

Estimate change

TP change

Rating change



Motilal Oswal values your support in the Asiamoney Brokers Poll 2022 for India Research, Sales, Corporate Access and Trading team. We [request your ballot](#).



Bloomberg	ANGELONE IN
Equity Shares (m)	83
M.Cap.(INRb)/(USDb)	107 / 1.3
52-Week Range (INR)	2022 / 992
1, 6, 12 Rel. Per (%)	-1/9/20
12M Avg Val (INR M)	1179
Free float (%)	56.0

Financial & Valuation (INR b)

Y/E March	2022	2023E	2024E
Revenues	16.8	20.6	23.1
Opex	8.3	10.8	12.0
PBT	8.4	9.6	10.8
PAT	6.3	7.2	8.1
EPS (INR)	75.4	86.7	97.9
EPS Gr. (%)	109.7	15.0	12.9
BV/Sh. (INR)	191.2	247.6	311.2

Ratios (%)

C/I ratio	49.2	52.2	52.0
PAT margin	37.1	34.9	35.1
RoE	46.0	39.5	35.0
Div. Payout	35.9	35.0	35.0

Valuations

P/E (x)	16.9	14.7	13.0
P/BV (x)	6.7	5.1	4.1
Div. Yield (%)	2.1	2.4	2.7

Shareholding pattern (%)

As On	Mar-22	Dec-21	Mar-21
Promoter	44.0	43.7	44.6
DII	10.3	8.6	12.0
FII	9.0	5.4	5.0
Others	36.7	42.3	38.5

CMP: INR1,284
TP: INR1,750 (+36%)
Buy

Decent performance amid tough industry conditions

- ANGELONE's PAT declined 11% QoQ, albeit, grew 50% YoY to INR1.8b (8.6% beat) in 1QFY23. The beat in profitability was led by a 4% beat in operating revenue, which rose 3% QoQ and 62% YoY to INR4.2b. The 14% beat in net interest income and 4% beat in F&O revenue drove the outperformance.
- The equity market volatility led to a decline in the active client ratio to 38.5% in 1QFY23 from 40.2% in 4QFY22.
- Operating expense (Opex) grew 53% YoY and 16% QoQ to INR2.7b (in line), led by a 71% YoY jump in employee costs.
- C/I ratio spiked to 51.6% (better than our estimate of 54%) v/s 45% in 4QFY22. It remained flat YoY.
- The number of orders declined to 207m in 1QFY23 from 211m in 4QFY22.
- The Board has recommended a dividend of INR7.65 per share.
- Our FY23 earnings estimate remains unchanged as a cut in volume assumption is offset by higher interest income. However, we reduce our earnings estimates for ANGELONE by 4.8% in FY24 as we moderate our growth assumptions for order volumes. We maintain our **BUY rating** on the stock with a revised TP of INR1,750 (premised on 18x FY24E EPS).

Beat on interest revenue; F&O share continues to rise

- ANGELONE's operating revenue was subdued, with a 3% QoQ and 62% YoY growth to INR4.2b (4% ahead of our estimate), driven by healthy interest income. Gross broking business declined marginally on a sequential basis led by a 23% QoQ decrease in cash broking revenue to INR659m. This was partially offset by a 3% QoQ growth in the F&O segment to INR3.8b. The share of the F&O segment in gross broking revenue further increased to 81% in 1QFY23 from 78% in 4QFY22.
- On a quarterly basis, average revenue per client dipped to INR453 in 1QFY23 from INR513 in 4QFY22.
- Other income declined 8% QoQ, but grew 18% YoY to INR0.9b (in line).

Higher Opex drives an increase in the C/I ratio

- Total Opex grew 16% QoQ and 53% YoY to INR2.7b (in line). Muted revenue performance and an increase in expenses led to an expansion in C/I ratio to 51.6% from 45.1% YoY in 4QFY22.
- Employee costs jumped 71% YoY and 36% QoQ to INR1b (8% ahead of our estimate). The sharp jump can be attributed to: 1) hiring of 20 personnel in the digital team in 1QFY23, taking its digital talent pool to 630; 2) ESOP expenses; and 3) annual increment and variable pay. Employee cost, as a percentage of operating revenue, climbed to 20% from 15% in 4QFY22.
- Administration costs rose 5% QoQ to INR1.6b (7% below our estimate). This was led by a slowdown in client acquisition activity.

Prayesh Jain - Research Analyst: (Prayesh.Jain@MotilalOswal.com)

Research Analyst: Nitin Aggarwal (Nitin.Aggarwal@MotilalOswal.com) | Urmila Bohra (Urmila.Bohra@motilaloswal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report.

Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

Highlights from the management commentary

- ANGELONE enjoyed 34% market share in new client additions in Jun'22.
- ESOP cost for FY23 is expected to be around INR600m, of which INR130m was accounted for in 1QFY23. Employee cost run-rate is likely to remain in the current range.
- Cost of acquisition is expected to start flattening out in the next few quarters.

Marginal decline in ADTO market share as well as the number of orders

- ADTO stood at INR9.4t, up 9% QoQ and doubled on a YoY basis. However, its market share contracted to 20.8% in 1QFY23 from 21% in 4QFY22. The number of orders declined sequentially to 207m in 1QFY23 from 211m in 4QFY22.
- This was led by a fall in its F&O market share to 20.8% from 21.1% in 4QFY22. Its F&O market share was the lowest in the last six quarters. F&O ADTO, though, grew 9% QoQ and 109% YoY to INR9.2t. However, the number of orders rose to 153m in 1QFY23 from 147m in 4QFY22. Revenue per order declined marginally to INR24.9 in 1QFY23 from INR25.3 in 4QFY22.
- Cash ADTO market share remained stable sequentially at 13.9%. However, cash ADTO dipped to INR39b (down 35% YoY and 15% QoQ) in 1QFY23. The number of orders fell to 48m in 1QFY23 from 57m in 4QFY22. Revenue per order dropped 9% QoQ to INR13.7 in 1QFY23.
- ANGELONE continued to strengthen its position in the Commodity segment as its market share expanded to 44.6% in 1QFY23 from 42.2% in 4QFY22.

Constant focus on tech innovation

ANGELONE continues to invest in building its digital capabilities. These include:

- The **Super app**, which will have faster interactions due to a refined and scalable broadcast, better peak-time order handling capabilities, biometric-driven instant login, real-time billing, etc. It is significantly predictable, ensuring the certainty of transactions. The company has also simplified the app by removing high friction areas such as bank account addition during the KYC journey.
- **Seamless KYC 2.0:** The super app will have an improved UX for faster and a more efficient DIY account opening journey.
- **Simplified homepage and trade execution journey:** The app is designed to have a simplified homepage, with features such as market performance, client portfolio performance, fund transfer option, third-party distribution services, etc.
- **Analytics of portfolio:** This will analyze the portfolio based on: 1) market capitalization, 2) sectors, and 3) holding concentration.
- **Transparent back office:** ANGELONE has revamped its entire post-trade services, with DASH as a new section. It will contain a one-tap view of various trade/non-trade charges.
- **An easy-to-use web platform for customers:** The web platform will have tabs for the watch list, portfolio, funds, reports, advisory, and markets.

Reduce FY24E EPS by 4.8%; however, retain BUY on reasonable valuations

ANGELONE is a perfect play on: 1) the financialization of savings and 2) digitization. It demonstrated a decent performance in 1QFY23, even amid challenging market conditions. As guided, the management continues to invest in technology and strengthen its position. Considering the macro environment, most of the discount

brokers are looking to reduce their investments towards client acquisitions to ensure healthy profitability. The same can be scaled up as and when the environment is relatively conducive. Our FY23 earnings estimate remains unchanged as a cut in volume assumption is offset by higher interest income. However, we reduce our earnings estimates for ANGELONE by 4.8% in FY24 as we moderate our growth assumptions for order volumes. We maintain our **BUY rating** on the stock with a revised TP of INR1,750 (premised on 18x FY24E EPS).

Quarterly Performance

Y/E March	FY22				FY23				1QFY23E	(INR m)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		Act v/s Est. (%)
Revenue from Operations	2,600	2,992	3,512	4,064	4,203	4,101	4,060	4,074	4,030	4.3
Other Income	807	888	936	1,031	948	1,030	1,086	1,098	936	1.3
Total Income	3,407	3,880	4,448	5,095	5,151	5,131	5,145	5,171	4,966	3.7
Change YoY (%)	110.4	83.3	100.5	68.9	51.2	32.3	15.7	1.5	45.8	5.5
Operating Expenses	1,744	2,040	2,191	2,298	2,660	2,704	2,712	2,677	2,681	-0.8
Change YoY (%)	88.9	89.9	94.6	48.0	52.5	32.6	23.8	16.5	53.8	-1.3
Depreciation	41.0	45.3	48.3	52.3	64.5	65.5	66.5	67.5	53.3	21.0
PBT	1,622	1,795	2,209	2,744	2,427	2,362	2,367	2,426	2,231	8.8
Change YoY (%)	151.1	80.1	111.2	92.8	49.6	31.6	7.2	-11.6	37.5	12.1
Tax Provisions	408	451	562	696	611	590	592	603	558	9.5
Net Profit	1,214	1,343	1,647	2,048	1,816	1,771	1,775	1,824	1,673	8.6
Change YoY (%)	151.8	80.2	124.7	101.0	49.6	31.8	7.8	-11.0	37.8	11.8
Key Operating Parameters (%)	20.2									
Cost to Income Ratio	51.2	52.6	49.3	45.1	51.6	52.7	52.7	51.8	54.0	-237bps
PBT Margin	47.6	46.3	49.7	53.9	47.1	46.0	46.0	46.9	44.9	219bps
Tax Rate	25.2	25.1	25.4	25.4	25.2	25.0	25.0	24.8	25.0	16bps
PAT Margins	35.6	34.6	37.0	40.2	35.3	34.5	34.5	35.3	33.7	157bps
Revenue from Operations (INR Mn)										
Gross Broking Revenue	3,229	3,598	4,150	4,760	4,707	4,732	4,713	4,746	4,651	1.2
F&O	2,034	2,483	3,071	3,713	3,813	3,848	3,839	3,869	3,662	4.1
Cash	1,001	935	913	857	659	655	639	630	801	-17.7
Commodity	129	144	125	190	188	187	187	202	149	26.8
Currency	32	36	42	48	47	42	48	44	40	16.6
Net Broking Revenue	2,055	2,275	2,709	3,196	3,191	3,194	3,181	3,190	3,140	1.6
Net Interest Income	545	717	803	868	1,012	907	879	884	890	13.7
Revenue from Operations Mix (%)										
As % of Gross Broking Revenue										
F&O	63.0	69.0	74.0	78.0	81.0	81.3	81.5	81.5	78.7	2.3
Cash	31.0	26.0	22.0	18.0	14.0	13.8	13.6	13.3	17.2	-3.2
Commodity	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.3	3.2	0.8
Currency	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.9	0.1
Net Broking (As % Total Revenue)	79.0	76.0	77.1	78.6	75.9	77.9	78.4	78.3	77.9	-2.0
Net Interest Income (As % Total Revenue)	21.0	24.0	22.9	21.4	24.1	22.1	21.6	21.7	22.1	2.0



Highlights from the management commentary

Industry

- Despite the current industry headwinds, management expects the long-term growth story to remain intact.
- With regards to the recent media article around regulatory body restricting F&O trading for retail investor, management has clarified that the NSE meeting was just to understand the onboarding process followed by digital brokers. Resultantly, there was no red flag observed.
- The digital broking industry is witnessing consolidation. The top few discount brokers are expected to enjoy the bulk of the market share in terms of incremental clients in the coming months.
- Presently, the key challenge for any fintech company is to educate the customers as products are becoming increasingly complex.

Business

- Once the Super app is fully operational and all third party products are made available, the activation ratio is likely to reach higher levels of around 50% (v/s ~40% currently).
- In spite of a sharp fall in ARPU in the past couple of quarters, the payback period continues to be around two quarters.
- Management is concerned on the regulatory changes. However, the focus will continue to be on launching products and developing the customer base for long-term growth.
- The company has built a system to increase scalability. Presently, its transaction handling capacity is 2-3x of the existing levels.
- As a platform-based company, ANGELONE wants to be ready with products such as: (1) Mutual Funds (2) ETFs, (3) Fixed Income products (like FD, bonds and sovereign bonds), etc., which are gaining higher wallet share.
- Account aggregation framework is anticipated to expand the product suite provided to the clients and can be a big game changer. The company is investing heavily in technology to capitalize on these evolving opportunities.
- ANGELONE enjoyed 34% market share in new client additions in Jun'22.
- With MF being launched on Super app, client base shall expand further.

Financials

- ESOP cost for FY23 is expected to be around INR600m, of which INR130m was accounted for in 1QFY23. Employee cost run-rate is likely to remain in the current range.
- Over the last 18 months, the company is heavily investing in technology and products to capture the industry growth. Investment trajectory is expected to continue for the next few quarters as well.
- Tech spend is around 15-18% of total cost incurred.
- ARPU has been declining as more than 90% of customers acquired are new to the market, which was not the case a few years back. In the current market environment, it has been difficult to get them active.
- Cost of acquisition is likely to start flattening out in the next few quarters.

Technological initiatives

- Successfully rolled out the first phase of Super app to limited customers on both IOS and web platform. The app is based on swiftness, reliability, simplicity, transparency and availability.
- During 2QFY23, the company will start working on the Android-based Super app. Post that it will further need a quarter for complete migration.
- Digital advancement has led to a reduction in customer care calls.
- Activation rate has improved in the 0-15 days bucket on the new app.
- Mr. Dinesh Radhakrishnan joined ANGELONE as the Chief Product and Technology Officer. Prior to joining, he was working with Ola Electric.

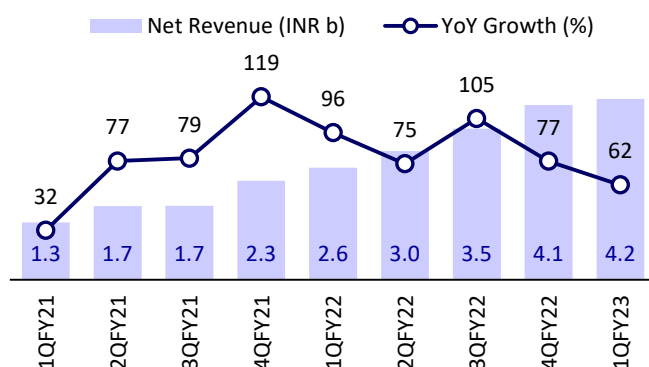
Exhibit 1: Downgraded our FY24 estimates to factor in weak market conditions

INR b	Old Est.		New Est.		Change (%)	
	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
Net Brokerage Income	13.1	15.4	12.8	14.1	-2.8	-8.5
Net Interest Income	3.3	3.4	3.7	3.8	12.8	12.9
Other Income	4.2	5.2	4.2	5.1	-1.2	-1.1
Total Income	20.6	24.1	20.6	23.1	0.0	-3.9
Operating Expenses	10.8	12.5	10.8	12.0	-0.6	-3.5
EBITDA	9.8	11.6	9.8	11.1	0.6	-4.3
PBT	9.6	11.4	9.6	10.8	0.2	-4.8
Tax	2.4	2.8	2.4	2.7	0.2	-4.8
PAT	7.2	8.5	7.2	8.1	0.2	-4.8
C/I ratio	52.5	51.8	52.2	52.0	0.3	-0.2
RoE	39.5	36.6	39.5	35.0	-0.1	1.6
Dividend payout ratio	35.0	35.0	35.0	35.0	0.0	0.0

Source: MOFSL, Company

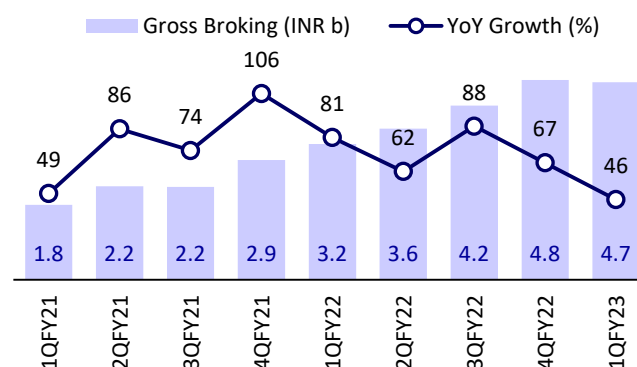
Key exhibits

Exhibit 2: Net revenue saw muted performance...



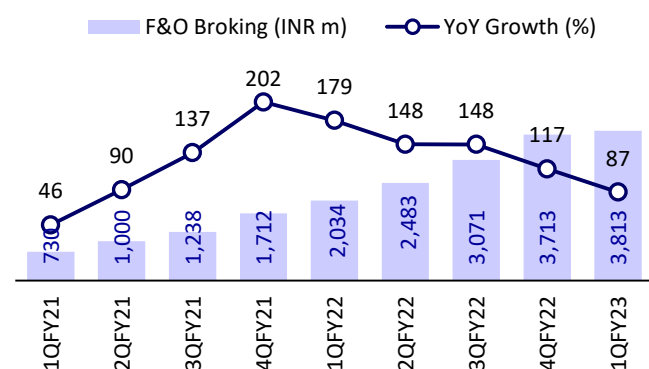
Source: MOFSL, Company

Exhibit 3: ..with marginal dip in Gross broking revenue



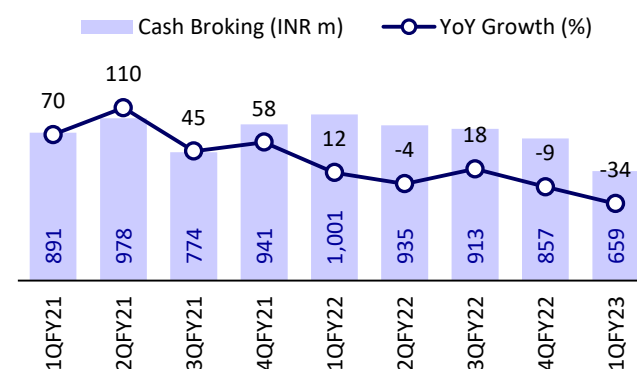
Source: MOFSL, Company

Exhibit 4: F&O growth momentum remained resilient



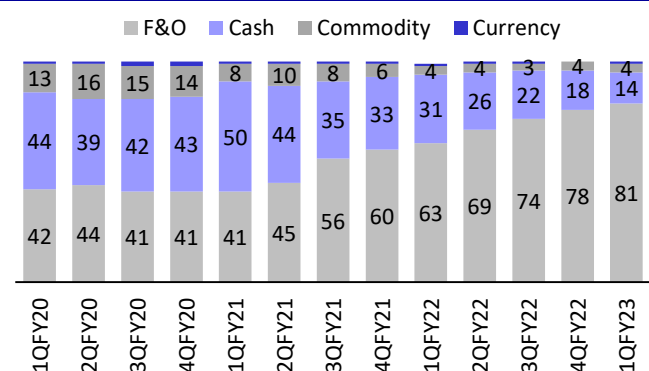
Source: MOFSL, Company

Exhibit 5: Cash broking revenue declined



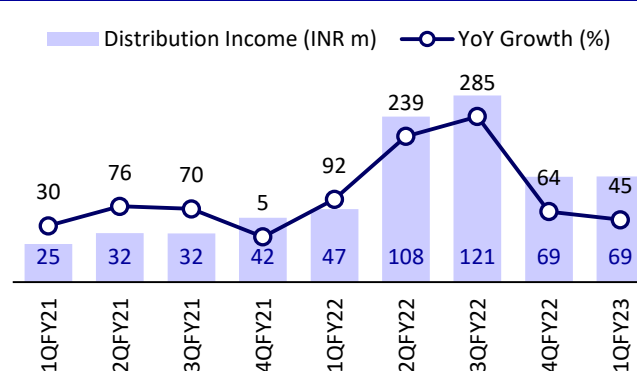
Source: MOFSL, Company

Exhibit 6: Share of F&O in gross broking revenue inched up

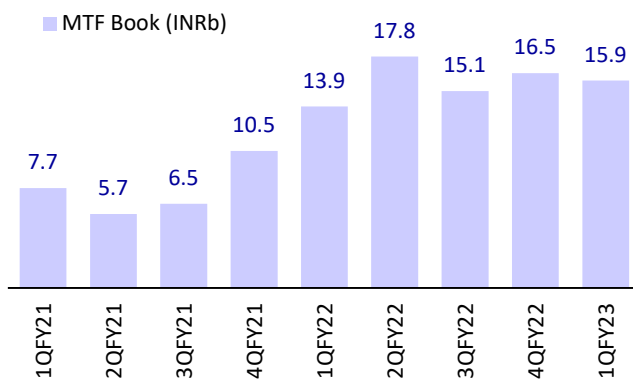


Source: MOFSL, Company

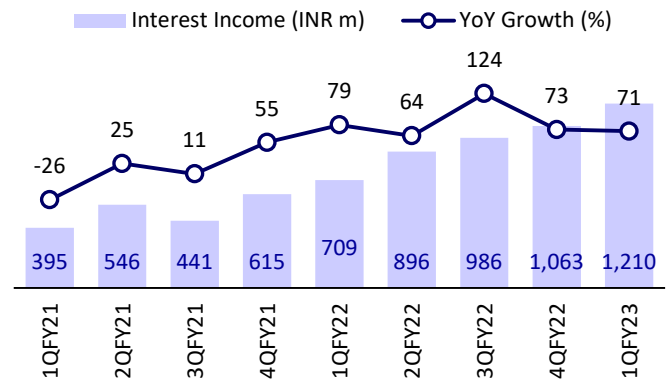
Exhibit 7: Distribution income remained flat sequentially



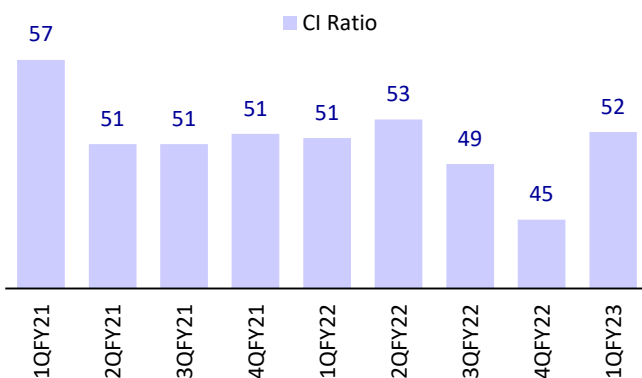
Source: MOFSL, Company

Exhibit 8: MTF book at INR15.9b declined sequentially

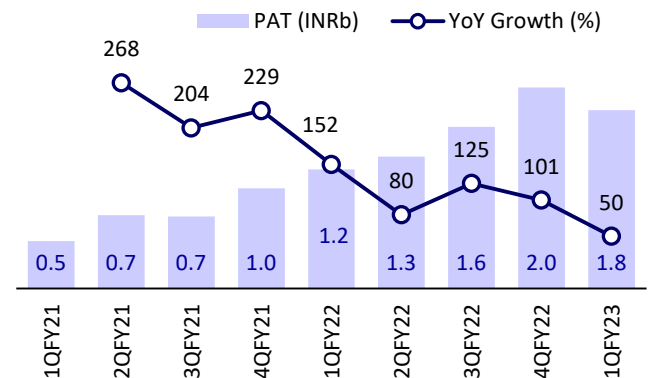
Source: MOFSL, Company

Exhibit 9: Interest income continued to remain strong

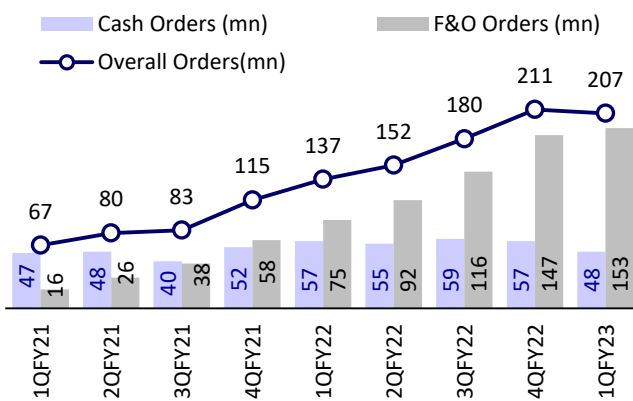
Source: MOFSL, Company

Exhibit 10: C-I ratio jumped sequentially

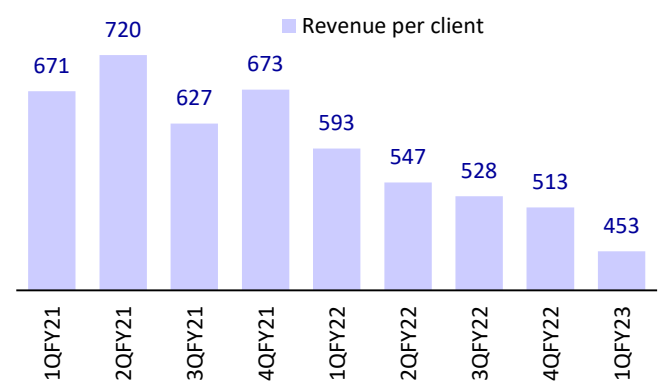
Source: MOFSL, Company

Exhibit 11: Trend in PAT growth

Source: MOFSL, Company

Exhibit 12: No. of orders declined...

Source: MOFSL, Company

Exhibit 13: ...as well as revenue per client

Source: MOFSL, Company

Exhibit 14: No. of trades for the company continued to grow despite market correction of more than 5%; thus, strongly weathering market volatility in 17 of the 21 instances

Period	# of Trading Days	Fall In Nifty 50	Fall In Nifty MidCap 150	Fall In Nifty Bank	Change in Angel's Avg Orders
18 Apr - 15 May, 2019	17	-5.3%	-8.2%	-6.3%	0.8%
04 Jun - 19 Jun, 2019	11	-3.3%	-5.1%	-4.1%	-2.8%
05 Jul - 05 Aug, 2019	22	-9.1%	-11.7%	-12.1%	3.5%
24 Sep - 07 Oct, 2019	9	-4.1%	-6.1%	-9.2%	3.4%
03 Jan - 01 Feb, 2020	22	-5.1%	1.3%	-8.1%	11.2%
12 Feb - 23 Mar, 2020	27	-37.1%	-38.3%	-46.0%	18.8%
30 Mar - 03 Apr, 2020	4	-6.7%	-3.0%	-13.6%	5.5%
04 May - 18 May, 2020	11	-10.5%	-7.7%	-18.4%	2.8%
08 Jul - 15 Jul, 2020	6	-1.7%	-2.7%	-5.7%	2.5%
24 Jul - 03 Aug, 2020	7	-2.9%	-0.4%	-8.7%	1.1%
31 Aug - 24 Sep, 2020	19	-7.2%	-6.8%	-16.6%	-3.1%
15 Jan - 29 Jan, 2021	10	-6.6%	-5.4%	-6.0%	10.9%
16 Feb - 26 Feb, 2021	9	-5.1%	0.8%	-6.7%	7.8%
04 Mar - 12 Apr, 2021	25	-6.1%	-5.1%	-15.3%	2.1%
19 Oct - 30 Nov, 2021	29	-8.1%	-8.1%	-10.1%	10.1%
09 Dec - 20 Dec, 2021	8	-4.9%	-5.6%	-7.6%	-1.2%
13 Jan - 24 Jan, 2022	8	-5.8%	-7.1%	-4.6%	14.8%
03 Feb - 24 Feb, 2022	16	-8.6%	-13.1%	-10.4%	4.7%
28 Feb - 07 Mar, 2022	5	-4.8%	-3.9%	-8.8%	2.1%
05 Apr - 13 May, 2022	26	-12.6%	-11.2%	-14.3%	3.1%
31 May - 17 Jun, 2022	14	-8.2%	-7.9%	-8.6%	-7.3%

Source: MOFSL, Company

Financials and valuation

Income Statement						(INR M)	
Y/E March	2018	2019	2020	2021	2022	2023E	2024E
Total Income	4,433	4,723	4,721	8,971	16,827	20,599	23,124
Change (%)	37.9	6.5	0.0	90.0	87.6	22.4	12.3
Gross Brokerage Income	4,785	5,014	5,039	9,065	15,737	18,898	21,731
Less - Brokerage / direct expenses	2,464	2,420	2,304	3,630	5,502	6,142	7,598
Net Brokerage Income	2,321	2,595	2,735	5,436	10,235	12,756	14,133
Interest income	2,038	1,696	1,254	1,998	3,653	4,499	4,724
Less - Finance costs	947	666	489	389	721	818	883
Net Interest income	1,091	1,031	765	1,609	2,932	3,682	3,842
Other Income	1,021	1,098	1,221	1,927	3,661	4,162	5,149
Operating Expenses	2,701	3,245	3,142	4,675	8,273	10,753	12,024
Change (%)	3.9	20.2	-3.2	48.8	76.9	30.0	11.8
Employee expenses	1,245	1,593	1,598	1,718	2,809	4,058	4,393
Admin expense	1,456	1,652	1,544	2,957	5,464	6,695	7,631
Operating Margin	1,732	1,478	1,578	4,296	8,554	9,846	11,099
Depreciation	145	188	209	184	187	264	281
Exception	0	0	166	0	0	0	0
Profit Before Tax	1,587	1,290	1,204	4,112	8,367	9,582	10,819
Change (%)	231.3	-18.7	-6.7	241.6	103.5	14.5	12.9
Tax	508	448	320	1,131	2,117	2,396	2,705
Tax Rate (%)	32.0	34.7	26.6	27.5	25.3	25.0	25.0
PAT	1,079	842	884	2,981	6,251	7,187	8,114
Change (%)	248.0	-22.0	5.0	237.3	109.7	15.0	12.9
Dividend	235	234	227	1,056	2,245	2,515	2,840

Balance Sheet						(INR M)	
Y/E March	2018	2019	2020	2021	2022	2023E	2024E
Equity Share Capital	720	720	720	818	829	829	829
Reserves & Surplus	4,029	4,765	5,427	10,492	15,015	19,687	24,961
Net Worth	4,749	5,485	6,147	11,310	15,844	20,515	25,789
Borrowings	11,223	8,666	4,880	11,715	12,577	13,577	14,577
Other Liabilities	7,702	8,018	11,043	25,114	43,777	72,320	87,162
Total Liabilities	23,674	22,168	22,070	48,138	72,198	1,06,413	1,27,528
Cash and Investments	9,330	10,134	14,607	18,830	48,936	83,166	1,03,012
Change (%)	39.9	8.6	44.1	28.9	159.9	69.9	23.9
Loans	11,309	7,617	2,806	11,285	13,575	17,675	18,559
Change (%)	748.3	-32.6	-63.2	302.2	20.3	30.2	5.0
Net Fixed Assets	1,158	1,181	1,104	1,150	1,638	1,793	1,848
Current Assets	1,877	3,236	3,553	16,873	8,050	3,778	4,109
Total Assets	23,674	22,168	22,070	48,138	72,199	1,06,413	1,27,528

E: MOSL Estimates

Financials and valuation

Ratios	(%)						
Y/E March	2018	2019	2020	2021	2022	2023E	2024E
As a percentage of Revenues							
Net Brokerage Income	52.3	54.9	57.9	60.6	60.8	61.9	61.1
Net Interest Income	24.6	21.8	16.2	17.9	17.4	17.9	16.6
Other Income	23.0	23.2	25.9	21.5	21.8	20.2	22.3
Total cost	60.9	68.7	66.6	52.1	49.2	52.2	52.0
Employee Cost	28.1	33.7	33.9	19.2	16.7	19.7	19.0
Opex (ex-emp) Cost	32.8	35.0	32.7	33.0	32.5	32.5	33.0
PBT	35.8	27.3	25.5	45.8	49.7	46.5	46.8
PAT	24.3	17.8	18.7	33.2	37.1	34.9	35.1
Profitability Ratios (%)							
RoE	25.0	16.5	15.2	34.2	46.0	39.5	35.0
Dividend Payout Ratio	21.8	27.8	25.7	35.4	35.9	35.0	35.0
Valuations	2018	2019	2020	2021	2022	2023E	2024E
BVPS (INR)	57.3	66.2	74.2	136.5	191.2	247.6	311.2
Change (%)	22.0	15.5	12.1	84.0	40.1	29.5	25.7
Price-BV (x)	22.2	19.2	17.2	9.3	6.7	5.1	4.1
EPS (INR)	13.0	10.2	10.7	36.0	75.4	86.7	97.9
Change (%)	248.0	-22.0	5.0	237.3	109.7	15.0	12.9
Price-Earnings (x)	97.7	125.3	119.4	35.4	16.9	14.7	13.0
DPS (INR)	3.3	3.3	3.2	12.9	27.1	30.4	34.3
Dividend Yield (%)	0.3	0.3	0.2	1.0	2.1	2.4	2.7
E: MOSL Estimates							

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd.. (PIMPL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions. Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act") and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co.Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company
- received compensation/other benefits from the subject company in the past 12 months
- other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website www.motilaloswal.com. CIN no.: L67190MH2005PLC153397. Correspondence Office Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad(West), Mumbai- 400 064. Tel No: 022 7188 1000.

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579;PMS:INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: na@motilaloswal.com, Contact No.: 022-71881085.

* MOSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench.