: SEBI

# SEBI's STUDY ON PERFORMANCE OF RETAIL TRADERS

How did individual traders fare in FY24

How did prop traders and FII perform during FY24

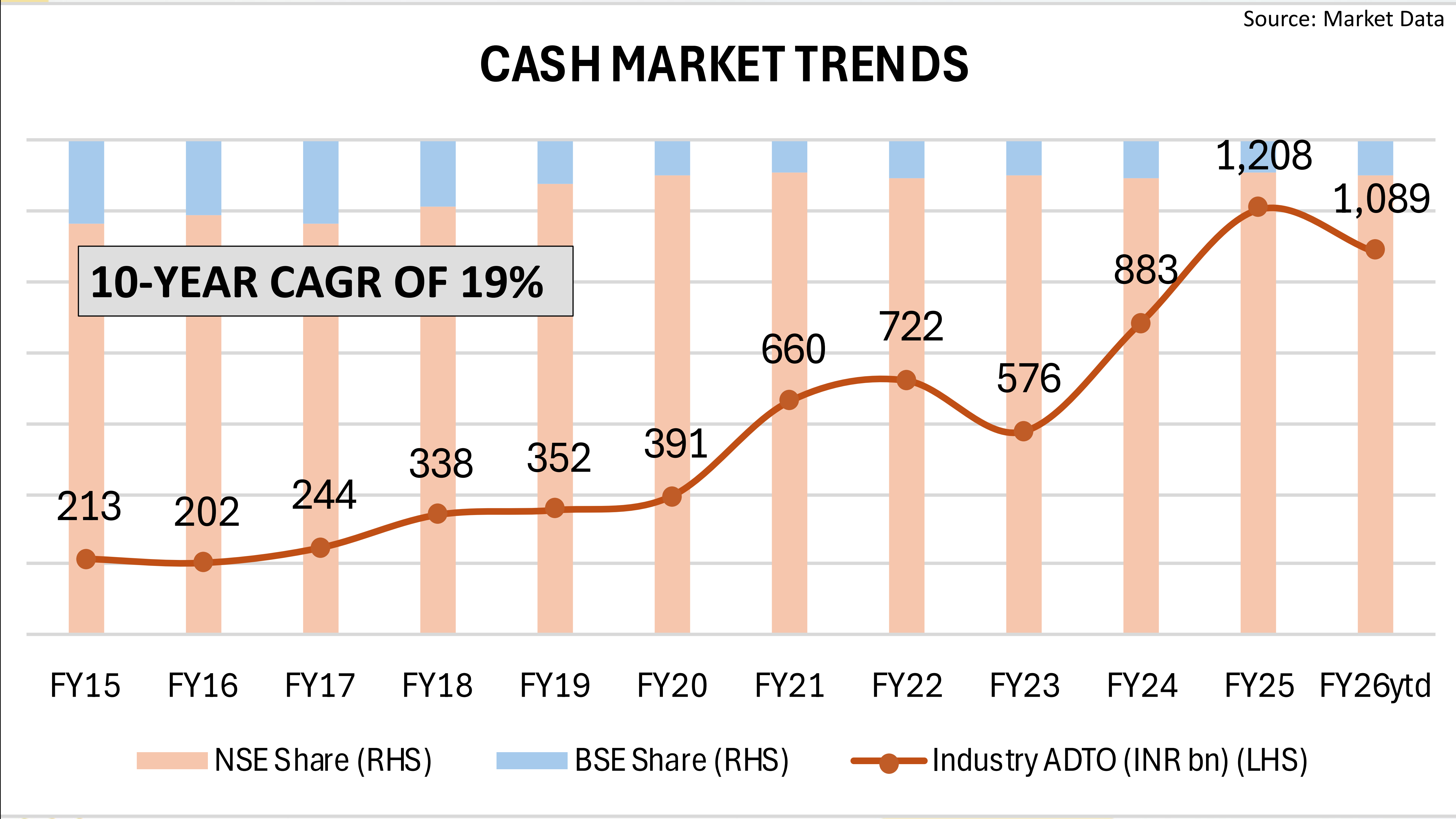
Persistence

Source: SEBI

# KEY PRODUCTS - CASH

1. Meaning
2. How exchanges make money here?
   a. Normal Stocks
   b. Special Stocks (BSE's X and Z Categories)
3. Mutual Fund orders placed via the exchanges
   a. BSE's StAR MF (85% share)
   b. NSE's MFSS (15% share)

Source: Annual Reports

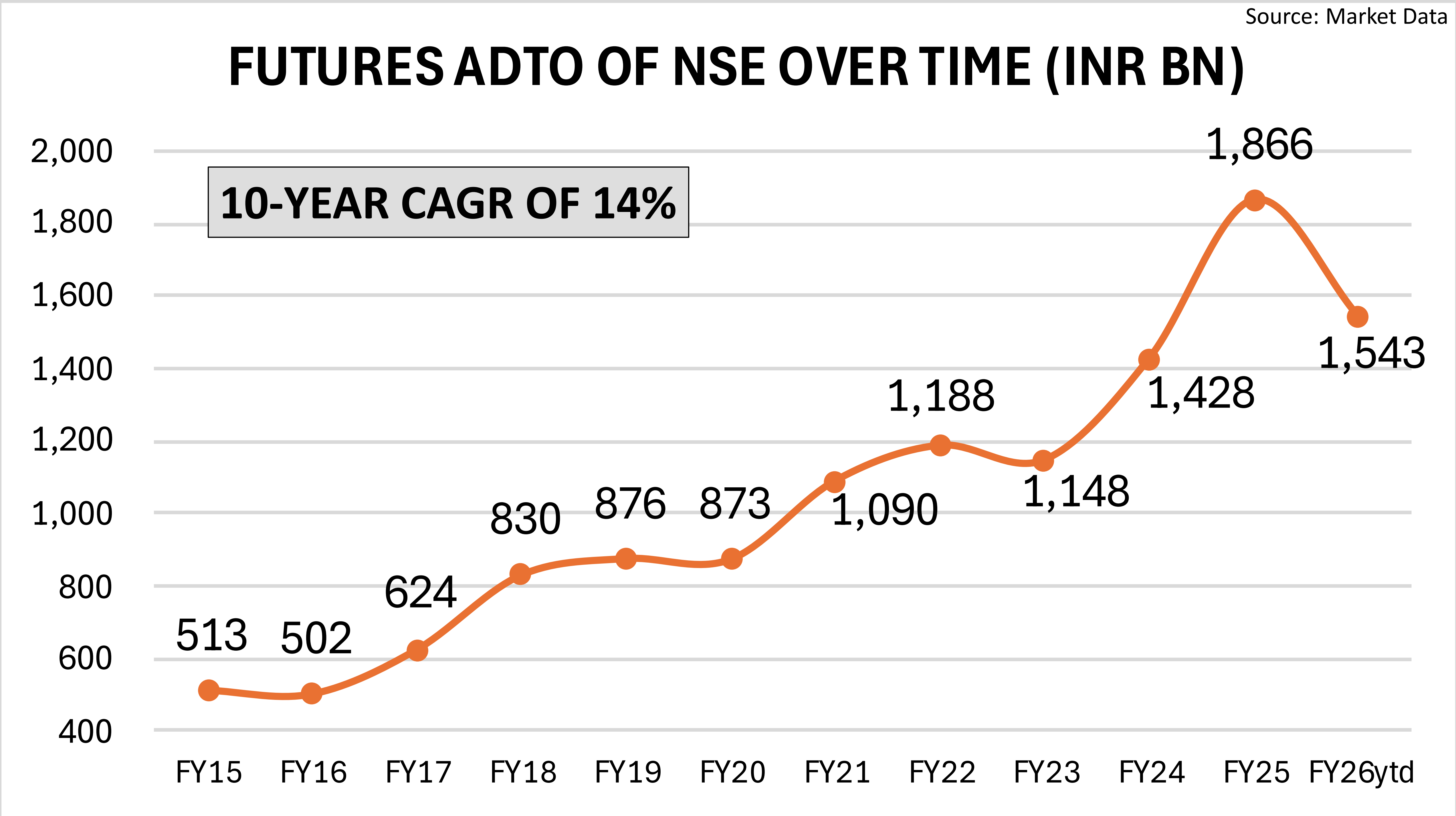


Source: Market Data
CASH MARKET TRENDS
10-YEAR CAGR OF 19%
213
202
244
338
352
391
660
722
576
883
1,208
1,089
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
FY26ytd
NSE Share (RHS)
BSE Share (RHS)
Industry ADTO (INR bn) (LHS)

# KEY PRODUCTS - FUTURES

1. Meaning, Margins, Mark to market
2. Monopoly of NSE here
3. How NSE makes money here?

Source: Annual Reports



Source: Market Data
FUTURES ADTO OF NSE OVER TIME (INR BN)
10-YEAR CAGR OF 14%
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
513
502
624
830
876
873
1,090
1,188
1,148
1,428
1,866
1,543
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
FY26ytd

# OTHER KEY INCOME STREAMS

1. Colocation – A mechanism to place trades (Meaning, Need, Fees (next slide))
2. Listing and Data Services (Services, Fees)
3. Investment Income *(6-7% of revenue)*

Source: Annual Reports

# COLOCATION CHARGES

| Items | NSE | BSE |
|---|---|---|
| Initial Setup charges | INR 25k to 1 L per rack | - |
| Annual Charge per rack per annum | Quarter – 2.25 L<br>Half – 4.5 L<br>Full – 9 L | Quarter – 3 L<br>Half – 6 L<br>Full (6 KVA) – 12 L<br>Full (15 KVA) – 25 L |
| Annual charges for Message per second (MPS) | 40 mps – 50k<br>100 mps – 250k<br>200 mps – 500k<br>400 mps – 10 L<br>1k mps – 25 L<br>>1k mps – Multiples of 25 L | 40 mps – Nil<br>100 mps – 50k<br>200 mps – 100k<br>400 mps – 200k<br>1k mps – 500k<br>>1k mps – Multiples of 500k |

Source: Websites

# DIRECT EXPENSES

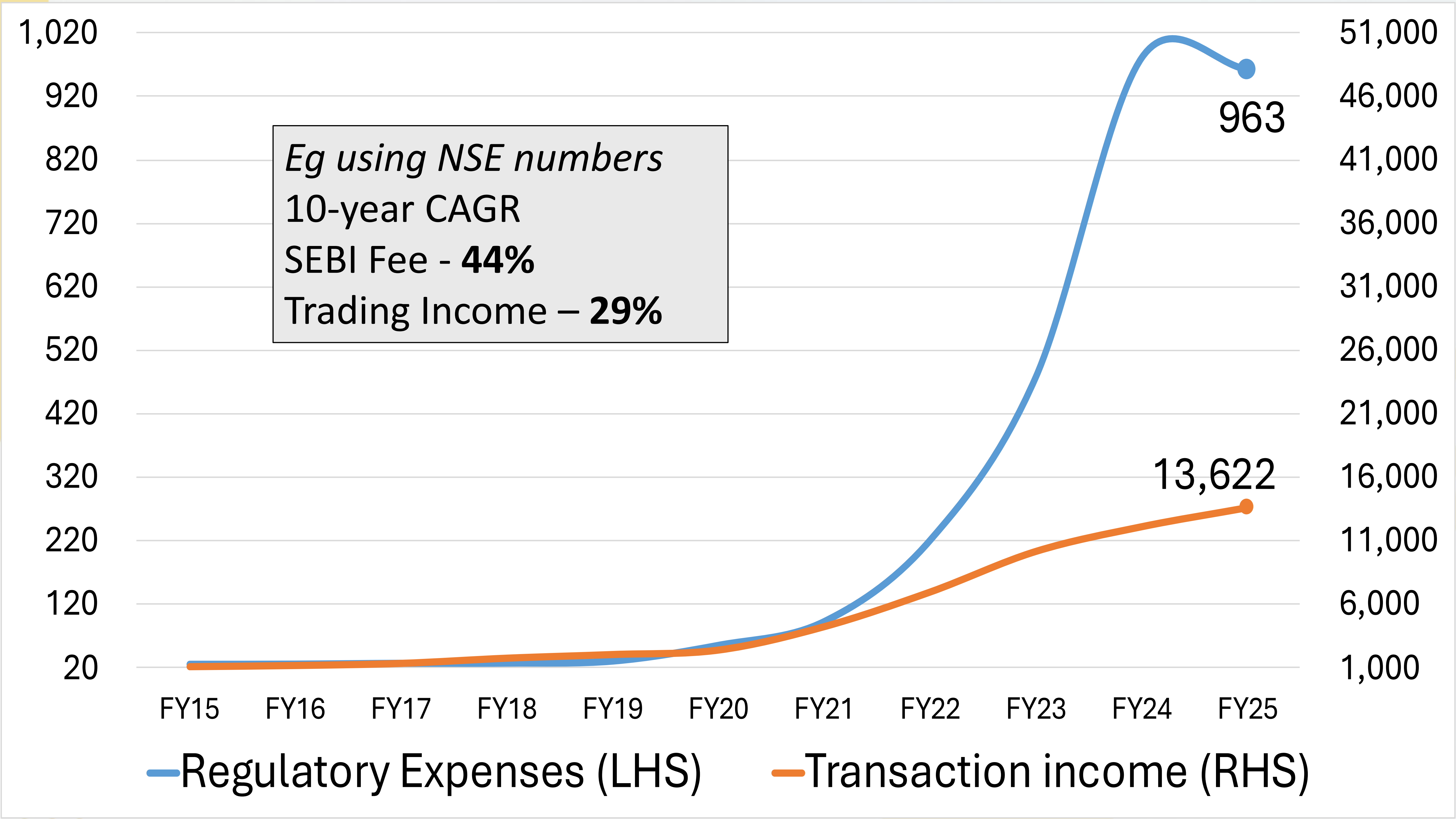
# SEBI REGULATORY FEES

1. Why? – To fund SEBI's regulatory activities

2. How is it calculated? ~ INR 1.2 per 1 crore notional

3. Difference in growth rates of Notional and Premiums?

Source: Websites


Eg using NSE numbers
10-year CAGR
SEBI Fee - 44%
Trading Income – 29%
1,020
920
820
720
620
520
420
320
220
120
20
51,000
46,000
41,000
36,000
31,000
26,000
21,000
16,000
11,000
6,000
1,000
963
13,622
FY15
FY16
FY17
FY18
FY19
FY20
FY21
FY22
FY23
FY24
FY25
Regulatory Expenses (LHS)
Transaction income (RHS)

# CLEARING AND SETTLEMENT ("C&S") FEES

1. What is C&S? – Mechanism to avoid counterparty risk


# CLEARING AND SETTLEMENT (“C&S”) FEES

2. Amount charged as C&S fee?

3. Who clears in India & what is their market share %?

4. Why does market share % matter?
    a. Investment Income
    b. C&S Cost

Source: Websites

# C&S FEES - ILLUSTRATION

| Particulars | A standalone exchange | NSE | BSE |
|---|---|---|---|
| Volumes | 1000 trades | | |
| **Cleared on:** | | | |
| NSE Clearing | ~95% = 950 trades | | |
| ICCL | ~5% = 50 trades | | |
| **C&S Fee paid:** | | | |
| NSE Clearing | 950 trades * 12p = INR 114 | Nil | INR 114 |
| ICCL | 50 trades * 12p = INR 6 | INR 6 | Nil |
| **TOTAL C&S FEE** | **INR 120** | **INR 6** | **INR 114** |
| *~Fee per trade* | *12 paise* | *~1 paise* | *~11 paise* |

# SETTLEMENT GUARANTEE FUND ("SGF")

1. What is SGF? – Funds to ensure settlement
2. Few rules around it:
   - Who determines the amount?
   - What factors affect the balance of the SGF?
   - Who pays the amount?
   - How is it held?

Source: Websites, Annual Reports and Concalls

# UNIT ECONOMICS

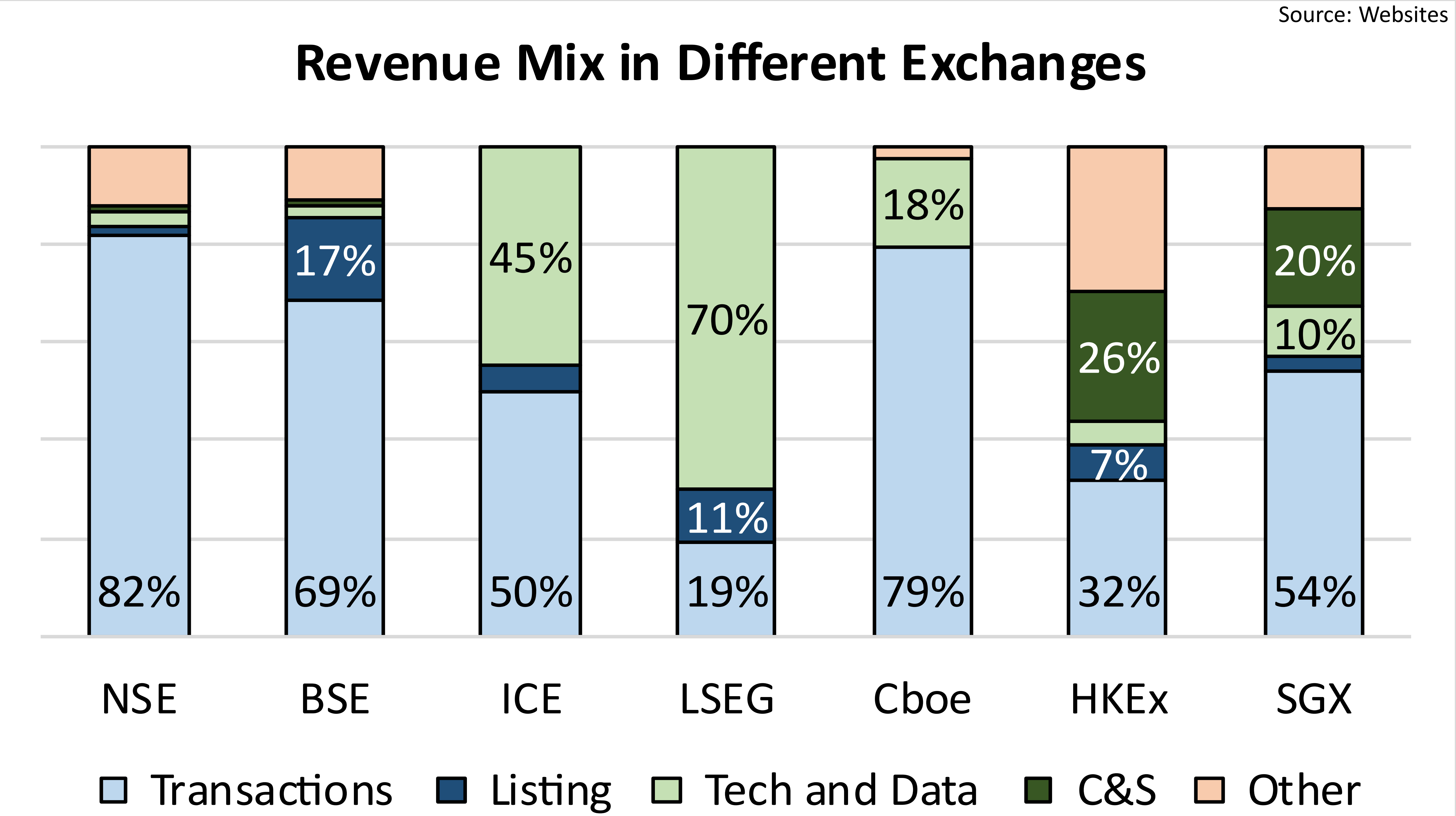
# EQUITY OPTIONS

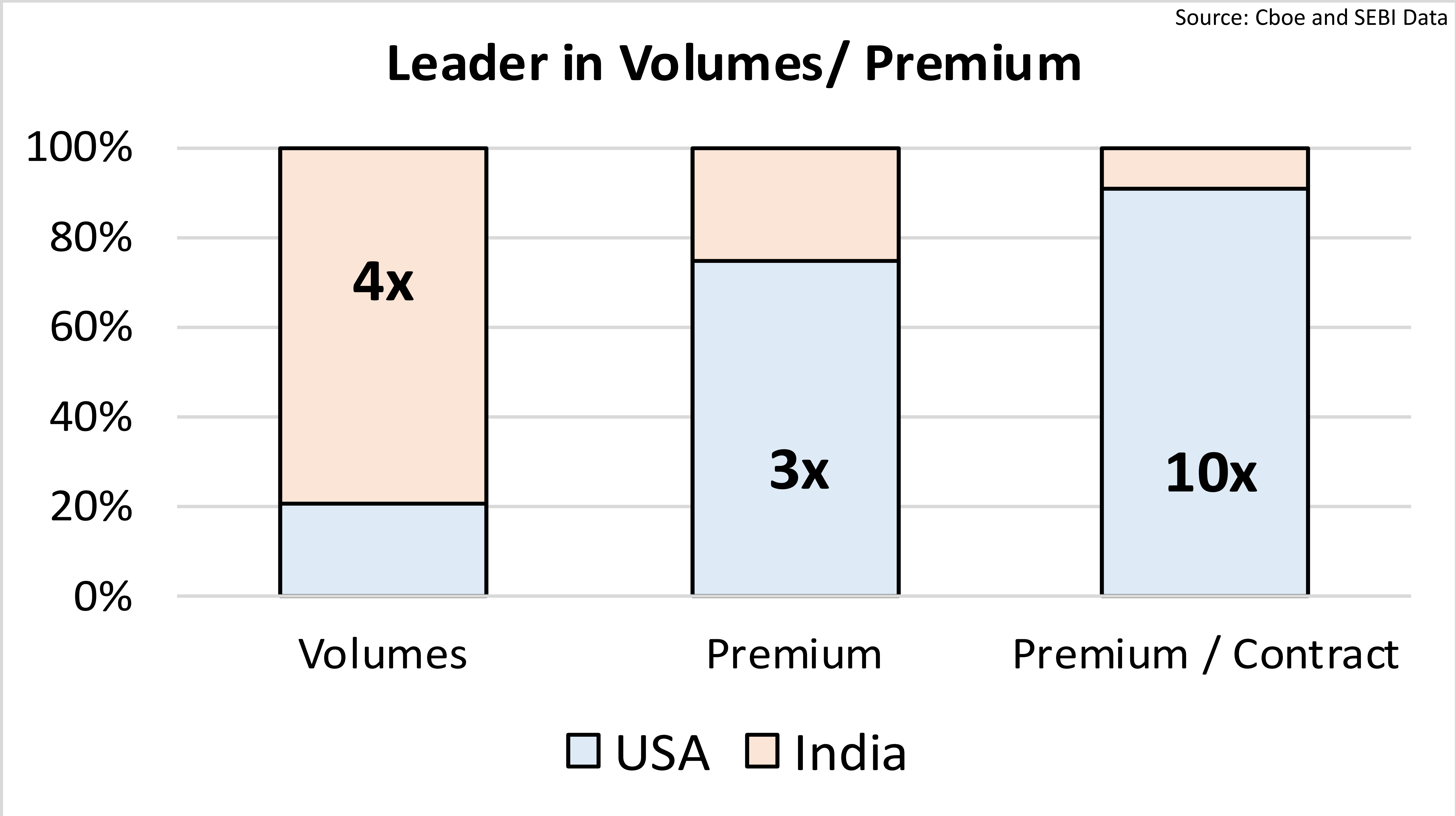
| Particulars (INR)<br>(One contract = One Unit) | All options combined | | Stock options<br>(NSE only) |
|---|---|---|---|
| | NSE | BSE | |
| | | | |
| Avg Notional per contract (Q1FY26) | 17,00,000 | 16,00,000 | 7,00,000 |
| Avg Premium to Notional ratio (Since Dec 24) | 25 bps | 11 bps | 150 bps |
| | | | |
| Premium (Notional * Prem to Notional ratio) | 4,250 | 1,760 | 10,500 |
| | | | |
| **Income (INR 35/ 32.5 per 1 lakh)** | **1.49** | **0.57** | **3.68** |
| | | | |
| Regulatory Cost (INR 1.2 per 1 cr notional) | 0.20 | 0.19 | 0.08 |
| Clearing and settlement Cost (12 paise) | 0.01 | 0.11 | 0.01 |
| | | | |
| **Contribution - Options** | **1.28** | **0.27** | **3.59** |
| *Margin(%)* | *86%* | *47%* | *98%* |

# CASH AND FUTURES

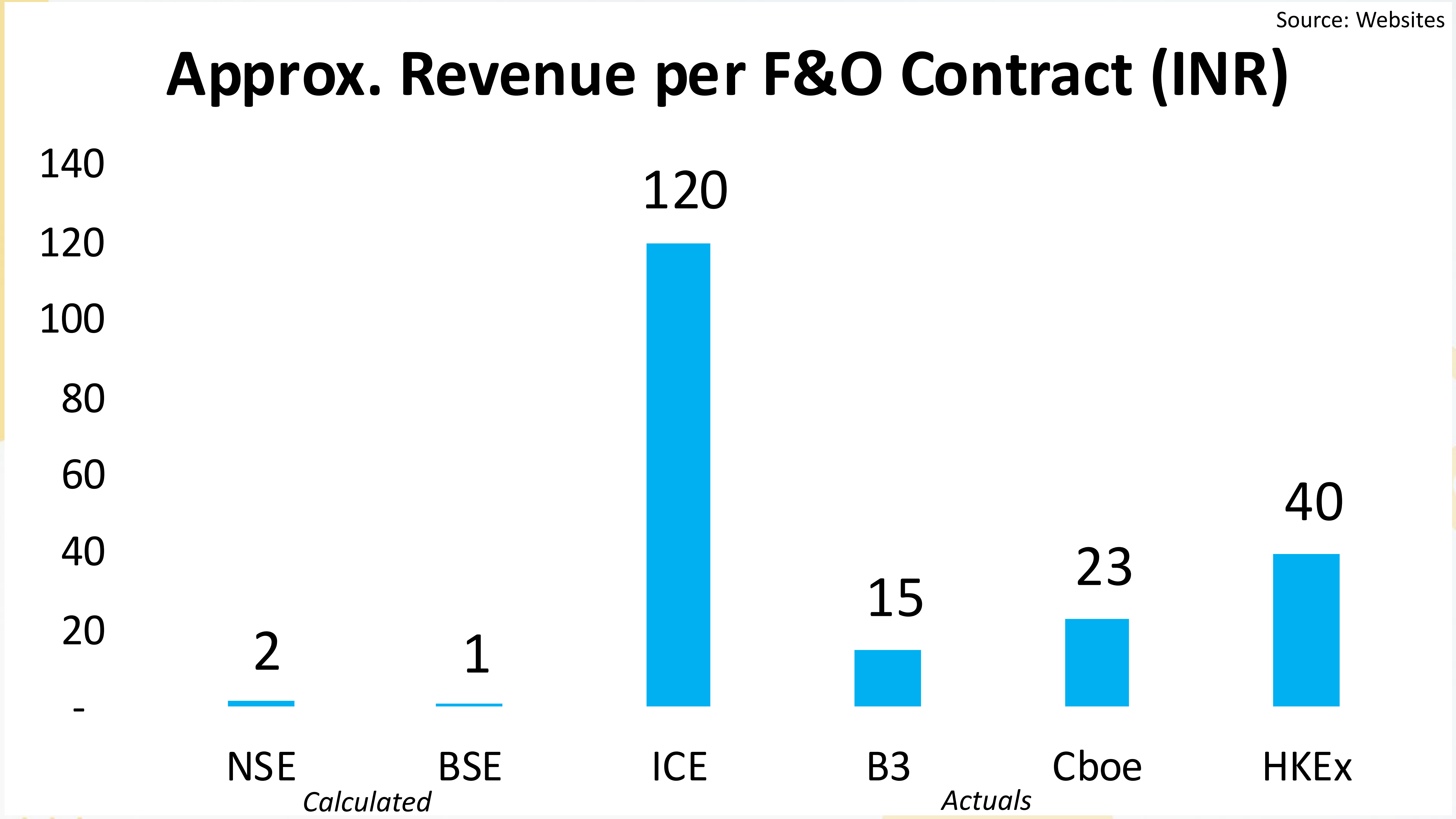
| Particulars (INR) (One trade = One Unit) | NSE Cash | BSE Cash | | NSE Futures |
|---|---|---|---|---|
| | | Normal (95%) | Special (5%) | |
| Average value per trade (last 10 years) | 30,000 | 20,000 | 20,000 | 7,00,000 |
| | | | | |
| **Income** (INR 2.97/ 3.75/ 100/ 1.73 per 1 lakh) | **0.89** | **0.75** | **20.00** | **12.11** |
| | | | | |
| Regulatory Cost (INR 1.2 per 1 cr value) | 0.004 | 0.002 | 0.002 | 0.084 |
| Clearing and settlement Cost (12 paise) | 0.01 | 0.11 | 0.11 | 0.01 |
| | | | | |
| **Contribution - Cash and Futures** | **0.88** | **0.63** | **19.88** | **12.02** |
| *Margin(%)* | *99%* | *84%* | *99%* | *99%* |

# INDIAN VS GLOBAL EXCHANGES


Source: Websites
Revenue Mix in Different Exchanges
82%
17%
69%
45%
50%
70%
11%
19%
18%
79%
26%
7%
32%
20%
10%
54%
NSE
BSE
ICE
LSEG
Cboe
HKEx
SGX
Transactions
Listing
Tech and Data
C&S
Other



Source: Cboe and SEBI Data
Leader in Volumes/ Premium
100%
80%
60%
40%
20%
0%
4x
3x
10x
Volumes
Premium
Premium / Contract
USA
India


Source: Websites
Approx. Revenue per F&O Contract (INR)
140
120
100
80
60
40
20
-
2
1
120
15
23
40
NSE
BSE
ICE
B3
Cboe
HKEx
Calculated
Actuals

# FINANCIAL METRICS – A COMPARISON

| Exchange ($mn) | M Cap | Revenue | PAT % | ROE % | TTM PE |
|---|---|---|---|---|---|
| NSE *(from Unlisted Zone)* | 56,051 | 2,256 | 65% | 45% | 38x |
| BSE | 11,751 | 380 | 44% | 26% | 63x |
| ICE | 87,924 | 9,279 | 30% | 11% | 30x |
| LSEG | 59,275 | 11,090 | 10% | 5% | 46x |
| Cboe | 25,062 | 4,094 | 19% | 21% | 28x |
| HKEx | 67,357 | 2,867 | 59% | 28% | 34x |
| SGX | 13,851 | 1,078 | 47% | 31% | 28x |

Source: Market Data

FINANCIAL OPPORTUNITIES FORUM

# Thank You

For Your Attention and Participation.

Upcoming FOFs:

Tuesday, November 18, 2025

Thursday, December 11, 2025

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