JM FINANCIAL

Internet

Demystifying recent developments in online food delivery

- Aggregators progressively becoming indispensable to restaurants
- Aggregators' share of restaurants turnover as high as c.30%
- High commission remains a key point of friction

ZOMATO IN: Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	105
Upside/(Downside)	41.7%
Previous Price Target	105
Change	0.0%

Zomato - ONDC: Missing the forest for the trees

Zomato – 4QFY23 Result Update

Swapnil Potdukhe
swapnil.potdukhe@jmfl.com | Tel: (91 22) 62241876

Sachin Dixit
sachin.dixit@jmfl.com | Tel: (91 22) 66303078

Anuj Kotewar
anuj.kotewar@jmfl.com | Tel: (91 22) 62241874

Our primary checks across 135+ restaurants spread across 10 cities suggest food delivery aggregators Zomato (Buy, TP INR 105) and Swiggy (unlisted) together account for 30%+ turnover of restaurants that are listed on their platforms. Macro challenges apart, the aggregators are expanding choice, use cases and palate of the consumers, in addition to providing convenience and a seamless ordering experience. This is leading to addition of more differentiated supply that includes cloud kitchens, exotic cuisines, gourmet meals, and value meals, amongst others, which in turn is driving more demand for out-of-home cooked food. This network effect of demand and supply is helping the organised food services industry grow faster than it otherwise would have. In the absence of any new material competition emerging and ONDC remaining a non-starter in its current shape and form, we strongly believe aggregators can continue to grow 1.2x-1.5x of the underlying industry in the foreseeable future. We reiterate Zomato as our top pick in the listed Internet space.

- **Both large incumbent aggregators are becoming indispensable:** Interactions with 135+ restaurant owners and managers suggest both incumbent aggregators are helping the organised food services industry pie to grow. Their presence is leading to meaningful changes in eating-out habits of consumers and higher ordering frequencies, especially among millennials and Gen Z. Similarly, aggregators are also facilitating an increase in supply by helping entrepreneurs build new restaurant brands (a few of which are only available online), widen their reach and improve customer retention and loyalty. Naturally, it is also helping create new opportunities for skilled and unskilled job seekers. With no meaningful competition in sight, we believe both incumbent aggregators are becoming indispensable to the ecosystem.

- **Restaurants now earn a meaningful share of turnover through the aggregators:** Restaurants that we spoke to receive c.20 orders everyday on average through both the aggregators combined. In turnover terms, aggregators contribute ~30%. This is despite the fact these restaurants have been active on the aggregator platforms for only ~3.5 years (average). Further, three-fourths of the restaurants that we surveyed mentioned the usage of direct ordering channels such as own app and website (through integration with Dotpe/Thrive), social media connects or direct tele calling to generate demand. Having said that, only a handful of restaurants within the sample claimed that they received a notable number of direct orders.

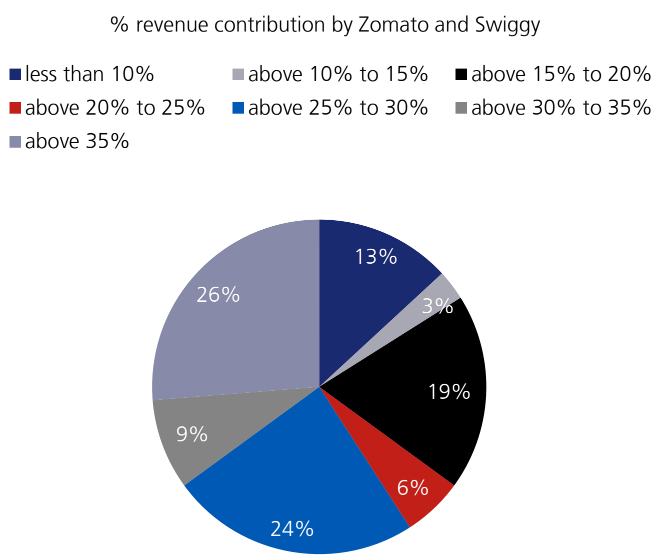
- **Main area of friction is high commissions, other disagreements appear resolvable:** While aggregators have enhanced industry turnover, the main friction point is high commission rates that restaurants claimed eats into their profit margins. The average commissions claimed by the restaurants stood at 27% of AOV (for the restaurant). We note that this number is likely inflated by 18% GST that aggregators are required to collect from restaurants on top of their own commissions. Adjusted for that, actual commissions could be 22-23%. Marking up online menu prices vs. dine-in menu prices to cover up aggregator commissions and discounts is an ubiquitous practice, with 85%+ of the total restaurants admitting to following it. Our interactions suggest that aggregators are taking efforts to amicably resolve other contentious issues such as data sharing.

- **Awareness around ONDC remains low:** In our survey, only a small proportion of restaurant owners had heard about ONDC despite the heightened focus on it of late. Even amongst those who were aware, many had little clue as to how they could get onboarded on the network. Some who were listed were clueless as to whether the orders that they had received through Magicpin (unlisted, which is the largest seller-side app for F&B category on ONDC) originated on ONDC's buyer-side partner platforms or through Magicpin's own erstwhile discovery platform.

Other important takeaways

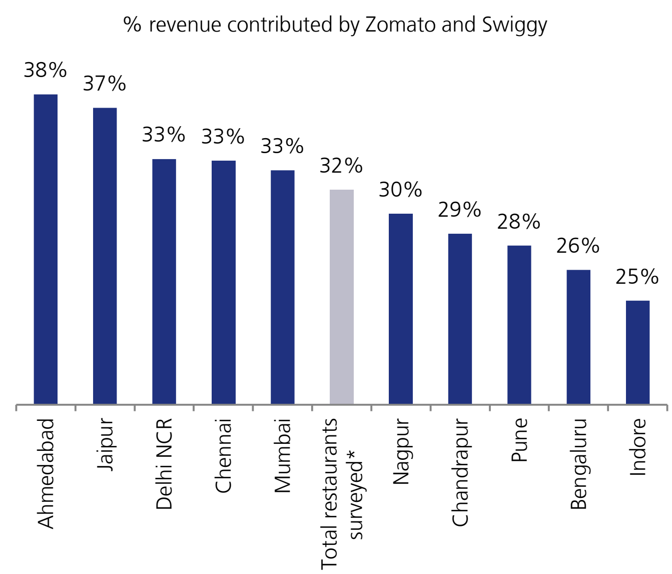
- **Balance of power in favour of aggregators**: While, theoretically, the organised food services industry can survive without the presence of aggregators, practically that is unlikely to ever happen. Aggregators now contribute >30% on average to the turnover of restaurants who are listed on their platforms, whereas the contribution of individual outlets to the aggregators GMV/Revenue is relatively nominal. For that matter, even some of the branded, chain restaurants mentioned that they have limited bargaining power over aggregators on account of the latter's sheer size, customer loyalty and diversified supplier base. The only few restaurants that are somewhat immune to this are those who have surplus walk-in demand or some natural advantage; for e.g., the outlet is located very close to a railway station or in a very high-density business hub. Aggregators' advantage gets even more amplified when they are negotiating with standalone or new outlets. In fact, we also came across instances where even successful branded chains were not able to leverage their scale while opening a new outlet and ended up paying signficantly higher commissions towards the new outlets compared to the more matured ones. The recourse for restaurants on disputed orders or ratings also appears limited. Restaurants, therefore, mitigate their relatively inferior position by being available on both Zomato and Swiggy.

Exhibit 1. c.60% restaurants that participated in our survey (n=137) claimed that aggregators contribute >25% of their daily turnover



Source: JM Financial. * Sample size = 137

Exhibit 2. Aggregators contributed >30% on average to the turnover of restaurants that participated in our survey (n=137)

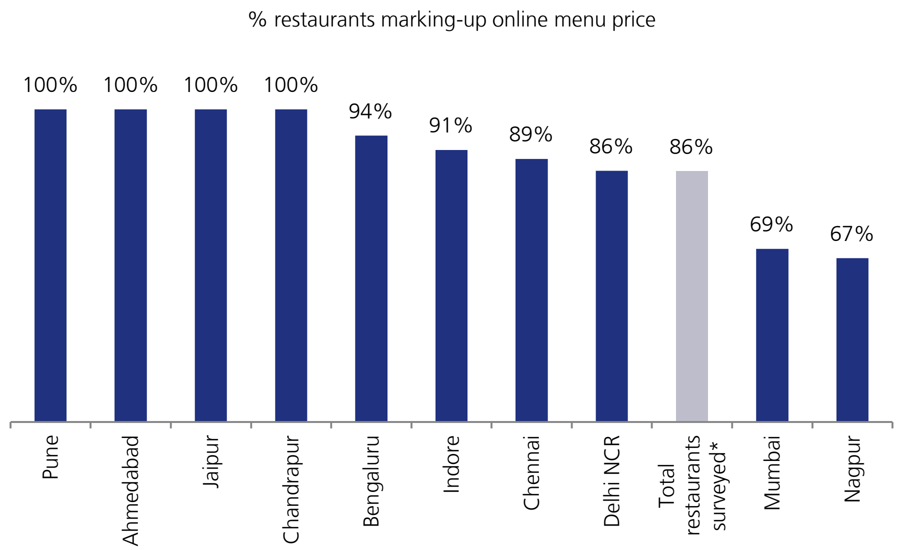


Source: JM Financial. * Sample size = 137

- **Restaurants that offer discounts often get better visibility:** Anecdotal evidence suggests consumers spend more when they are enticed with discounts/deals. And so, when aggregators began their businesses, it was quite natural that they spent heavily on discounts/cashbacks in order to scale up quickly. While restaurant-funded discounts were also prevalent, they were mostly discretionary in nature. Consequently, a substantial proportion of discounts earlier were platform-funded discounts, while restaurant-funded discounts used to be nominal. But since aggregator focus has moved from just growth to profitable growth, platform discounts are mainly limited to new or inactive customers. On the other hand, customers continue to see discounts as a matter of right - which means discounts/deals remains critical to improving customer engagement and, thereby, driving up order volume. Hence, aggregators quite often offer better visibility to restaurants that are willing to offer upfront discounts to their customers. This, in turn, leads to several restaurants offering heavy subsidies on the menu price albeit with a maximum discount threshold.

- **Marking up online menu prices is now a common practice:** More than 85% of the restaurants that we interacted with said that they had marked up their online menu prices on the aggregator platforms vs. dine-in menu prices. These restaurants claimed mark-ups are necessary to recoup upfront customer discounts and/or to compensate for high aggregator commissions. We believe aggregators are unlikely to voluntarily stop such practices, unless there are regulatory changes or a severe backlash from customers, both of which do not seem to be happening at present. This is because forcing price parity with restaurants' offline menus will either increase the friction on commissions or force them to scale down discounts, both of which would be undesirable outcomes from the aggregators' perspective.

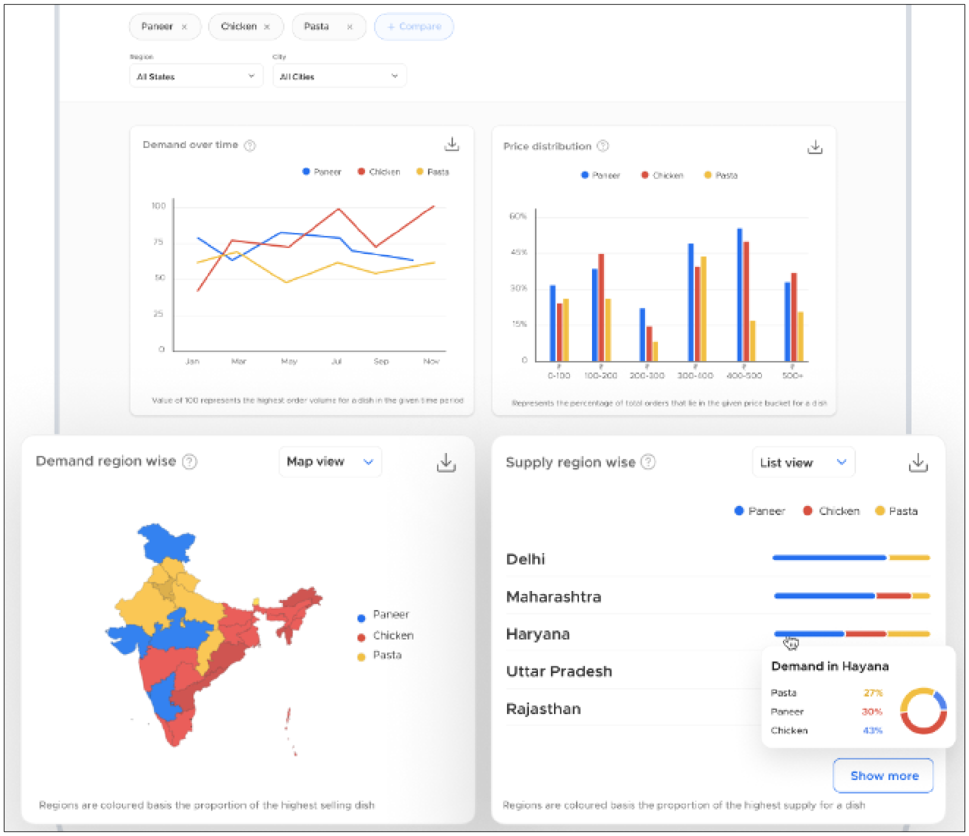
Exhibit 3. More than 85% restaurants that participated in our survey (n=137) claimed that they are marking up their online menu prices



Source: JM Financial. * Sample size = 137

- **Proxy data and analytical insights are shared free of cost:** While its true that the aggregators do not share readily identifiable customer details such as email id, phone number and address with the restaurants, they do end up sharing a lot of proxy data (through consumer masking). For instance, aggregators share virtual customer ids basis which restaurants can trace and analyse a customer's ordering behavior. Aggregators also share detailed business insights (such as top-rated and poor-rated food items, marketing success insights, financials insights, etc.) and analytical insights (such as how the competition is faring at the aggregate level or which item sells best at different periods of a day in a particular locality) that could help restaurants in making tactical/strategic choices. Most importantly, access to all these data points is free of cost. Further, assuming aggregators were to start sharing readily identifiable customer data, we believe they face the risk of a severe customer backlash as the latter would be cluttered with spam calls/emails/SMS/whatsapp from restaurants that they would have ordered from in the past. Our interactions also suggest that only a few restaurants, typically large branded, chain restaurants have the expertise or the willingness to invest to optimise all the data/insights shared by the aggregators. This effectively leads us to believe that the constant clamour on data sharing is mostly unnecessary, as it serves the business interests of only a few restaurants in the top echelon.

Exhibit 4. Illustration of data insights shared by Zomato with their restaurant partners



Source: Company

- Direct ordering is still relevant for a sizeable percentage of restaurants: More than three-fourths of the total restaurants that we spoke to said that they accepted orders through direct channels such as own app and website (through integration with Dotpe/Thrive), social media connects or direct calling. Some restaurants also claimed that they incentivise direct orders through upfront discounts. Having said that, only a handful of restaurants claimed that they received a notable number of direct orders. Since direct orders are relatively less compared to aggregator-generated orders, most restaurants prefer to fulfill them on their own, while a few others take the services of point-to-point delivery platforms such as Dunzo/Rapido. That said, own delivery has its own set of operational challenges for restaurants. Further, some restaurants mentioned that they charged a certain delivery fee from customers in order to recover their delivery cost.

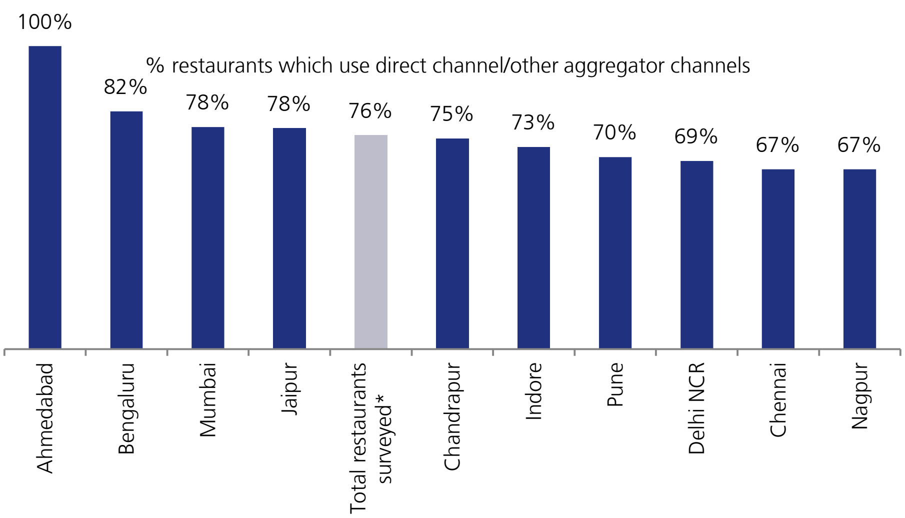
- Alternate online channels also available but awareness remains low: While the general perception is that India today has only two food delivery platforms, during our research we came across a wide range of online food ordering platforms. Having said that, most of these platforms have very localised operations, limited to one or two cities (refer exhibit 5). The only exception to this phenomenon was Magicpin (unlisted) which has made decent inroads in terms of presence in a few Tier 1 cities. Nonetheless, the daily order volume for all these players put together is just a fraction of what the two large incumbents service on a daily basis.

Exhibit 5. Examples of alternate food delivery platforms

Platform	Operations in	Description
Magicpin	Mainly Tier 1/2 Cities	40k+ restaurants
Qmin	Mainly Tier 1/2 Cities	The Indian Hotels Company Ltd. Restaurants
Waayu	Mumbai	1.5k+ restaurants, Zero commissions but restaurants pay subscription fees
Qugometa	Bengaluru	Free delivery up to 3kms
Donebro	Bengaluru	
Saucetra	Bengaluru	
Pune Eat outs	Pune	Zero commissions, restaurant delivers on its own
Taste2plate	Kolkata	Intercity online food delivery
Potafo	Kozhikode	150+ restaurants

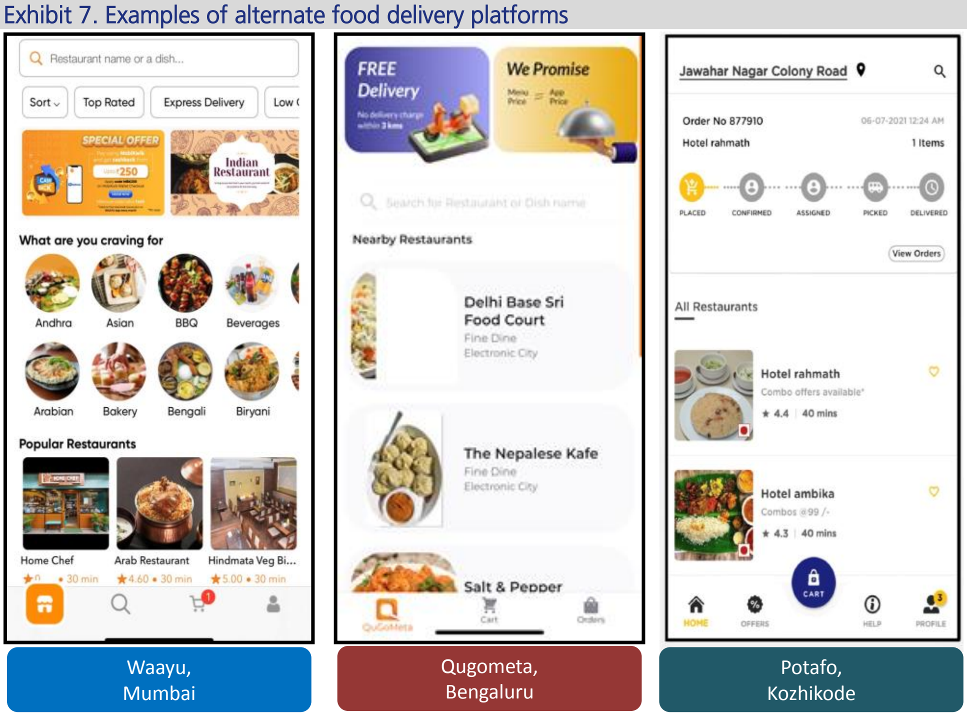
Source: Company, JM Financial

Exhibit 6. Three-fourths of the restaurants that we surveyed (n=137) mentioned the usage of direct ordering channels or other relatively small aggregators



Source: JM Financial. * Sample size = 137

Exhibit 7. Examples of alternate food delivery platforms

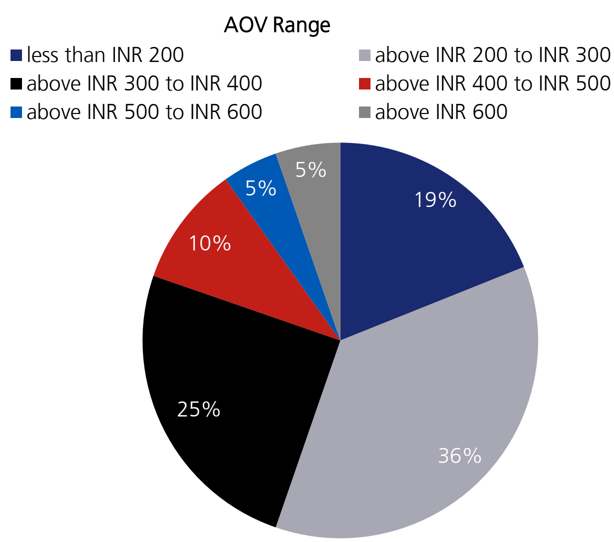


Source: Company, JM Financial

- **At scale, benefits of engaging third-party delivery can outweigh own delivery:** Several restaurants noted that their core business was to curate, innovate and offer superior quality of food. Therefore, building and efficiently operating an in-house delivery fleet was not a viable option beyond a certain scale. This is because own delivery fleet requires incremental investments towards manpower and delivery vehicles. Plus, there are limitations on delivery radius (deliveries beyond 1-3 km are cumbersome), scale benefits are difficult to achieve and customer experience is generally inferior to third-party delivery aggregators. While utilising in-house manpower leads to significant savings on commissions and better access to customer data, several restaurants suggested that these benefits often do not override the investments.

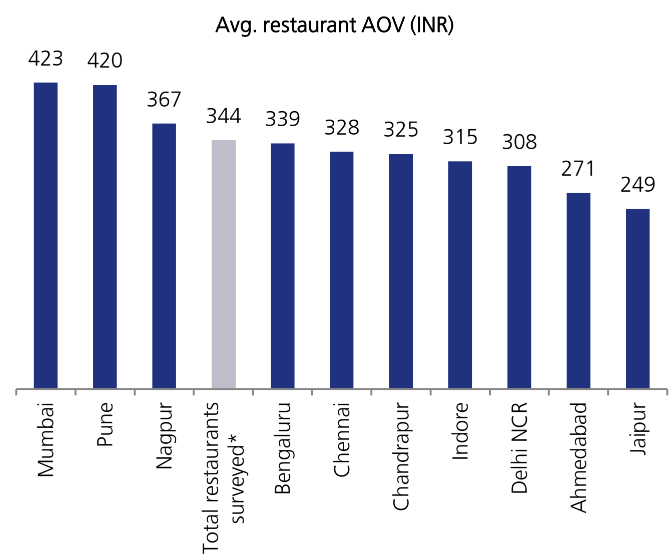
- **AOVs need to increase meaningfully for commission rates to come down:** We note that aggregator commission rates for restaurants that operate at very high AOVs (upwards of INR 1,000 per order) ranged from low to mid-teens, significantly below those claimed by restaurants that operate at low AOVs (around INR 400 or lower). We believe this is because at higher AOVs 1) restaurant level unit economics for aggregators work out far better even if rates are lower due to higher absolute commissions per order, and 2) direct ordering becomes a much more effective alternate channel both for the restaurant as well as the customer.

Exhibit 8. 70%+ restaurants that participated in our survey (n=132) claimed their AOVs ranged from INR 200 to INR 500



Source: JM Financial. * Sample size = 132

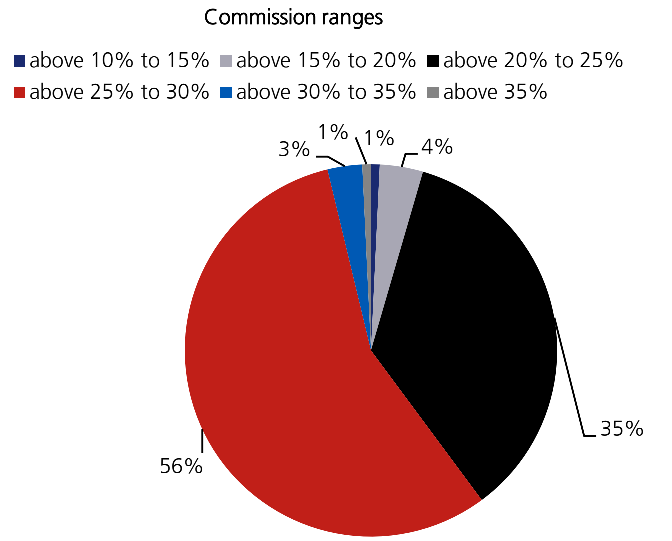
Exhibit 9. City-wise AOVs (average) mentioned by restaurants that participated in our survey (n=132)



Source: JM Financial. * Sample size = 132

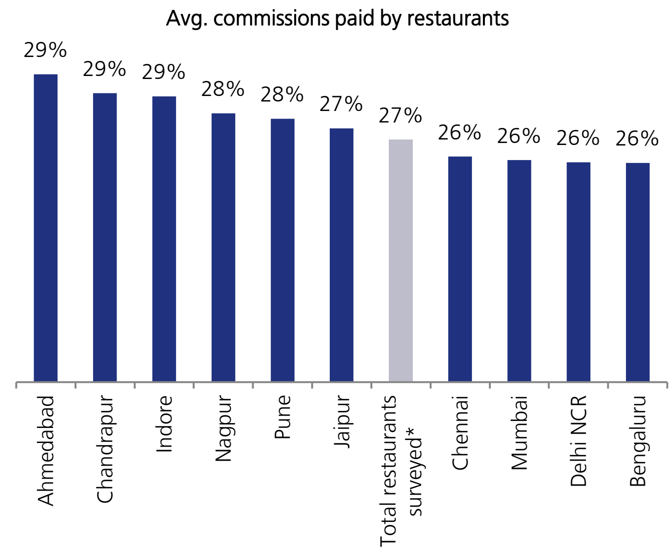
- **Aggregators are likely experimenting flexible commissions:** The average commissions claimed by the restaurants stood at 27% of NSV. We note that this number is likely inflated by 18% GST that aggregators are required to collect from restaurants on top of their own commissions. Adjusted for that, actual commissions could be 22-23%. A few restaurants mentioned that the aggregators now allow them to choose from flexible commission plans basis their requirement and choice. For example, one aggregator offers a three-tiered commission plan – Basic, Basic+ and Premium. Commission rates are the lowest in the basic plan but restaurants do not have access to marketing support, cataloguing support, distant customers, amongst other value-added services. Having said that, we believe flexible commission plans are currently on an experimental basis. But given that some of the global peers have already pivoted to flexi-commission structures, we expect Indian aggregators to also adopt such tactics that could reduce the friction points with restaurants.

Exhibit 10. 90%+ restaurants that participated in our survey claimed their commission rates ranged between 20% and 30% (n=133)



Source: JM Financial. * Sample size = 133

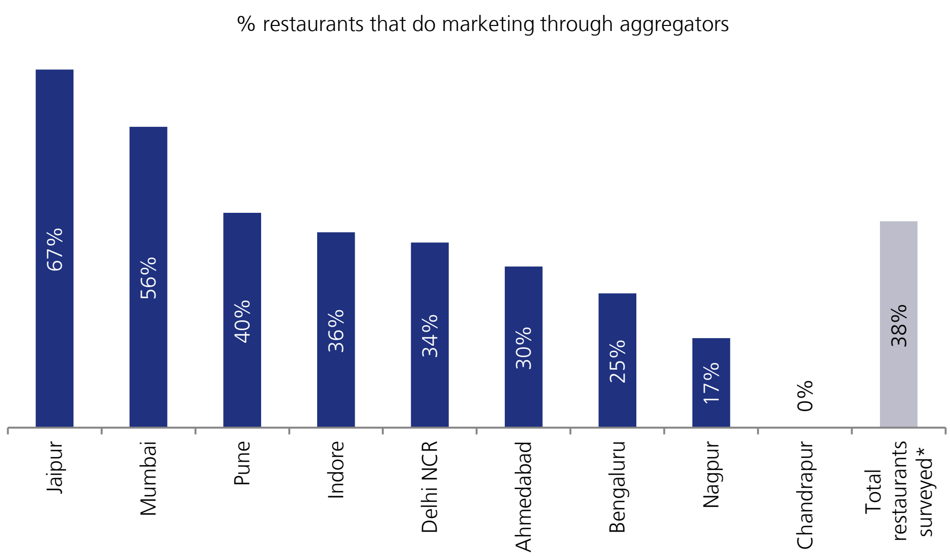
Exhibit 11. City-wise commissions (average) mentioned by restaurants that participated in our survey (n=133)



Source: JM Financial. * Sample size = 133

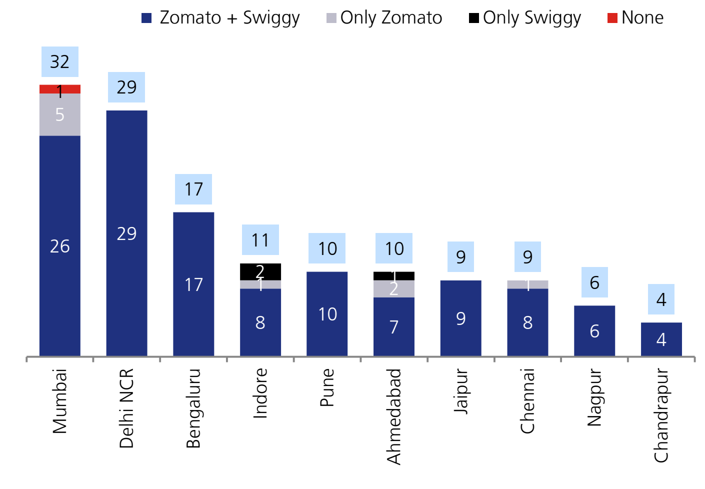
- **High proportion of aggregator ad-income likely comes from new, chain and branded restaurants:** Close to two fifths of the total restaurants we spoke to said that they now indulge in branding and marketing activities on either of the aggregators or both (in a few cases). Recently set up restaurants typically end up spending more compared to the well-established ones. Similarly, chain and organised restaurants are more amenable to these spends (in fact many have set up dedicated teams) compared to the standalone restaurants. The latter generally prefer social media marketing (Facebook/Instagram/Whatsapp) or traditional offline methods.

Exhibit 12. Close to two fifths of the total restaurants surveyed (n=120) claimed that they were using the aggregators for marketing purposes



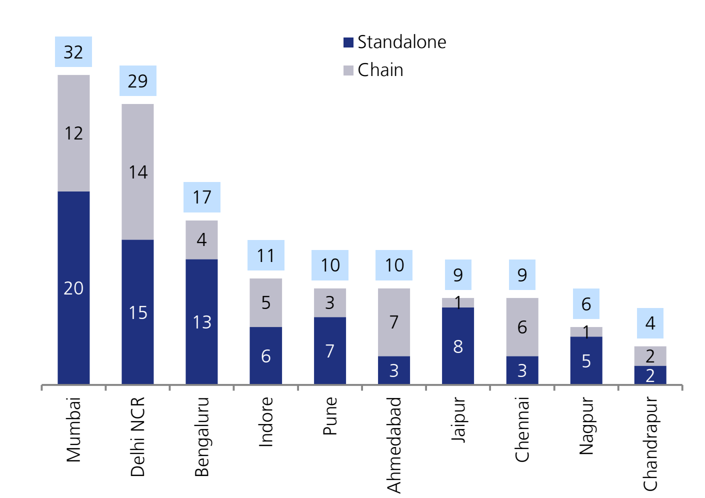
Source: JM Financial * Sample size = 120

Exhibit 13. Food aggregator platforms used by restaurants who participated in our survey (n=137)



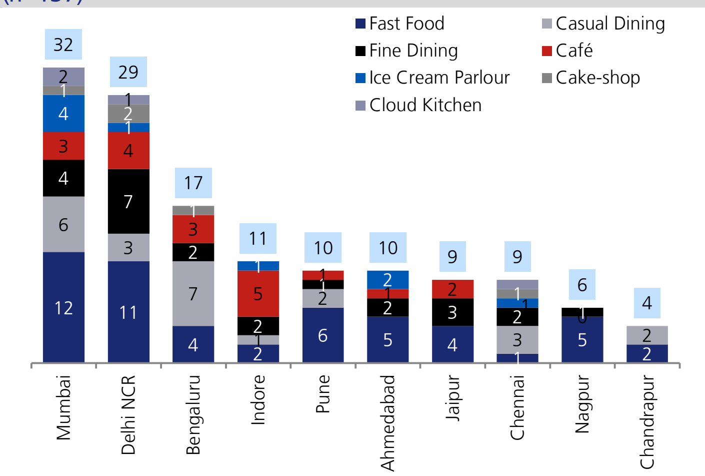
Source: JM Financial. * Sample size = 137

Exhibit 14. Type of restaurants who participated in our survey (n=137)



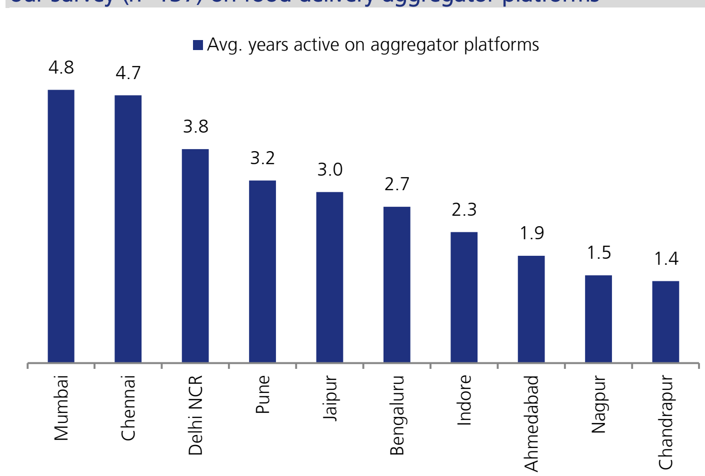
Source: JM Financial. * Sample size = 137

Exhibit 15. Type of restaurants who participated in our survey (n=137)



Source: JM Financial. * Sample size = 137

Exhibit 16. Average time spent by restaurants that participated in our survey (n=137) on food delivery aggregator platforms



Source: JM Financial. * Sample size = 137

- **Seamless and timely settlements helping build aggregator - restaurant trust:** A common feature across most our conversations was that the two large aggregators always settle the outstanding payments of restaurants as per pre-agreed arrangements, i.e., weekly/bi-weekly, etc., typically with no follow-ups required. This attribute is very highly appreciated by their restaurant partners.
- **Hyperpure being used but large-scale adoption will likely take time:** A few restaurants in Tier 1 cities noted that they use Zomato's Hyperpure services to source some of their food ingredient requirements. However, its usage was limited to a few SKUs and penetration in terms of a restaurant's daily spends wallet share appeared low.
- **Riders are now required to book slot-based gigs beforehand:** During the course of our primary checks we also spoke with 20 food delivery partners of Zomato and Swiggy across six cities. The most important takeaway was that delivery partners have to book their gig hours in advance with the aggregators (in slots of 2-4 hours). While there are no limitations on the number of slots that a delivery partner can book in a day, the number of partners that can pre-book a particular slot is capped. We believe this way the aggregators try to better match demand with supply, which helps them save on payment of excess availability fees during slack hours (it is a compensation that aggregators give to delivery partners for being available to deliver even if there is no gig available). Delivery

partners can see approximately hourly payouts that they can expect while booking a slot itself. Delivery partners are graded by the aggregators basis their past performance such as booked slots honoured, customer ratings, orders accepted vs. completed, amongst others. The performance is regularly monitored basis these parameters and partners are informed of steps they need to take to improve their grades as higher grades lead to better payouts.

- Delivery partner compensation and benefits: Qualification to join as a delivery partner with aggregators is generally not too stringent. Basic education and good communication skills are enough for anyone to get onboarded. In fact, in most cases, riders are onboarded and trained entirely through digital processes. Aggregators primarily pay delivery partners basis a) orders/trips completed b) kilometers travelled, and c) hours they were active. In addition, incentives are also paid on achieving certain milestones in a day/week. Average payouts and incentives are relatively high during dinner times, weekends, big festive days and adverse weather conditions. Our survey suggests per hour payouts range between INR 75 to INR 180, depending on the earlier described variables. Average pay-outs per order ranged between INR 40 to INR 70. Lastly, delivery partners are also covered by health and life insurance policies.

- What delivery partners like? 1) No dependency on any particular employer, 2) Flexible working hours as per one's availability/choice, 3) Timely payouts, 4) Monthly earnings can go as high as INR 40k per month (which at times could be higher than some other semi-skilled jobs) 5) Option to raise token or reach out to handling manager in case of certain unforeseen issues such as heavy rains, extreme traffic, restaurant- or customer-related issues.

- What delivery partners do not like? 1) Challenging working conditions due to extreme weather and high traffic (especially in Tier 1 cities), 2) Most incentives can only be achieved if they put in long working hours, 3) Absence of social security benefits, 4) Low bargaining power with the aggregators, and 5) Fear of penalties being imposed in case of customer complaints.

- Reiterate Zomato as our top pick in the listed Internet space: Due to its strong market leadership within the food aggregators (c.55% share vs. Swiggy) space and recent trends in profitability, Zomato remains our top pick in the space; we maintain '**BUY**' with an unchanged TP of INR 105.

APPENDIX I

JM Financial Institutional Securities Limited

Corporate Identity Number: U67100MH2017PLC296081
Member of BSE Ltd. and National Stock Exchange of India Ltd.
SEBI Registration Nos.: Stock Broker - INZ000163434, Research Analyst - INH000000610
Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.
Board: +9122 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com
Compliance Officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: sahil.salastekar@jmfl.com
Grievance officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: instcompliance@jmfl.com

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 10% stocks with market capitalisation in excess of INR 200 billion and REITs* and more than 15% for all other stocks, over the next twelve months. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 10% upside from the current market price for stocks with market capitalisation in excess of INR 200 billion and REITs* and in the range of 10% downside to 15% upside from the current market price for all other stocks, over the next twelve months.
Sell	Price expected to move downwards by more than 10% from the current market price over the next twelve months.

* REIT refers to Real Estate Investment Trusts.

Research Analyst(s) Certification

The Research Analyst(s), with respect to each issuer and its securities covered by them in this research report, certify that:
All of the views expressed in this research report accurately reflect his or her or their personal views about all of the issuers and their securities; and
No part of his or her or their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

Important Disclosures

This research report has been prepared by JM Financial Institutional Securities Limited (JM Financial Institutional Securities) to provide information about the company(ies) and sector(s), if any, covered in the report and may be distributed by it and/or its associates solely for the purpose of information of the select recipient of this report. This report and/or any part thereof, may not be duplicated in any form and/or reproduced or redistributed without the prior written consent of JM Financial Institutional Securities. This report has been prepared independent of the companies covered herein.

JM Financial Institutional Securities is registered with the Securities and Exchange Board of India (SEBI) as a Research Analyst and a Stock Broker having trading memberships of the BSE Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE). No material disciplinary action has been taken by SEBI against JM Financial Institutional Securities in the past two financial years which may impact the investment decision making of the investor. Registration granted by SEBI and certification from the National Institute of Securities Market (NISM) in no way guarantee performance of JM Financial Institutional Securities or provide any assurance of returns to investors.

JM Financial Institutional Securities renders stock broking services primarily to institutional investors and provides the research services to its institutional clients/investors. JM Financial Institutional Securities and its associates are part of a multi-service, integrated investment banking, investment management, brokerage and financing group. JM Financial Institutional Securities and/or its associates might have provided or may provide services in respect of managing offerings of securities, corporate finance, investment banking, mergers & acquisitions, broking, financing or any other advisory services to the company(ies) covered herein. JM Financial Institutional Securities and/or its associates might have received during the past twelve months or may receive compensation from the company(ies) mentioned in this report for rendering any of the above services.

JM Financial Institutional Securities and/or its associates, their directors and employees may; (a) from time to time, have a long or short position in, and buy or sell the securities of the company(ies) mentioned herein or (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) covered under this report or (c) act as an advisor or lender/borrower to, or may have any financial interest in, such company(ies) or (d) considering the nature of business/activities that JM Financial Institutional Securities is engaged in, it may have potential conflict of interest at the time of publication of this report on the subject company(ies).

Neither JM Financial Institutional Securities nor its associates or the Research Analyst(s) named in this report or his/her relatives individually own one per cent or more securities of the company(ies) covered under this report, at the relevant date as specified in the SEBI (Research Analysts) Regulations, 2014.

The Research Analyst(s) principally responsible for the preparation of this research report and members of their household are prohibited from buying or selling debt or equity securities, including but not limited to any option, right, warrant, future, long or short position issued by company(ies) covered under this report. The Research Analyst(s) principally responsible for the preparation of this research report or their relatives (as defined under SEBI (Research Analysts) Regulations, 2014); (a) do not have any financial interest in the company(ies) covered under this report or (b) did not receive any compensation from the company(ies) covered under this report, or from any third party, in connection with this report or (c) do not have any other material conflict of interest at the time of publication of this report. Research Analyst(s) are not serving as an officer, director or employee of the company(ies) covered under this report.

While reasonable care has been taken in the preparation of this report, it does not purport to be a complete description of the securities, markets or developments referred to herein, and JM Financial Institutional Securities does not warrant its accuracy or completeness. JM Financial Institutional Securities may not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This report is provided for information only and is not an investment advice and must not alone be taken as the basis for an investment decision.

The investment discussed or views expressed or recommendations/opinions given herein may not be suitable for all investors. The user assumes the entire risk of any use made of this information. The information contained herein may be changed without notice and JM Financial Institutional Securities reserves the right to make modifications and alterations to this statement as they may deem fit from time to time.

This report is neither an offer nor solicitation of an offer to buy and/or sell any securities mentioned herein and/or not an official confirmation of any transaction.

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 JM Financial Institutional Securities and/or its affiliated company(ies) 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 a certain category of investors. Persons in whose possession this report may come, are required to inform themselves of and to observe such restrictions.

Additional disclosure only for U.S. persons: JM Financial Institutional Securities has entered into an agreement with JM Financial Securities, Inc. ("JM Financial Securities"), a U.S. registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") in order to conduct certain business in the United States in reliance on the exemption from U.S. broker-dealer registration provided by Rule 15a-6, promulgated under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC") (together "Rule 15a-6").

This research report is distributed in the United States by JM Financial Securities in compliance with Rule 15a-6, and as a "third party research report" for purposes of FINRA Rule 2241. In compliance with Rule 15a-6(a)(3) this research report is distributed only to "major U.S. institutional investors" as defined in Rule 15a-6 and is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research report and are not a major U.S. institutional investor, you are instructed not to read, rely on, or reproduce the contents hereof, and to destroy this research or return it to JM Financial Institutional Securities or to JM Financial Securities.

This research report is a product of JM Financial Institutional Securities, which is the employer of the research analyst(s) solely responsible for its content. The research analyst(s) preparing this research report is/are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore, the analyst(s) are not subject to supervision by a U.S. broker-dealer, or otherwise required to satisfy the regulatory licensing requirements of FINRA and may not be subject to the Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Any U.S. person who is recipient of this report that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, must contact, and deal directly through a U.S. registered representative affiliated with a broker-dealer registered with the SEC and a member of FINRA. In the U.S., JM Financial Institutional Securities has an affiliate, JM Financial Securities, Inc. located at Harborside Financial Center, 2500 Plaza 5, 25th Floor, Office No. 2558, Jersey City, NJ 07311. Telephone +1 (201) 633-3610 which is registered with the SEC and is a member of FINRA and SIPC.

Additional disclosure only for U.K. persons: Neither JM Financial Institutional Securities nor any of its affiliates is authorised in the United Kingdom (U.K.) by the Financial Conduct Authority. As a result, this report is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the matters to which this report relates may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This report is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons.

Additional disclosure only for Canadian persons: This report is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities described herein in Canada or any province or territory thereof. Under no circumstances is this report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the registration requirement in the relevant province or territory of Canada in which such offer or sale is made. This report is not, and under no circumstances is it to be construed as, a prospectus or an offering memorandum. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. If you are located in Canada, this report has been made available to you based on your representation that you are an "accredited investor" as such term is defined in National Instrument 45-106 Prospectus Exemptions and a "permitted client" as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada nor should it be construed as being tailored to the needs of the recipient. Canadian recipients are advised that JM Financial Securities, Inc., JM Financial Institutional Securities Limited, their affiliates and authorized agents are not responsible for, nor do they accept, any liability whatsoever for any direct or consequential loss arising from any use of this research report or the information contained herein.