Analysis of Profits & Losses in the Equity Derivatives Segment (FY22-FY24)

Department of Economic and Policy Analysis

भारतीय प्रतिभूति और विनिमय बोर्ड
Securities and Exchange Board of India

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EXECUTIVE SUMMARY

Individual Category Loss-Makers (FY24):

1. 91.1% of individual traders (about 73 lakh traders) lost money in the F&O segment in FY24.
2. 73 lakh loss-making traders, on an average, experienced net losses[1] of ₹1.20 lakh per person in FY24 (inclusive of transaction costs).

Individual Category Loss-Makers (during study period i.e. FY22-FY24):

3. During FY22-FY24, 1.13 crore unique Individual traders incurred a combined net loss (i.e. trading loss inclusive of transaction costs) of ₹1.81 lakh crore in F&O. In FY24 alone, Individuals incurred about ₹75k crore in net losses.
4. More than 1 crore loss-making traders (92.8% of individual traders) lost, on an average, about ₹ 2 lakh per person in the F&O over the period of three years.
5. Top 3.5% of loss-makers, approximately 4 lakh traders, faced an average loss of ₹28 lakh per person over the same period, inclusive of transaction costs.
6. Only 7.2% of Individual F&O traders made a profit over the period of three years.
7. Only 1% of individual traders managed to earn profits exceeding ₹1 lakh, after adjusting for transaction costs.

Major Category-wise P&L Pattern[2]:

8. While, Individuals made losses in F&O, the FPIs and Proprietary traders earned profits. The Proprietary traders earned about ₹33,000 crore of gross profits (i.e. trading profits before accounting for transaction costs) in F&O segment in FY24, followed by FPIs who earned about ₹28,000 crore in gross profits. Against this, Individuals and others incurred a loss of over ₹61,000 crore in FY24 (before accounting for transaction costs).
9. Majority of profits for FPIs and Proprietary traders were made by "Algo entities"[3]. 97% profits of FPIs and 96 % profits of Proprietary traders came from Algo entities in FY24.

[1] Net Losses means trading losses inclusive of various transaction costs.
[2] This analysis is based on the entire population of F&O traders. Further, the P&L represent only squared off gross P&L (i.e not adjusted for transaction costs and not considering the open positions at the end of FY24).
[3] Algo entities are considered as those entities, who have done at least one trade in a year using algorithmic order.

Product Preference:

10. 99.3% of the F&O traders traded Options at least once during the last three years.
11. The percentage share of F&O traders, who traded Futures at least once during a year, has come down to 5.9% in FY24 from 10.6% in FY22.

Transaction Costs (TC):

12. Individuals incurred more than ₹50,000 crores in transaction costs for trading in F&O during FY22 to FY24. Of which more than half (about ₹25,000 crore) was in the form of brokerage, followed by ₹13,800 crores to the Government in the form of STT, GST and Stamp duty and ₹10,200 crore in the form of Exchange fees.
13. On an average, individual traders spent ₹26,000 per person on F&O transaction costs in FY24.
14. Nearly 71% of transaction cost was in the form of Brokerage (51% of TC) and Exchange Fees (20% of TC).

Product-wise, Activity-wise:

15. Percentage of Individuals making losses in Futures contracts is consistently lower than those making losses in Options contracts throughout the study period. In FY24, about 60% of traders made net losses in Futures, compared to 91.5% in Options.
16. Higher trading activity was associated with a higher percentage of loss-makers. The proportion of loss makers was highest (95% of total traders) in "*High-Value*"[4] traders, compared to "*Mid-size*" traders (93.8%) and "*Small-size*" traders (91.5%).

Demographic Trends:

17. The proportion of young traders (having age less than 30 years) trading in F&O has increased significantly from 31% in FY23 to 43% in FY24. Nearly 93% of these young traders incurred losses in F&O in FY24, higher than the average loss makers of 91.1% in FY24.
18. Over 75% of individual F&O traders (65.4 lakh traders) in FY24 had declared annual income of less than ₹5 lakh.

[4] *"High-Value" Traders is defined as the trader who recorded combined premium turnover of more than ₹1 crore in Options during FY22 to FY24. "Mid-Size" trader means trader having combined turnover between ₹1 Lakh and ₹1 crore. "Small-Size" trader means trader having combined turnover of less than ₹1 Lakh over three years' period.*

19. The proportion of "*Low_Income*" traders (having annual income less ₹5 lakh) has increased significantly from 71% in FY22 to 76% in FY24.
20. The proportion of 'Female' traders participating in F&O has decreased from 14.9% in FY22 to 13.7% in FY24. Compared to 'Male' traders, less proportion of 'Female' traders incurred losses. While 91.9% 'Male' traders made losses in F&O in FY24, 86.3% percentage of 'Female' traders made losses in F&O.
21. Individuals from Beyond Top 30 (B30) cities made up over 72% of the total F&O trader base in FY24, a higher proportion compared to mutual fund investors, 62% of whom are from B30 cities.
22. For every 100 Mutual Fund investors, there were 28.6 F&O traders from B30 cities and 17.8 F&O traders from T30 cities in FY24.
23. More than 50% of all the F&O traders, who traded in FY24, were from top four states namely Maharashtra, Gujarat, Uttar Pradesh and Rajasthan. 21.7% of F&O traders (or 18.8 lakh F&O traders) were from Maharashtra followed by Gujarat (10.1 lakh or 11.6%), UP (9.3 lakh, or 10.7%) and Rajasthan (5.4 lakh or 6.2%).

<u>New Traders:</u>

24. Almost half of all the F&O traders in FY24 (42 lakh traders) were "*New_Traders*" (i.e. traders who traded for the first time in three years in the equity F&O segment). 92.1% of these "*New_Traders*" experienced losses and on an average, experienced a net loss of about ₹46,000 per person in FY24.

<u>Persistence:</u>

25. More than 75% of the loss-makers persisted with the trading in F&O, despite making losses in preceding two consecutive years.

1. OBJECTIVE OF THE STUDY

This study is an extension of the earlier study published by SEBI in January 2023 titled "Profit & Losses of Individuals in the Equity Derivatives segment"[5] for the period FY19 and FY22, to see if there has been any significant pattern in the Profit and Loss of Individual category. In the said study, it was found that 9 out of 10 Individual investors made losses in derivatives.

With rising participation of individual investors in both equity and equity derivatives and exponentially growing volumes in the derivatives in the recent past, it was felt necessary to understand the changing pattern in the profits and losses of all categories of investors (including Individual Investors). More attention is given to the Individual category investors, as almost 99.8% of the F&O participants are Individuals.

This follow-up study aims to analyze,

a) Changes in the P&L pattern of Individuals, since last SEBI study for FY19 and FY22;
b) The pattern in trading behavior and profits and losses of different categories of investors (viz. FPI and Prop trader) in the equity Futures and Options (F&O) segment;
c) The pattern in profits and losses of Individual category investors, factoring in demographics and other factors such as trading activity and product preference.

[5] *https://www.sebi.gov.in/reports-and-statistics/research/jan-2023/study-analysis-of-profit-and-loss-of-individual-traders-dealing-in-equity-fando-segment_67525.html#*

2. BACKGROUND

India's derivatives market has witnessed remarkable growth since its inception in June 2000, when the National Stock Exchange (NSE) launched trading in Index Futures. The market quickly expanded with the introduction of Index Options, Stock Futures, and Stock Options. The derivatives product became popular and derivatives market became integral part of the Indian financial system, facilitating hedging, speculation, and price discovery in the financial system to various categories of investors.

Over the past two decades, India has evolved into one of the largest and most liquid derivatives markets in the world, driven by increasing participation from retail investors, Foreign Portfolio Investors (FPIs), and proprietary traders. This expansion was facilitated by technological advancements, regulatory reforms, and the growing need for risk management tools in a rapidly evolving financial landscape.

The derivatives market, particularly the equity segment, has seen an exponential rise in trading volumes. This growth can be attributed to several factors, including heightened market awareness, improved access to financial products, and increasing volatility in asset prices. The ability to hedge risk efficiently, leverage positions with minimal capital, and speculate on price movements without owning the underlying asset has made derivatives an attractive tool for a wide range of market participants.

In recent years, the rise in algorithmic trading and the increasing participation of individual retail investors in the derivatives space have further propelled the market's growth. The availability of sophisticated trading platforms and lower transaction costs have enabled retail investors to actively trade in Options and Futures contracts, contributing to the surge in market liquidity. A rise of Individual traders' participation in the F&O segment has also kick-started a debate on product suitability and the need for safety nets and firewalls for Individual investors. The number of Retail traders, or Individual traders (Individuals) have almost doubled in two years from about 51 lakhs in FY22 to about 96 lakhs in FY24. Although they contributed about 30% in total turnover in FY24, they are a clear majority in number terms, as 99.8% of total traders in the equity F&O segment are Individuals.

Table 1: Percentage share of Individual category in the Equity F&O segment

Year	Investors in F&O (in lakh)			Notional Turnover in F&O segment (in ₹Lakh Crore)		
	Individual	**Total**	**% of Total**	**Individual**	**Total**	**% of Total**
FY22	51.35	51.51	99.7%	12,125	33,905	35.8%
FY23	66.96	67.13	99.7%	26,531	76,447	34.7%
FY24	95.75	95.93	99.8%	48,479	1,59,855	30.3%

Note: Please note that the turnover is computed as two sided Notional Turnover, i.e. sum of notional turnover of buyer as well as that of seller.

Further, compared to Mutual Fund investors, the number of Individual F&O traders have grown faster. In FY22, there were 20 derivatives traders for every 100 Mutual Fund investors, in FY24, that number has gone up to 24.5.

Therefore, this rapid growth in F&O trading activity has once again highlighted the need for investor education and risk management practices, as a significant proportion of retail traders continued to incur losses in the market. SEBI study in 2023 highlighted that 89% of individual traders in the F&O segment lost money in FY22. These traders, on average, experienced net losses of ₹1.10 lakh during the study period, underscoring the high-risk nature of derivatives trading for individuals.

3. DATA COLLECTION AND OVERVIEW

For Section 1 (Entire Population)

For this section, category-wise data of all investor categories that traded in the equity F&O segment of NSE during FY24 is collected. For this section, the categories are classified as under,

Table 2: Definitions of categories for Section 1 Data

Category	Major Entities
FPI	FPI-all categories, FVCI, QFI, etc.
DII	Mutual Fund, Banks, NBFC, Insurance Companies, AIFs, Domestic Financial Institutions, etc.
Proprietary Traders	Trading Member, who itself trade in F&O in its own account
Individuals	Individuals, HUF, Proprietorship Firm, Partnership Firm, Limited Liability Partnership Firm
Others	Corporates, Trusts, Society, NRI, PMS clients, Non Govt. Organization

For Section 2 (Select sample of top 15 brokers)

For this section, individual client-wise (which includes HUF and NRIs but excludes Proprietary traders, institutions, partnership firms, corporates etc.) data of realized net trading profit /loss incurred during FY22, FY23 and FY24 has been collected from the top 15 brokers (based on individual traders' turnover for the period FY24) in equity F&O segment of NSE. These top 15 brokers account for nearly 90 percent of total individuals and about 75 percent of the individual client level turnover in NSE equity F&O segment during FY24.

Table 3: Sample of Investors from Top15 brokers

Year	No of Individual Investors in F&O (in lakh)		
	Sample	**Actual**	**% of Total**
FY22	42.74	51.35	83.2%
FY23	58.35	66.96	87.1%
FY24	86.26	95.75	90.1%

Notes: 1. Sample means clients of Top15 broker; Actual means – Total traders in the F&O segment of NSE;

It may be noted that the sample of earlier SEBI study was based on Top 10 brokers, whereas that of current study is based on the sample collected from Top 15 brokers.

4. METHODOLOGY

In order to analyse the net profit/ loss[6] of individual traders dealing in the equity F&O segment, data has been collated from top 15 brokers with respect to realized gross and net trading profit/loss, transaction cost, number of transactions carried out during the analysis period, various demographic parameters which includes age, gender, and city. Further, the data fields (as given in the table below) have been divided into subcategories, in order to have a holistic as well as an in-depth view of the P&L of individual traders across different categories.

Table 4: Description of Data fields

Sl. No.	Data Fields/ Parameters	Sub-category
1	Product Category	Index Options, Stock Options, Index Futures, Stock Futures
2	Age	<30, 30-40, 40-50, 50-60, >60 (years)
3	Income	<5 Lakh, 5-10L, 10-25L, 25-50L, 50-100L, >100L
4	Gender	Male/ Female
5	Tier_Cities	Tier I, Tier II, Tier III *
6	T30_B30_Cities	Top 30 Cities, Beyond 30 Cities #

Notes:

a) *Tier I (The following 7 cities considered - Banglore, Delhi, Chennai, Hyderabad, Mumbai, Pune, Kolkata).*
b) *Tier II (The following 20 cities considered - Amritsar, Bhopal, Bhubaneswar, Chandigarh, Faridabad, Ghaziabad, Jamshedpur, Jaipur, Kochi, Lucknow, Nagpur, Patna, Raipur, Surat, Visakhapatnam, Agra, Ajmer, Kanpur, Mysuru, Srinagar),*
c) *Tier III (The following 19 cities considered - Etawah, Roorkee, Rajamundry, Bhatinda, Hajipur, Rohtak, Hosur, Gandhinagar, Junagadh, Udaipur, Salem, Jhansi, Madurai, Meerut, Mathura, Bikaner, Cuttack, Vijayawada, Nashik).*
d) ** - A pin code mapping has been done for these cities as per the information available in https://data.gov.in/ in order to maintain consistency across all the brokers.*
e) *# - Top 30 cities classification is as per the pin code mapping provided by AMFI.*

- Sample Brokers: Top 15 brokers (brokers were identified on the basis of largest percentage share of individual traders' turnover in equity F&O segment of NSE during FY24)
- Client-set: Individual Clients (which includes HUF and NRIs; excludes Proprietary traders, institutions, partnership firms etc.)

[6] *Net Profit/Loss: Net trading P/L – Transaction Cost*

- Period: FY 2021-22 to FY 2023-24
- Segment: Equity F&O Segment
- Variables: Product category, Age, Income, Gender, Pincode, Net trading Profit/Loss, Transaction cost
- Losses: Unless otherwise mentioned Losses in this report means "Net Losses" (after adjusting for transaction costs.
- For computation of profit/loss- realized profit/loss during the period is considered.
- For clarity w.r.t cases where 1 leg of transaction falls under the study period, while, other falls outside, explanation is given as under-
  - ***Example 1: Period: FY 2021-22; Consider Contract-A with expiry in April 2021.***
    Contract-A purchased & sold during March 2021 - will not be considered
    Contract-A purchased during March 2022, sold during April 2022/ settled on expiry - will be considered.
- Contracts resulting in physical delivery of stocks are excluded.
- For PIN Codes correspondence address is considered.

It may be noted that the results of Section 1 (entire population at NSE) and Section 2 (sample of top 15 brokers) are not strictly comparable. The difference in the data is as given in the table below,

Table 5: Difference in Section1 and Section 2 data

	Section 1 (Entire population of NSE F&O)	**Section 2 (Sample of top 15 brokers)**
Exchange data	Only NSE	Both NSE and BSE
Brokers data	All Brokers at NSE	Top 15 Brokers in F&O
Individual Category Definition	Individuals, HUF, Proprietorship firms, Partnership Firm, Limited Liability Partnership Firm	Individuals, HUFs and NRIs
No. of Individual Investors	95.75 lakh	86.26 lakh
Gross Loss of Individuals in FY24	₹ 41,544 crore	₹ 52,361 crore

5. DATA ANALYSIS AND FINDINGS

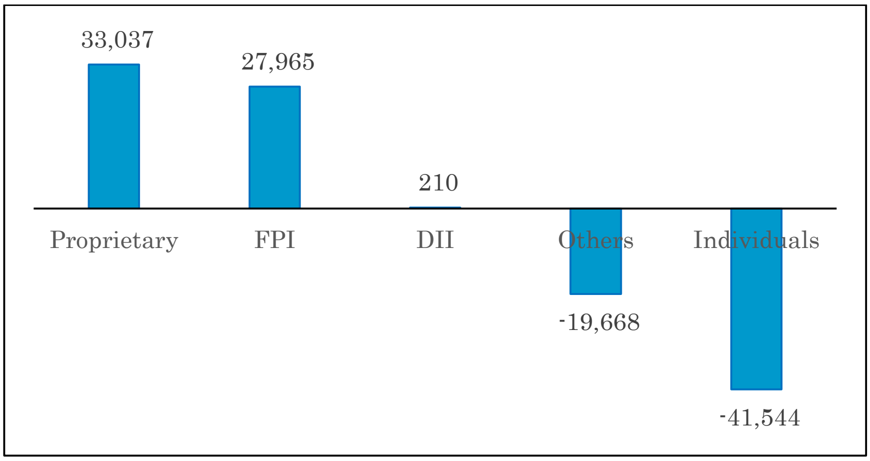
SECTION 1: ENTIRE POPULATION DATA OF NSE F&O SEGMENT (ALL BROKERS, ALL INVESTOR CATEGORIES)

- This section is based on the entire population of 95.7 lakh traders in the equity F&O segment of NSE for FY24. Further, the P&L represent only squared off gross P&L (i.e. not adjusted for transaction costs and not considering the open positions at the end of FY24).

5.1. Category-wise Profit & Loss for FY24

- In FY24, the Proprietary traders' category earned the highest gross profit[7] (i.e. trading profits before accounting for transaction costs) of about ₹33,000 crore in the equity F&O segment of NSE, followed by Foreign Portfolio Investors (FPIs) category (₹28,000 crore). Domestic Institutional Investors (DIIs) earned modestly in the F&O to the tune of ~ ₹200 crore in gross profits. On the other hand, the Individual category experienced the highest gross loss of ~ ₹41,500 crore, while 'Others' category (which represented mostly Corporates, Trusts, NRIs and PMS clients) incurred a gross loss (i.e. trading loss before accounting for transaction costs) of ~ ₹19,700 crore.

Chart 1: Gross P&L in Equity Derivatives Segment- FY24 (Amount in ₹ Crore)

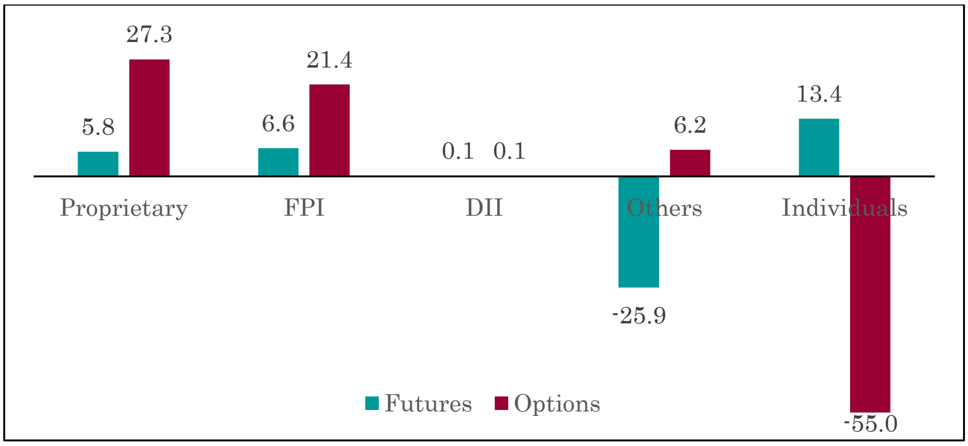


Source: NSE

- However, there was a diverging pattern in profit and loss in Futures vis-à-vis Options for Individuals. While, Individuals made losses in Options to the tune of ~ ₹55,000 crore in FY24, they made profits to the tune of about ~ ₹13,400 crore in Futures.

[7] Gross profit means trading profits before accounting for transaction costs

Chart 2: Gross P&L in Equity Derivatives Segment- FY24 (Futures vs Options) (Amount in ₹ '000 crore)



Source: NSE

- FPI and Proprietary traders mainly traded through algorithms (commonly known as Algorithmic Trading). 306 out of 376 FPIs traded through algorithms, while 347 out of 626 Proprietary traders traded through algorithms. On the other hand, only 13% of 95.7 lakh individual traders traded through algorithms. This 13% proportion is overstated because it also includes those clients, who had experienced forced liquidation by the brokers (usually post 3.20 pm) to square-off intraday positions, using algorithmic trading.

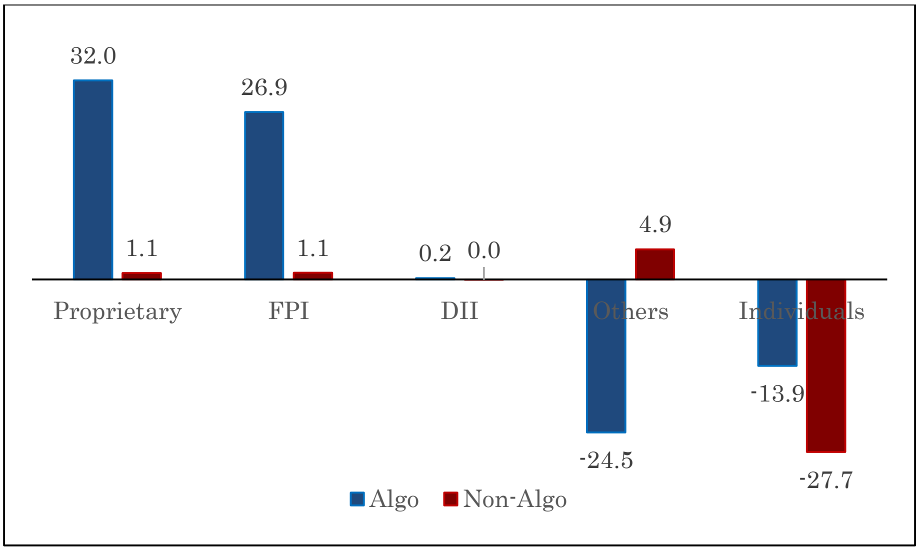
Table 6: Number of Investors in F&O segment of NSE during FY24

Category of Investors	Number of Traders	Algo / Non Algo	Futures	Options	Derivatives
FPIs	376	Algo	281	203	306
		Non_Algo	44	59	70
Proprietary	626	Algo	274	277	279
		Non_Algo	313	328	347
DIIs	48	Algo	31	27	33
		Non_Algo	10	13	15
Individuals#	95,75,473	Algo	1,07,211	12,44,182	12,44,936
		Non_Algo	5,64,771	82,44,133	83,30,537
Others##	14,162	Algo	1,138	1,659	1,725
		Non_Algo	6,829	11,078	12,437
Total	**95,90,685**	**Algo**	**1,08,935**	**12,46,348**	**12,47,279**
		Non_Algo	**5,71,967**	**82,55,611**	**83,43,406**

Note: 1. For the purpose of this study, Algo entities are classified as those entities, who have done at least one trade in a year using algorithmic order. 2. "Individuals" includes Individuals, HUF, Proprietorship firms, Partnership Firm. 3. "Others" includes Corporates, Trusts, Society, NRI, PMS clients.
Source: NSE

- The majority of profits of FPIs and Proprietary traders in F&O was earned by Algo entities. Algo entities are defined as those entities, who have done at least one trade in a year using algorithmic order. "Others" category, which includes mainly Corporates, NRIs and Trusts, made losses with Algos, but profit without Algos.
- 97% profits of FPIs and 96% profits of Proprietary traders came from Algo entities.

Chart 3: Gross P&L in Equity Derivatives Segment- FY24 (Algo vs Non-Algo entities) (Amount in ₹ 000 crore)



Note: 1. Algo entities are classified as those entities, who have done at least one trade in a year using algorithmic order. 2. Some Individuals are also considered as Algo entities, if their broker has squared off their position using Algo.
Source: NSE

SECTION 2: SELECT SAMPLE (SAMPLE OF TOP 15 BROKERS, INDIVIDUAL CATEGORY INVESTORS)

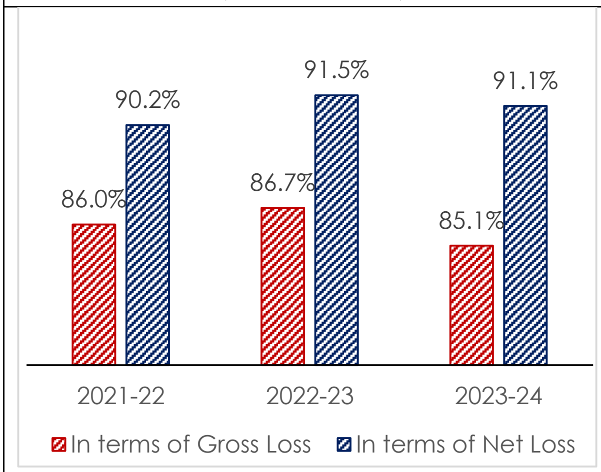
- This section onwards, the analysis is based on a sample of 15 brokers and limited to Individual investors. Individuals means Individuals, HUFs and NRIs. The period of this study is from FY22 to FY24.

5.2. Proportion of Loss-Makers

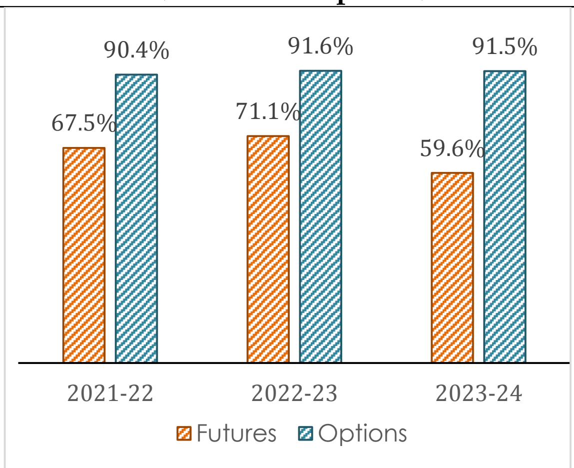
- In FY24, 91.1% individuals made net losses (i.e. trading losses inclusive of transaction costs) in F&O, compared to 91.5% in FY23 and 90.2% in FY22. In terms of gross P&L (i.e. trading profits & losses before accounting for transaction costs), 85.1% of individuals made losses in FY24.
- In terms of Future versus Options Traders, it was observed that the percentage of Individual traders making losses in Futures contracts is constantly lower than those making losses in Options contracts throughout the study period. In FY24, only about 60% traders made (net) losses in Futures, compared to 91.5% in Options.

Chart 4: Proportion of Loss Makers in F&O segment – Individual Category

% of Individuals Making Losses (Gross vs Net)

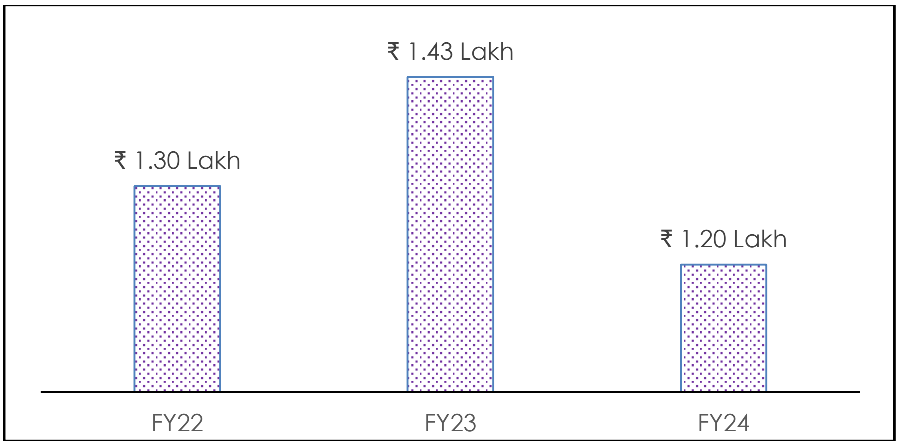


% of Individuals Making Net Losses (Futures vs Options)



- 91.1% of Individual F&O traders (about 73 lakh traders) incurred losses in F&O in FY24. These loss-makers incurred an average loss of ₹ 1.20 lakh per person (lower than ₹ 1.43 lakh per person in FY23).

Chart 5: Average Per Person Net Loss of Loss-Makers in F&O

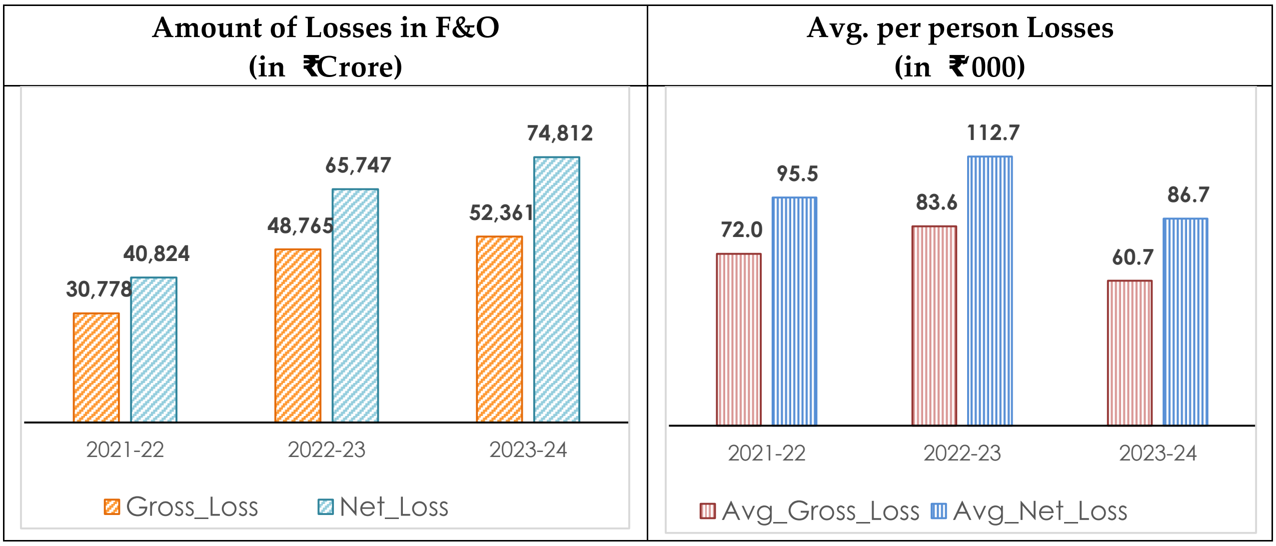


Note: The loss-makers are classified based on their gross profit or loss.

5.3. Amount of Losses by Individual Category Traders

- In FY24, Individual traders' gross loss (i.e. trading loss before accounting for transaction costs) widened to about ₹52,400 crore (compared to ₹48,800 in FY23) whereas net losses amplified to about ₹ 74,800 crore (compared to ₹ 65,700 crore in FY23). On the other hand, the average net loss narrowed from about ₹ 1,13,000 per person in FY23 to about ₹ 87,000 per person in FY24.

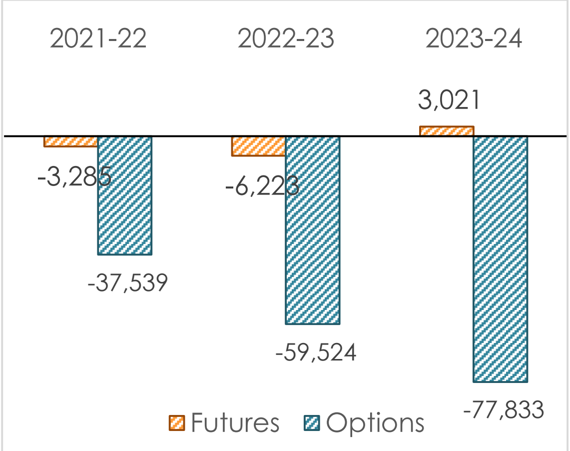
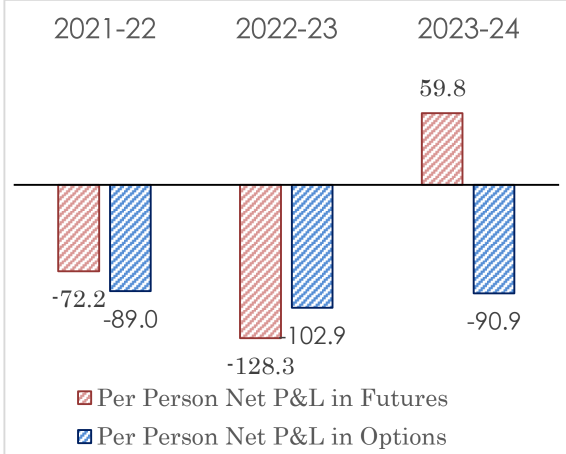
Chart 6: Trends in Profit and Loss in F&O segment (Gross vs Net P&L)



- Individual's losses in Options segment grew 30.8% year-on-year to ₹77,800 crore in FY24, while they made gains of ₹3,000 crore in Futures (compared to losses of about ₹6,200 crore in FY23).

- In Futures, individuals made an average net profit of about ₹60,000 per person in FY24, compared to loss of ₹1,28,000 per person in FY23. In Options, average per person net loss narrowed to about ₹91,000 in FY24 from about ₹1,03,000 in FY23.

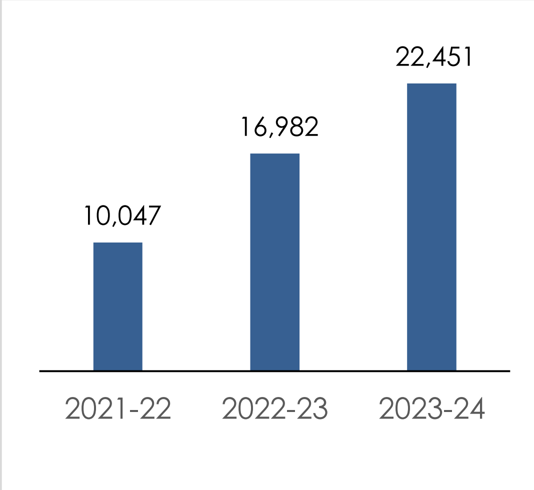
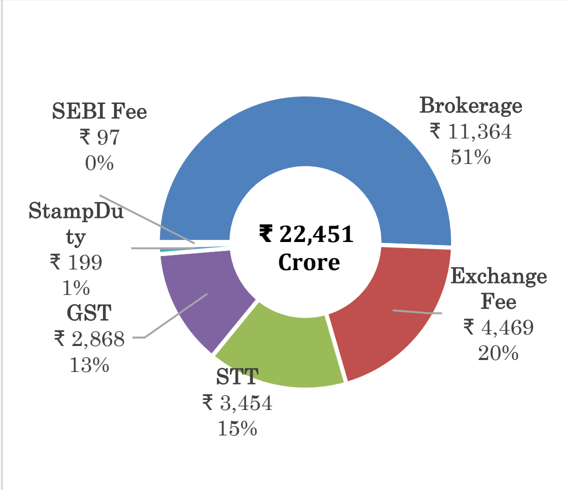
Chart 7: Trends in Profit and Loss in F&O segment (Futures vs Options)

Amount of Profits/Losses (in ₹Crore)	Avg. per person Profits/Losses (in '000 ₹
	

5.4. Transaction Costs (TC)

- On an average, Individuals spent ~ ₹ 26,000 per person as a transaction cost in FY24.
- Nearly 71% of transaction cost was in the form of Brokerage (51% of TC) and Exchange Fee (20% of TC).
- Individual traders incurred more than ₹50,000 crore in transaction costs for trading in F&O during FY22 to FY24. Of which more than half (about ₹25,000 crore) was in the form of brokerage, followed by ₹13,800 crore to the Government in the form of STT, GST and Stamp duty and ₹10,200 crore in the form of Exchange fees.
- Compared to FY22, the TC incurred by F&O traders more than doubled from about ₹10,000 crore to more than ₹22,000 crore in FY24.
- While the number of transactions have gone up by 157% from 290 crore in FY22 to 745 crore in FY24, TC per transaction has gone down from about ₹35 to ₹30 during the same period.

Chart 8: Trends and Break up of Transactions Costs

Transaction Costs in F&O segment (Amount in ₹Crore)	Transaction Cost Break Up (FY24) (Amount in ₹Crore)
	

5.5. Aggregate Amount of Profit & Loss in F&O during FY22-FY24

- During FY22 to FY24, there were a total of 1.13 crore unique Individual traders, who traded in F&O at least once during these three years. Collectively, they incurred a combined gross loss of ₹1,31,903 crore and a combined net loss of ₹1,81,383 crore during the period of FY22 to FY24.

Table 7: Summary of Net Profit and Loss of Individuals in F&O segment

Year	Gross Turnover	Gross Profit	Brokerage	Transaction Cost (incl. Brokerage)	Net Profit	Traders
	(in ₹ Lakh Crore)	(in ₹ Crore)	(in ₹ Crore)	(in ₹ Crore)	(in ₹ Crore)	(in Lakh)
FY22	115.0	-30,778	5,185	10,047	-40,824	42.7
FY23	148.6	-48,765	8,508	16,982	-65,747	58.4
FY24	172.2	-52,361	11,364	22,451	-74,812	86.3
Total	**435.8**	**-1,31,903**	**25,056**	**49,480**	**-1,81,383**	**113.2**

Notes: Based on a sample of top 15 brokers in the equity F&O segment.

- Out of these 113.2 lakh individual F&O traders, 103.4 lakh traders (or 91.3% traders) traded only Options and 0.70 lakh traders (or 0.6% traders) traded only Futures. 9.1

lakh individual traders (or 8.1% of traders) traded both Futures as well as Options. Which means, 112.5 lakh traders (or 99.4% of traders) traded Options at least once during these three years.

- In terms of profit and loss, out of these 113.2 lakh individual F&O traders, 105.1 lakh individuals (or 92.8% of total traders) incurred net losses in F&O combined for all three years. Alternatively, it means, only 7.2% of F&O traders made profit, when looked over a period of three years.
- Individual category traders made an average per person loss of ₹1.60 lakh over the period of three years. For the loss-makers, the average loss was about ₹2 lakh per person, whereas for the profit-makers, the average per person profit was ₹3 lakh per person.

Table 8: P&L of Profit-Makers vs Loss-Makers during FY22-FY24 combined

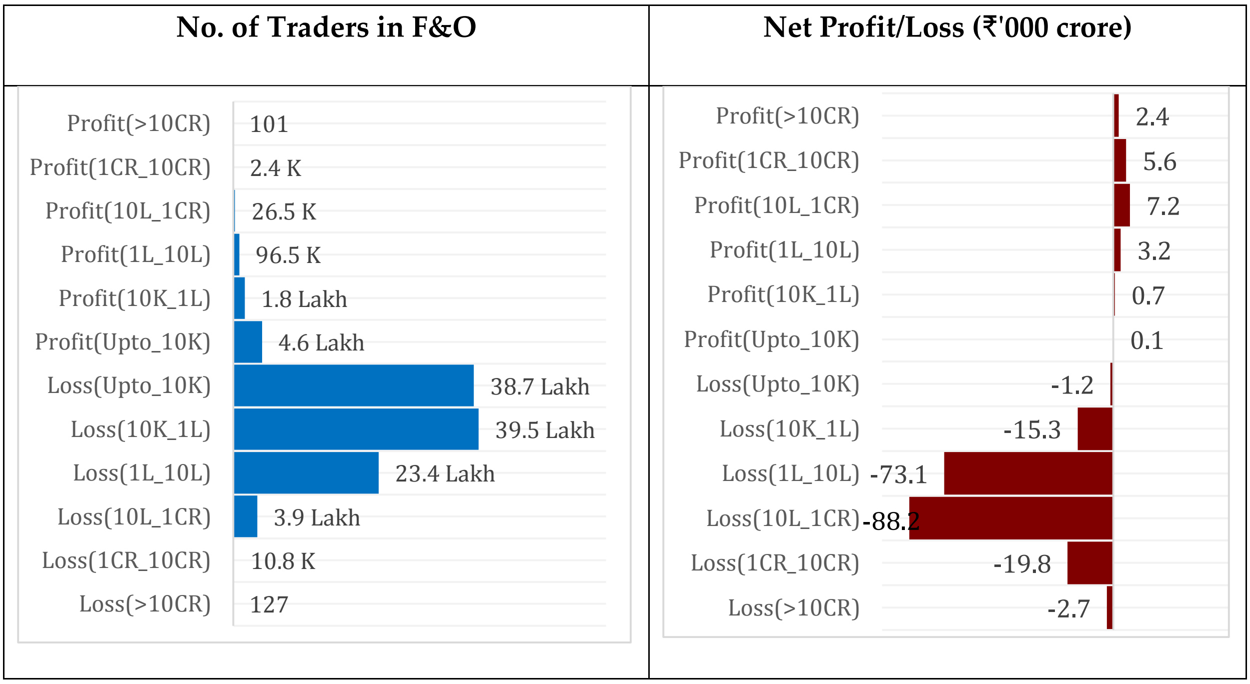
Category	**No of Traders**	**Gross Profit**	**Trans. Cost**	**Trans Cost** (as % of Gross Profit)	**Net Profit**	**Avg. Net Profit** (Per Person)
	(in Lakh)	(₹ Crore)	(₹ Crore)	(in %)	(₹ Crore)	(₹)
Profit-Makers	8.1	33,114	8,094	24.4%	25,020	3,08,889
Loss-Makers	105.1	-1,65,018	41,386	-25.1%	-2,06,404	-1,96,388
Overall	**113.2**	**-1,31,904**	**49,480**	**25.0%#**	**-1,81,384**	**-1,60,233**

Note: # - Computed as transaction cost / (absolute amount of gross profit and gross loss)

<u>Distribution of Losses in F&O-</u>

- Distribution of losses is highly skewed towards the loss-makers. While about 10,800 traders made losses of more than ₹1 crore in F&O segment combined for all three years, only about 2,500 traders made profit of more than ₹1 crore.
- These top 10,800 traders in terms of highest losses, incurred an average loss of more than ₹2 crore per person over the period of three years.
- About 4 lakh traders, who were top 3.5% of loss-makers, contributed to 55.3% of total losses. These traders incurred an average loss of about ₹28 Lakh per person over the period of three years.
- Only 1.1% of total traders made more than ₹1 Lakh in profit in F&O over the period of three years.

Chart 9: Distribution of Profit and Loss Makers in F&O during FY22 to FY24



<u>Distribution of Losses in Options-</u>

- For this section, trader's categories are classified based on the basis of their premium turnover in the Options segment and they are defined as follows,
  a) **Small-Size**: Turnover less than ₹1 lakh over three years' period
  b) **Mid-Size**: Turnover between ₹1 lakh - ₹1 Crore over three years' period
  c) **High-Value**: Turnover greater than ₹1 Crore over three years' period

- This section focuses solely on the Options segment, which represents 99.4% of all F&O traders. It was observed that about 30% of all option traders were "*Small-Size*" traders. These "*Small-Size*" traders incurred ₹1,003 crore in net losses in Options over the period of three years. While, their contribution to total turnover was 0.04%, the contribution to total losses of Individual category was 0.6%.
- "*Mid-Size*" traders represented 53% of total option traders (60 lakh option traders). These traders incurred a total loss of ₹32,251 crore. While their contribution to turnover was 6.6%, contribution to total losses was 18.4%.
- "*High-Value*" traders represented 17% of total option traders (19.3 lakh option traders). These traders incurred a total loss of ₹1,41,641 crore. While their contribution to turnover was 93.4%, contribution to total losses was 81.0%.
- More than 80% losses of Individual traders in Options segment were incurred by 17% "*High-Value*" Traders.

- It was observed that higher trading activity was associated with a higher percentage of loss-makers. The proportion of loss-makers was the highest (95% of total traders) in "*High-Value*" traders' category, compared to "*Mid-size*" traders (93.8% loss-makers) and "*Small-size*" traders (91.5% loss-makers).

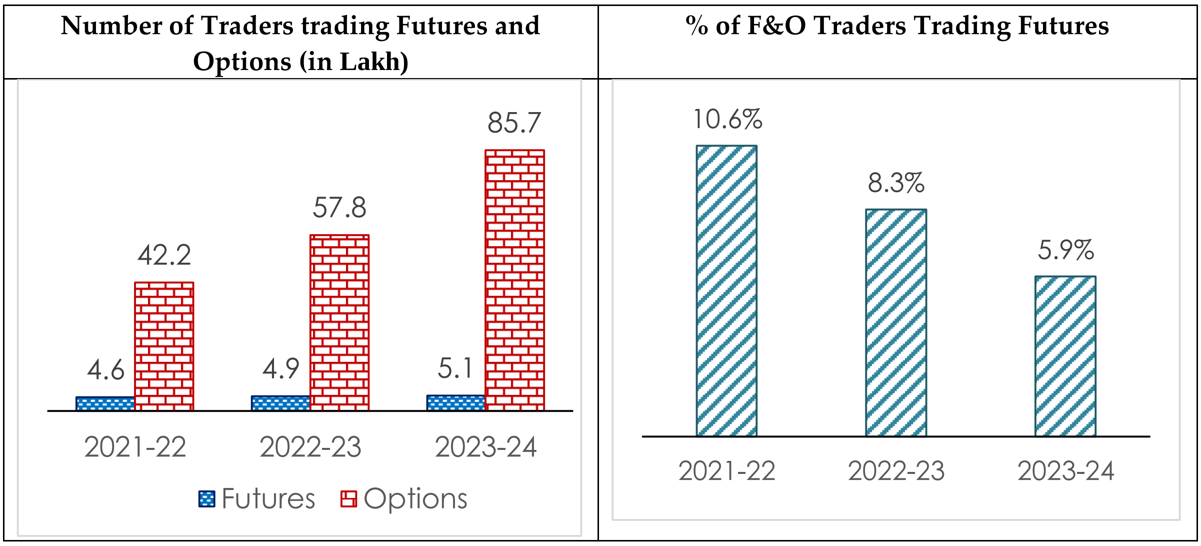
Table 9: Summary of Net Profit and Loss in Options segment during FY22-FY24

Category	Combined Premium Turnover (FY22 to FY24)	Net P&L (₹Crore)	No of Traders (in Lakh)	No of Loss Makers (in Lakh)	Loss Makers (in %)
Small-Size Traders	Upto ₹ 1 Lakh	-1,003	33.2	30.4	91.5%
Mid-Size Traders	₹ 1L - ₹ 1CR	-32,251	60.0	56.3	93.8%
High-Value Traders	> ₹ 1 CR	-1,41,641	19.3	18.4	95.0%
Total		**- 1,74,895**	**112.5**	**105.1**	**93.3%**

5.6. Product Preference

- 99.3% of the F&O traders traded Options at least once during FY24. 94.2% of the F&O traders traded only Options and 5.1% traders traded both Futures as well as Options. 0.7% of the F&O traders traded only Futures. The percentage share of F&O traders, who traded Futures at least once during a year, has come down to 5.9% in FY24 from 10.6% in FY22.

Chart 10: Product Preference of F&O Traders



5.7. Average Trade Size – Options Segment

In recent past, the number of option traders has gone up significantly from 42.2 lakh in FY22 to 85.7 lakh in FY24. In line with this trend, the average number of transactions in Options segment increased by 27% over FY22 to 870 transactions per person in FY24. Similarly, the average per person turnover (traded value) also increased by 15% over FY22 to ₹ 1 crore per person in FY24. However, during the same period, the average trade size has declined by 9% from ₹ 13,055 to ₹ 11,824 in FY24.

Table 10: Per Person Summary Trade Statistics in Options Segment

Year	Traders	Average No of Transactions per Person	Average Net Losses per Person	Average Turnover per Person	Average Trade Size
	(in Lakh)	(Number)	(₹)	(in ₹ Lakh)	(₹)
2021-22	42.2	687	-88,976	90	13,055
2022-23	57.8	924	-1,02,929	120	13,036
2023-24	85.7	870	-90,863	103	11,824

5.8. Size Wise Trends – Options Segment

Small-Size Traders

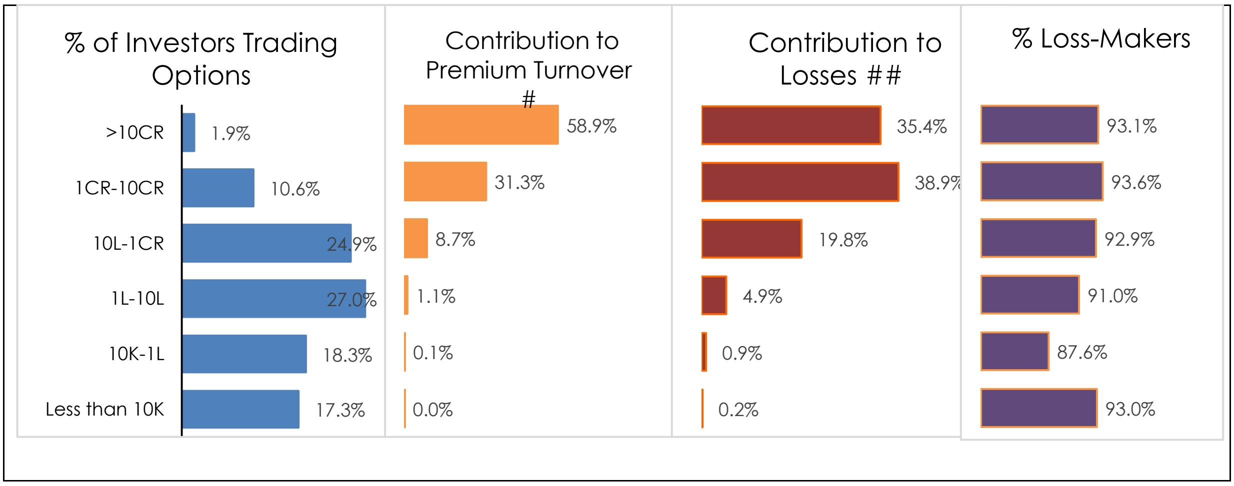
- In FY24, about 36% of all the option traders (about 30.5 lakh traders) were '*Small-traders*' (traded less than ₹ 1 lakh in Options premium turnover).
- These '*Small-traders*' contributed 0.1% to total Options' premium turnover and 1% to total losses of Individual category investors.
- 90.2% of these '*Small-traders*' incurred losses. The average per person loss of these 'Small-traders' was ₹ 2,600 per person. Total losses of these '*Small-traders*' in Options segment were about ₹ 788 crore in FY24.

High Value Traders

- About 1.6 lakh traders (1.9% of F&O traders) traded for more than ₹ 10 crore in options premium turnover in FY24. They contributed 58.9% to Option premium turnover and 35.4% to losses of the Individual category investors. 93.1% of these traders incurred losses and the average loss was ₹17.2 lakh per person.

- About 10.6 lakh traders (12.5% of F&O traders) traded for more than ₹1 crore in options premium turnover in FY24. They contributed 90.2% to Options premium turnover and 74.3% to losses of the Individual category investors. 93.5% of these traders incurred losses and the average loss was ₹5.4 lakh per person. **Details in Chart below and Annexure table 6.1(A) and 6.1(B)**.

Chart 11: Trading Activity-wise Trends (based on Premium Turnover Categories)



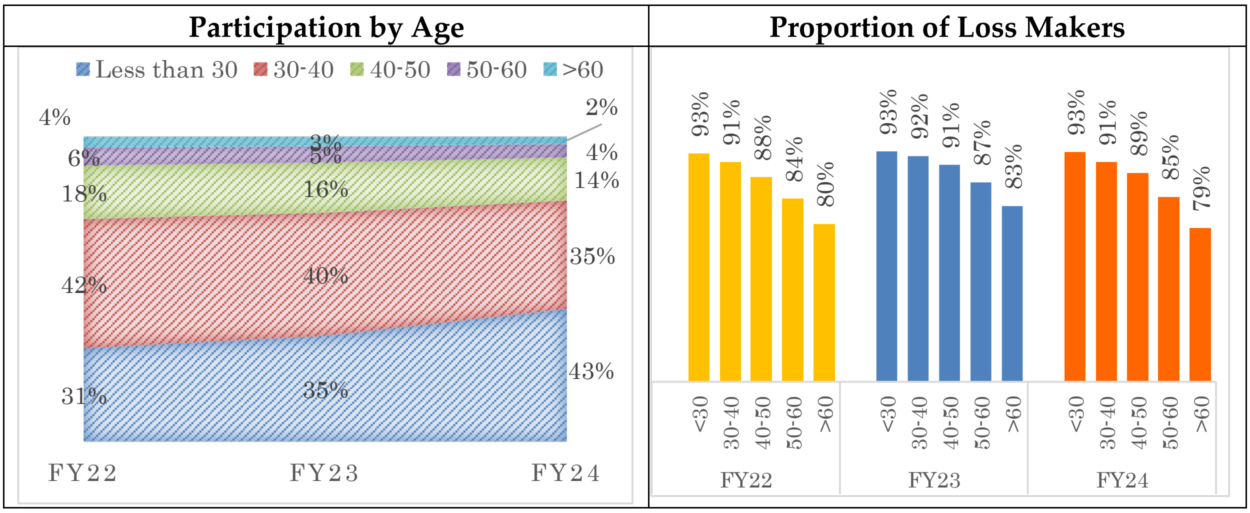
Note: 1. Trading activity categories are based on the premium turnover; 2. # - refers to contribution to Premium Turnover of Individual Category; 3. ## - refers to contribution to Net Losses of Individual Category

5.9. Age Wise Trends

- The proportion of young traders (having age less than 30 years) has increased significantly from 31% in FY23 to 43% in FY24.

- It was observed that the age group of the traders was inversely proportional to the possibility of loss. As traders age increased, the percentage of loss-makers in F&O declined, indicating relative risk aversion, better risk management or the experience coming into play for elderly traders compared to young traders. The percentage of loss-makers for young traders (age less than 30 years) was higher (93% in FY24) as compared to other age groups. On the other hand, the percentage of loss-makers in elderly traders (age greater than 60 years) was relatively lower at 79% in FY24.

Chart 12: Age wise Trends



5.10. Income Wise Trends

- For this section, F&O traders were classified in the following income brackets,
  - a) **Low Income**: declared annual income less than ₹5 lakh
  - b) **Mid Income**: declared annual income between ₹5 lakh to ₹25 lakh
  - c) **High Income**: declared annual income less than ₹25 Lakh to ₹ 1 Crore
  - d) **Very High Income**: declared annual income greater than ₹1 Crore

- Nearly 76% of the Individual F&O traders (i.e. 65.4 lakh F&O traders) had declared annual income of less than ₹5 lakh and ~ 94% of the Individual F&O traders (i.e. 80.5 lakh F&O traders) had declared annual income of less than ₹10 lakh in FY24.

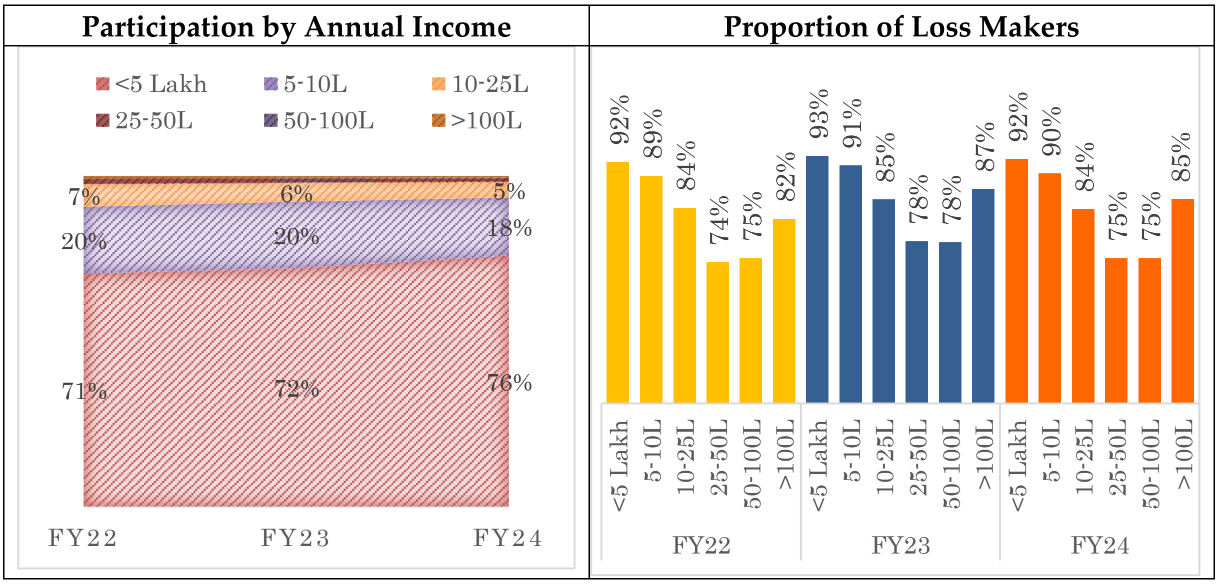
- The proportion of "*Low Income*" traders has increased significantly from 71% in FY22 to 76% in FY24.

- "*Mid Income*" traders' category is the second biggest category with 19.2 lakh traders (i.e. 18% of F&O traders). So, Small and Mid-Income category combined represented almost 98% of Individual F&O traders.

- The percentage of loss-makers for "*Low Income*" traders' category was the highest (92.2% in FY24) as compared to the average proportion of loss-makers (91.1% in FY24) and also compared to other income groups.

- With an exception of "*Very High Income*" Individual F&O traders, the percentage of loss-makers in F&O were inversely proportional to their income category. As traders' annual income increased, the percentage of loss-makers in that category had declined.
- The percentage of loss-makers from "*High Income*" traders' category was the lowest (about 75% loss-makers) amongst all income categories.

Chart 13: Income wise Trends



- "*Very High Income*" F&O traders actually made consolidated net profit of ₹259 crore in FY24, compared to all other categories which made consolidated net losses in FY24. Although, about 85% of total traders from this category too incurred losses.
- In terms of average per person P&L, "*High Income*" traders made average losses of ₹2.6 lakh per person, followed by "*Mid Income*" traders (average loss of ₹1.5 lakh per person), "*Low Income*" traders (average loss of ₹65 thousand per person). "*Very High Income*" traders earned an average profit of ₹96 thousand per person.

Table 11: Income wise Trends in F&O during FY24

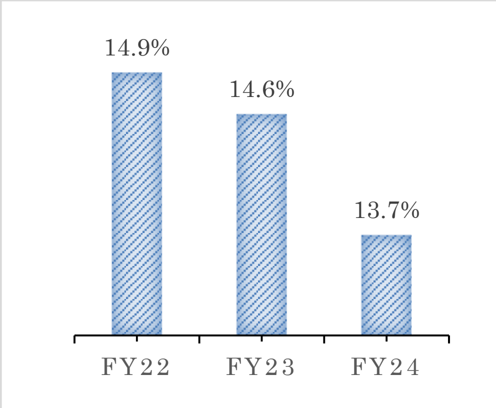
Category	Annual Income	Net P&L	No of Traders	No of Loss Makers	Loss Makers	Average P&L
		(₹ Crore)	(in Lakh)	(in Lakh)	(in %)	(₹ '000)
Low Income	Less than ₹5 Lakh	-42,790	65.4	60.2	92.2%	-65.5
Mid Income	₹5 Lakh - ₹25 Lakh	-29,293	19.2	17.0	88.3%	-152.5
High Income	₹25 Lakh to ₹1 Crore	-2,786	1.1	0.8	75.0%	-258.0
Very High Income	> ₹1 Crore	259	0.3	0.2	85.2%	95.9
Not Available	Not Available	-201	0.3	0.3	87.9%	-60.9
Total		**-74,811**	**86.3**	**78.5**	**91.1%**	-86.7

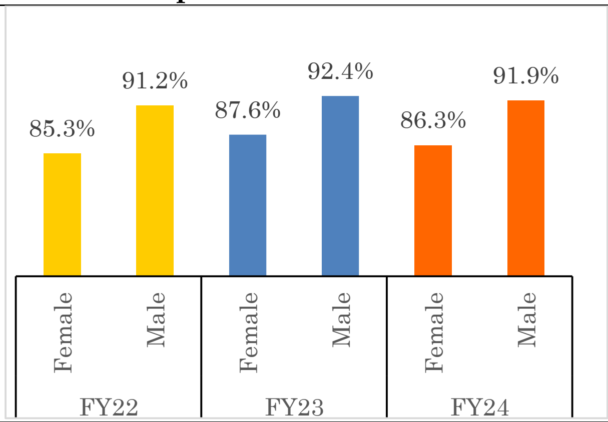
5.11. Gender Wise Trends

- The proportion of 'Female' traders participating in F&O has decreased from 14.9% in FY22 to 13.7% in FY24.
- Compared to 'Male' traders, the proportion of 'Female' loss-making traders in F&O was lower across the years. While 91.9% 'Male' traders made losses in F&O in FY24, 86.3% percentage of 'Female' traders made losses in F&O.
- In terms of average profit and loss, the average net losses by 'Female' traders were relatively lesser as compared to 'Male' traders. In FY24, the Female traders made an average per person loss of ₹75,973, while 'Male' traders incurred an average loss of ₹88,804.

Chart 14: Gender wise Trends

Participation of Female Traders	Proportion of Loss Makers





5.12. Profit-Makers vs. Loss-Makers

- Throughout the last three years, the Loss-Makers made more losses than the profits made by Profit-Makers in absolute terms. In FY24, the Loss-Makers made losses of ₹1.20 lakh per person, whereas Profit-Makers made profits of ₹1.03 lakh per person.
- Profit-Makers incurred ~22% transaction costs as percentage of gross profits (i.e. trading profits before accounting for transaction costs) in FY24. Loss-Makers incurred ~27% transaction costs, in addition to their gross loss (i.e. trading loss before accounting for transaction costs) in FY24.

Table 12: Profit and Loss of Profit-Makers vs Loss-Makers

Year	Category	No of Traders	Gross Profit	Trans. Cost	Trans Cost (as % of Gross Profit)	Net Profit	Avg. Net Profit (Per Person)
		(in Lakh)	(₹ Crore)	(₹ Crore)	(in %)	(₹ Crore)	(₹)
FY22	Profit-Makers	5.8	7,905	1,822	23.0%	6,083	1,04,519
	Loss-Makers	36.1	-38,683	8,225	-21.3%	-46,908	-1,29,975
FY23	Profit-Makers	7.6	8,497	2,618	30.8%	5,879	77,152
	Loss-Makers	50.0	-57,262	14,364	-25.1%	-71,626	-1,43,223
FY24	Profit-Makers	12.7	16,712	3,654	21.9%	13,058	1,02,900
	Loss-Makers	72.9	-69,073	18,797	-27.2%	-87,870	-1,20,469

5.13. New Traders vs. Regular Traders

- For this section, traders' categories are defined as follows,
  a) **New Traders:** Traders who traded for the first time in three years in FY24 in the equity F&O segment.
  b) **Regular Traders:** Traders who traded for all three consecutive years i.e. FY22-FY24 in the equity F&O segment.
  c) **Others**: All other traders.

- Almost half (42 lakh traders) of all the F&O traders were "*New Traders*" in FY24. 92.1% of these "*New Traders*" experienced net losses and on an average incurred a net loss of ~ ₹46,000 per person in FY24.

- Almost 25% of all the traders were "*Regular Traders*". 88.7% of these "*Regular Traders*" experienced losses and on an average incurred a net loss of ~ ₹1,50,000 per person in FY24.

Table 13: Profit and Loss of New Traders vs Regular Traders

Category of Trader	**No of Traders**	**Net P&L**	**Avg P&L Per Person**	**% Loss-Makers**	**% of Total Traders**	**Contri. to Turnover**	**Contri. to Losses**
	(Lakh)	(₹ Crore)	(₹)	(%)	(%)	(%)	(%)
New Traders (First time traded in FY24)	41.9	-19,337	-46,139	92.1%	48.6%	14.3%	25.8%
Regular Traders (traded in FY22, FY23 and FY24)	22.4	-33,767	-1,50,477	88.7%	26.0%	63.2%	45.1%
Others	21.9	-21,708	-99,078	91.4%	25.4%	22.5%	29.0%
Total	**86.3**	**-74,812**	**-86,728**	**91.1%**	**100.0%**	**100.0%**	**100.0%**

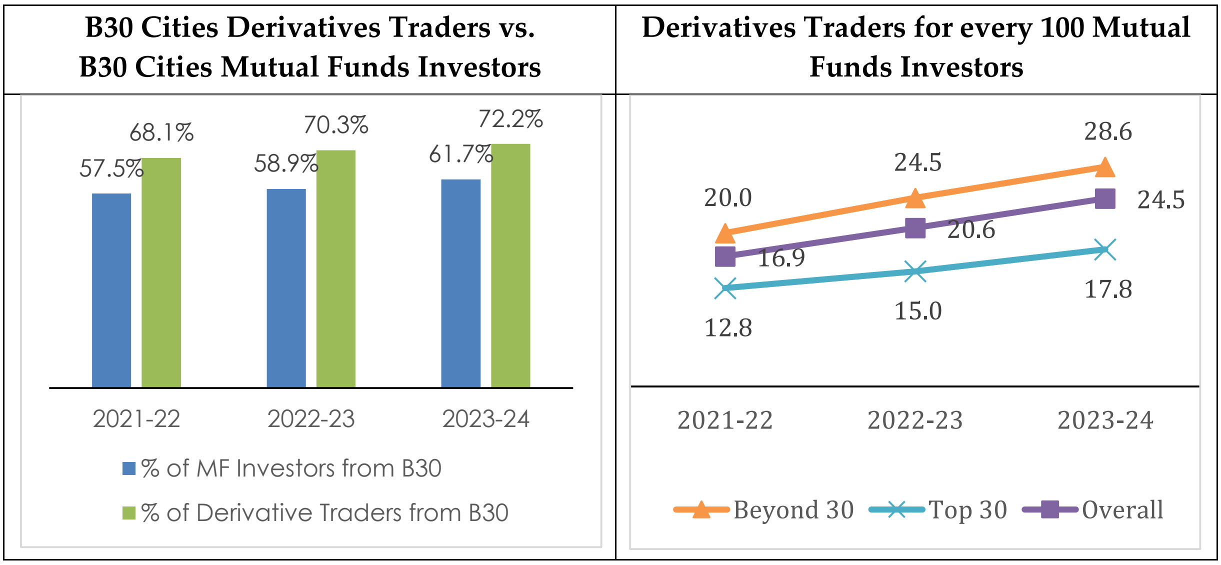
5.14. Geographic Spread

- A rising number of F&O traders in recent years has primarily been driven by increased participation of traders from beyond Top30[8] cities (B30 cities). In FY24, nearly three quarters of the total F&O traders (72.2% of total traders) belonged to the B30 cities, compared to 61.7% mutual funds investors, who belonged to the B30 cities.

- In FY24, the F&O traders from B30 cities contributed 51.3% to total turnover of the Individual category, and represented 68.1% total losses of the category. For the reference, it may be noted that, as of August 2024, about 27% of Individual investors' Mutual Fund assets were from B30 Locations[9]. This shows, that investors from B30 cities are relatively more active in the F&O segment than Mutual Funds, compared to T30 cities investors.

- It was also observed that the ratio of F&O trader to Mutual Fund investor is higher for B30 cities (28.6% in FY24), compared to T30 cities (17.8% in FY24). Meaning, for every 100 Mutual Fund investors from B30 cities, there were 28.6 F&O traders from B30 cities and 17.8 F&O traders from T30 cities for every 100 MF investors from T30 cities.

Chart 15: Trends in Derivatives Traders from B30 Cities



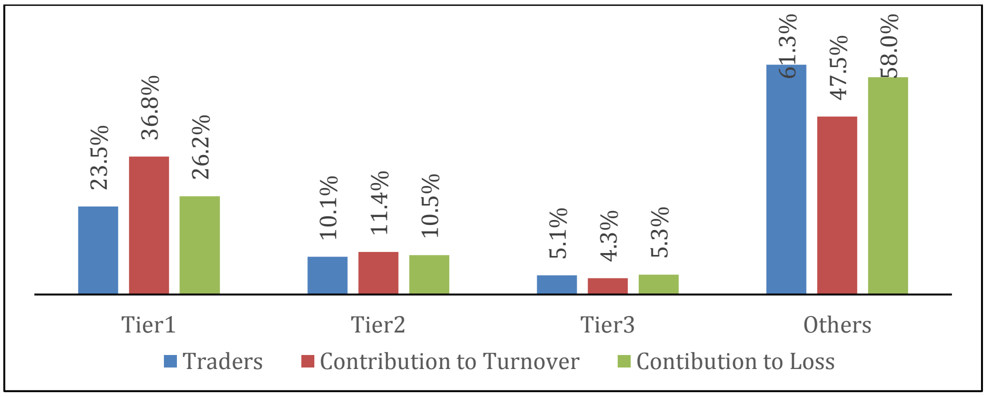
Note: At the end of March 2024, there were about 3.5 crore unique individual Mutual Fund investors in India.

[8] Top30 refers to the top 30 geographical locations in India and B30 refers to the locations beyond the top 30. The Top 30 cities considered for this study are as specified by AMFI.

[9] Report by AMFI on B30 Assets; https://www.amfiindia.com/Themes/Theme1/downloads/home/B30vsT30.pdf

- During FY24, almost one fourth (23.5%) of all the F&O traders belonged to the Tier I Cities. Traders from Tier I cities had higher contribution to Turnover (36.8%) but lower contribution to losses (26.2%). Traders from beyond Tier I, II and III cities[10], contributed lower to turnover but had higher contribution to losses. In FY24, the average per person loss was ~₹ 96,800 for Tier I cities Traders, followed by Tier II (~ ₹ 90,400), Tier III (~ ₹ 90,100) and Others (~ ₹ 82,000).

Chart 16: Trends in Derivatives Traders from Tier I, II and III cities



- More than 50% of all the F&O traders, who traded in FY24, were from top four states namely Maharashtra, Gujarat, Uttar Pradesh and Rajasthan. 21.7% of F&O traders (or 18.8 lakh F&O traders) were from Maharashtra followed by Gujarat (10.1 lakh or 11.6%), UP (9.3 lakh, or 10.7%) and Rajasthan (5.4 lakh or 6.2%). **Details in Annexure 6.2.**
- Amongst 15 major states, the highest 2-year percentage growth in the number of F&O traders was seen in UP (186% growth in FY24 over FY22), followed by Bihar (179%), West Bengal (177%) and Punjab (162%). **Details in Annexure 6.2.**
- In terms of state-wise pattern of average per person loss, it was observed that all the top four states with highest average per person loss were from southern region of India, namely Telangana (1.97 lakh per person loss), followed by Andhra Pradesh (1.45 lakh per person), Tamil Nadu (1.37 lakh per person) and Karnataka (1.35 lakh per person).

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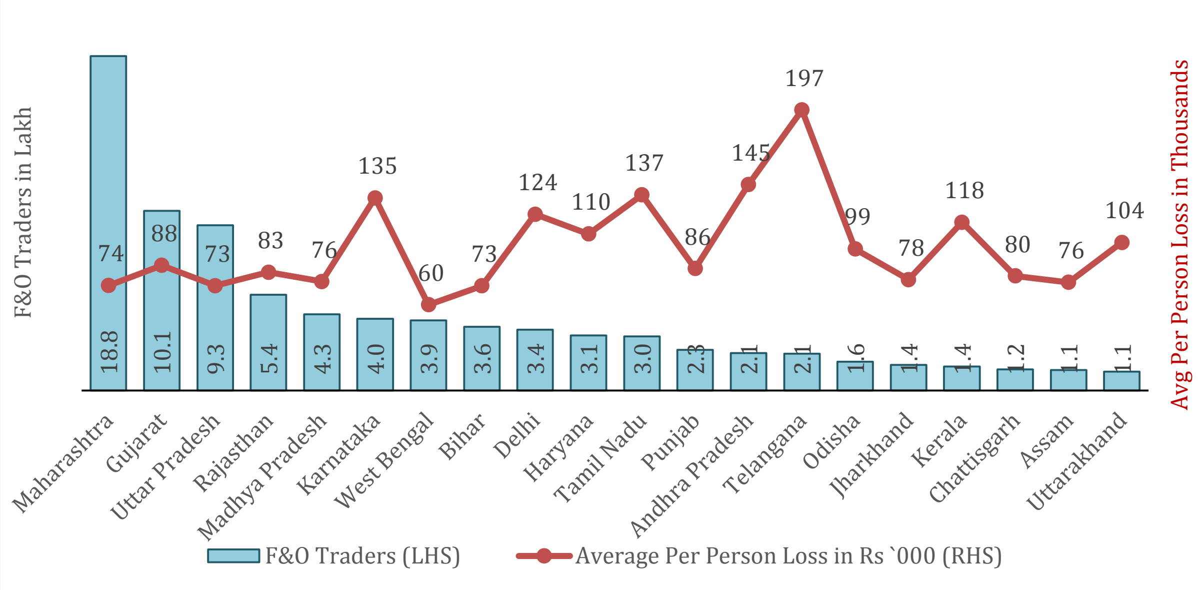
[10] *Tier I (The following 7 cities considered - Banglore, Delhi, Chennai, Hyderabad, Mumbai, Pune, Kolkata).*
Tier II (The following 20 cities considered - Amritsar, Bhopal, Bhubaneswar, Chandigarh, Faridabad, Ghaziabad, Jamshedpur, Jaipur, Kochi, Lucknow, Nagpur, Patna, Raipur, Surat, Visakhapatnam, Agra, Ajmer, Kanpur, Mysuru, Srinagar),
Tier III (The following 19 cities considered - Etawah, Roorkee, Rajamundry, Bhatinda, Hajipur, Rohtak, Hosur, Gandhinagar, Junagadh, Udaipur, Salem, Jhansi, Madurai, Meerut, Mathura, Bikaner, Cuttack, Vijayawada, Nashik).

Chart 17: State Wise F&O Traders and their Per Person Loss in F&O in FY24



5.15. Trading Behavior and Persistence

- As many as 76.3% of the loss-making traders persisted with the trading in F&O, in spite of making losses in preceding two consecutive years. Out of 24.4 lakh investors who made losses in both FY22 and FY23, 18.6 lakh traders continued to trade in third year, while 5.8 lakh traders stopped trading in the third year. However, only 8.3% of traders, who persisted to trade in F&O in third year in spite of losses in two preceding years, succeeded to make profit in third year.

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6. ANNEXURES

6.1. Trends based on Trading Activity in Options in FY24

Table 6.1 (A) – Distribution of Traders

Categories based on Premium Turnover	No of Traders	Per Person Average P&L	Net Losses
	(in Lakh)	(in ₹)	(in ₹ crore)
Less than 10K	14.8	-819	-121
10K-1L	15.7	-4,251	-667
1L-10L	23.2	-16,340	-3,786
10L-1CR	21.4	-72,094	-15,392
1CR-10CR	9.1	-3,34,201	-30,312
>10CR	1.6	-17,22,188	-27,555

Table 6.1 (B) – Percentage Contribution to Turnover and Losses

Categories based on Premium Turnover	% of total Investors	% share in Premium Turnover	% share in Notional Turnover	Contribution in Losses	% of Loss-Makers
Less than 10K	17.3%	0.0%	0.0%	0.2%	93.0%
10K-1L	18.3%	0.1%	0.2%	0.9%	87.6%
1L-10L	27.0%	1.1%	1.7%	4.9%	91.0%
10L-1CR	24.9%	8.7%	10.2%	19.8%	92.9%
1CR-10CR	10.6%	31.3%	33.3%	38.9%	93.6%
>10CR	1.9%	58.9%	54.6%	35.4%	93.1%

6.2. State-wise distribution of F&O Traders

State Name	2021-22	2022-23	2023-24	Percent Change (FY24 over FY22)
Maharashtra	11.68	14.56	18.78	61%
Gujarat	4.88	6.83	10.09	107%
Uttar Pradesh	3.25	5.25	9.28	186%
Rajasthan	2.17	3.21	5.37	147%
Madhya Pradesh	1.81	2.63	4.28	136%
Karnataka	2.5	3.05	4.02	61%
West Bengal	1.42	2.26	3.94	177%
Bihar	1.28	2.02	3.57	179%
Delhi	1.59	2.16	3.41	114%
Haryana	1.38	1.99	3.1	125%
Tamil Nadu	1.96	2.52	3.04	55%
Punjab	0.87	1.36	2.28	162%
Andhra Pradesh	1.61	1.82	2.11	31%
Telangana	1.54	1.72	2.07	34%
Odisha	0.78	1.08	1.62	108%
Jharkhand	0.58	0.86	1.43	147%
Kerala	0.76	1.07	1.35	78%
Chattisgarh	0.48	0.7	1.19	148%
Assam	0.32	0.56	1.14	256%
Uttarakhand	0.39	0.61	1.05	169%
Himachal Pradesh	0.22	0.34	0.6	173%
Jammu and Kashmir	0.17	0.26	0.43	153%
Chandigarh	0.08	0.12	0.17	113%
Goa	0.08	0.11	0.16	100%
Tripura	0.04	0.06	0.11	175%
Dadra and Nagar Hav.	0.02	0.04	0.09	350%
Manipur	0.08	0.07	0.07	-13%
Andaman and Nico.In.	0.02	0.04	0.06	200%
Pondicherry	0.03	0.03	0.04	33%
Daman and Diu	0.01	0.02	0.03	200%
Megalaya	0.01	0.02	0.03	200%
Nagaland	0.01	0.01	0.02	100%
Arunachal Pradesh	0.01	0.02	0.02	100%
Sikkim	0.01	0.01	0.02	100%
Mizoram	0	0.01	0.01	NA
Lakshadweep	0	0	0	NA
Others #	0.7	0.93	1.28	89%
Total	**42.74**	**58.35**	**86.26**	**102%**

Note: 1. Gray color represent categories are not color coded as the base is very small. 2. # means data not available.

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