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Pinduoduo Inc.

Equity Research

Target Price: 28,82\$

Current Price: 169,43\$

Downside Potential: -82,1%

Recommendation: UNINVESTABLE

Investment Horizon: 1 Year

Vienna, January 29th, 2021

Team – Overview

Equity Research



**Jan
Tanson**

Director

- Task distribution
- Story guideline
- Valuation



- BSc. (WU) – 7th Sem.
- BSc. Pharma – 5th Sem.



**Iryna
Zginnyk**

Associate

- Market & industry analysis
- Peer benchmarking
- Valuation



- BSc. (WU) – 3rd Sem.



**Benedikt
Lucny**

Analyst

- Business model
- Industry analysis
- HR analysis



- BSc. (WU) – 2nd Sem.



**Katrin
Haas**

Analyst

- Business model
- Financial analysis
- Management analysis



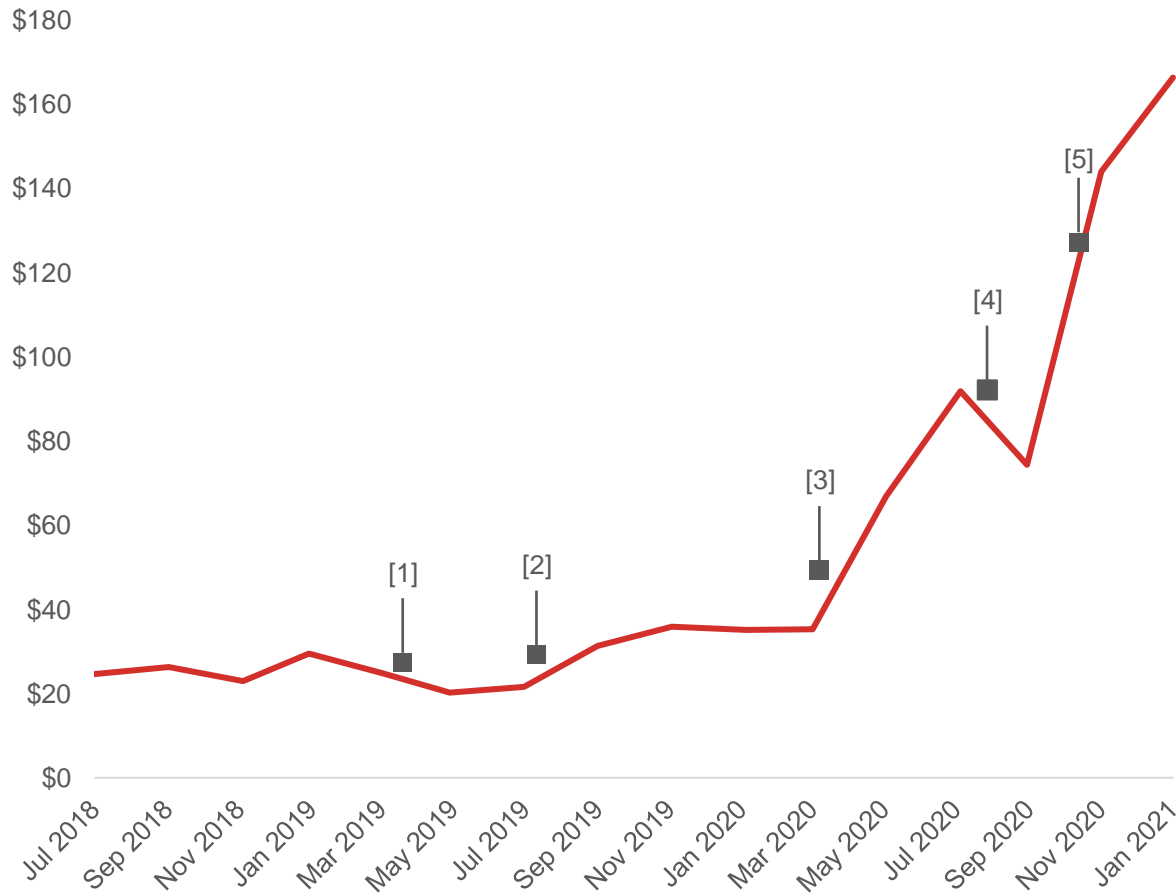
- BSc. (WU) – 5th Sem.

Agenda

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Share price performance

PDD has experienced a tremendous growth in share price and a lofty valuation since 2020

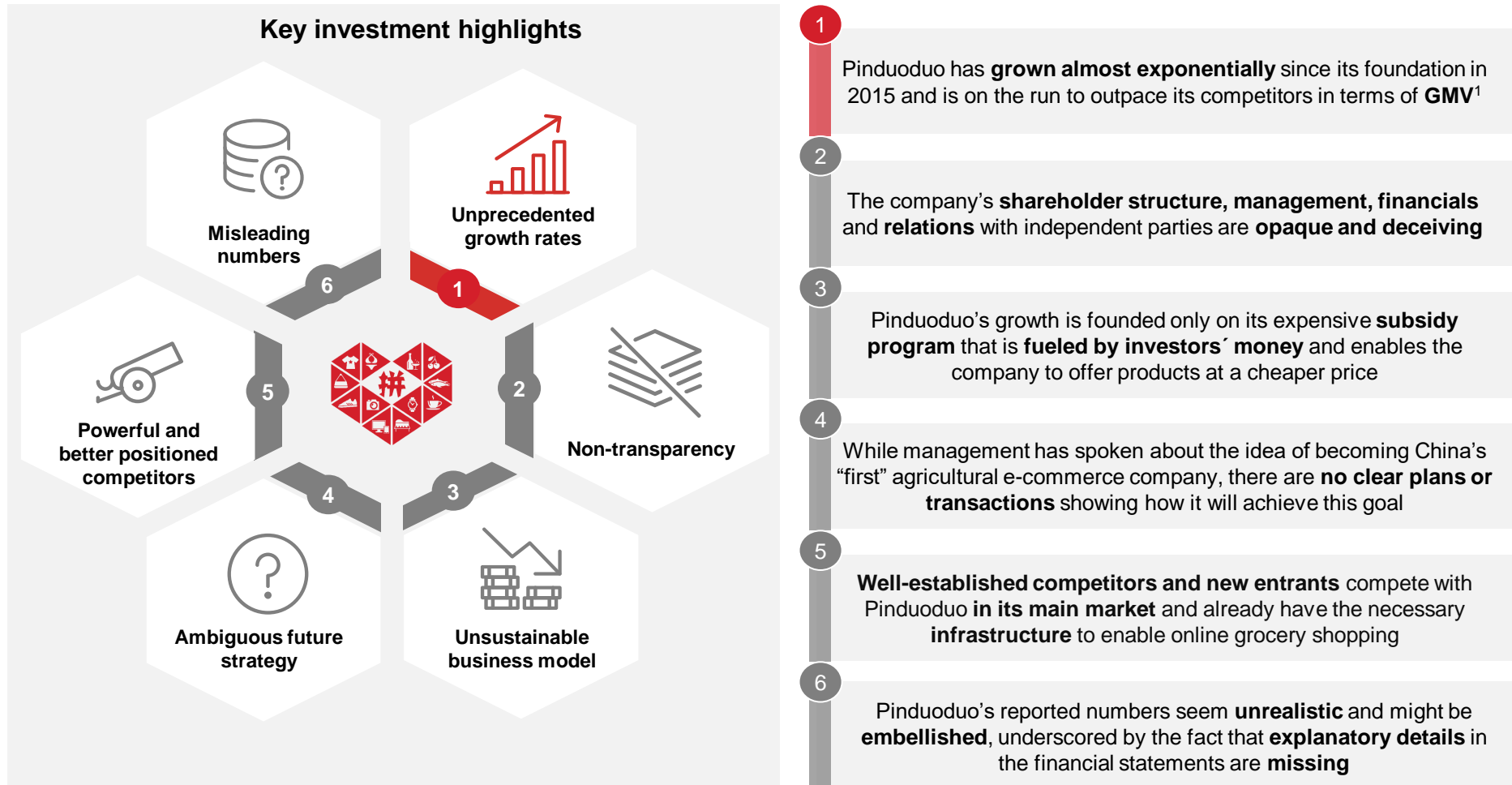


Share price – Major Events

- [1] April 2019 (-5%) – Financial Times cash burn criticism
- [2] August 2019 (+39%) – Q2 2020 results – Pinduoduo beats estimates & GMV strength
- [3] April 2020 (+35%) – Strategic partnership with GOME (financing of struggling retailer)
- [4] August 2020 (-19%) – Q2 2020 results – Pinduoduo missed top-line estimates
- [5] November 2020 (+21%) – Q3 2020 results – Pinduoduo beats expectations (89% Y/Y revenue growth) & Q3 report shows “investments paying off”

Investment thesis

A cash-burning business model, potential fraud and no plan for the future; PDD is uninvestable



¹Total value of all orders for products and services placed on Pinduoduo, regardless of whether actually sold, delivered, or returned. Shipping costs are included



Pinduoduo

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Business Description

Company overview

Pinduoduo Inc. is the holding company of a Chinese mobile e-commerce platform

Business description

- **Pinduoduo Inc.** is a **Chinese e-commerce platform** operator offering value-for-money merchandise and an interactive shopping experience through its same-named mobile platform
- Business segments: **Online marketplace services** (90%) & **Transaction services** (10%)
- **Founded:** September **2015**
- Headquarters: **Shanghai**, China
- Employees: 5,828
- Auditor: Ernst & Young Hua Ming LLP¹

Key financial metrics

| <i>in RMB tsd.</i> | 2016 | 2017 | 2018 | 2019 |
|--------------------|------------------|------------------|---------------------|--------------------|
| Revenues | 504.864 | 1.774.076 | 13.119.990 | 30.141.886 |
| YoY growth | | 245% | 641% | 220% |
| Costs of revenues | (544.870) | (722.830) | (2.905.249) | (6.338.778) |
| Gross margin | -8% | 58% | 78% | 79% |
| Operating expenses | (791.074) | (2.339.800) | (23.919.731) | (38.680.097) |
| Operating loss | (286.210) | (595.724) | (10.799.741) | (8.538.211) |
| Operating margin | | -34% | -82% | -28% |
| Net loss | (291.977) | (525.115) | (10.217.125) | (6.967.603) |
| Total Debt/Equity | 0% | 0% | 0% | 25% |

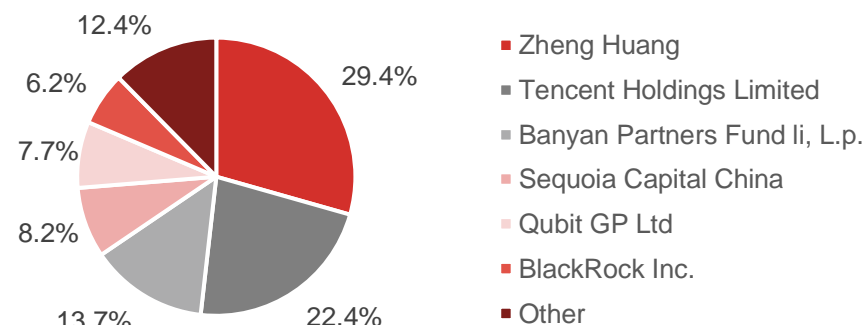
Initial public offering

- Date: July 26, **2018**
- Stock exchange: **NASDAQ**
- Ticker: **PDD**
- Initial Price: \$19,00
- Opening Trade: \$26,50
- Closing Price: \$26,70
- Offering led by Credit Suisse, Goldman Sachs & China Renaissance

Management team

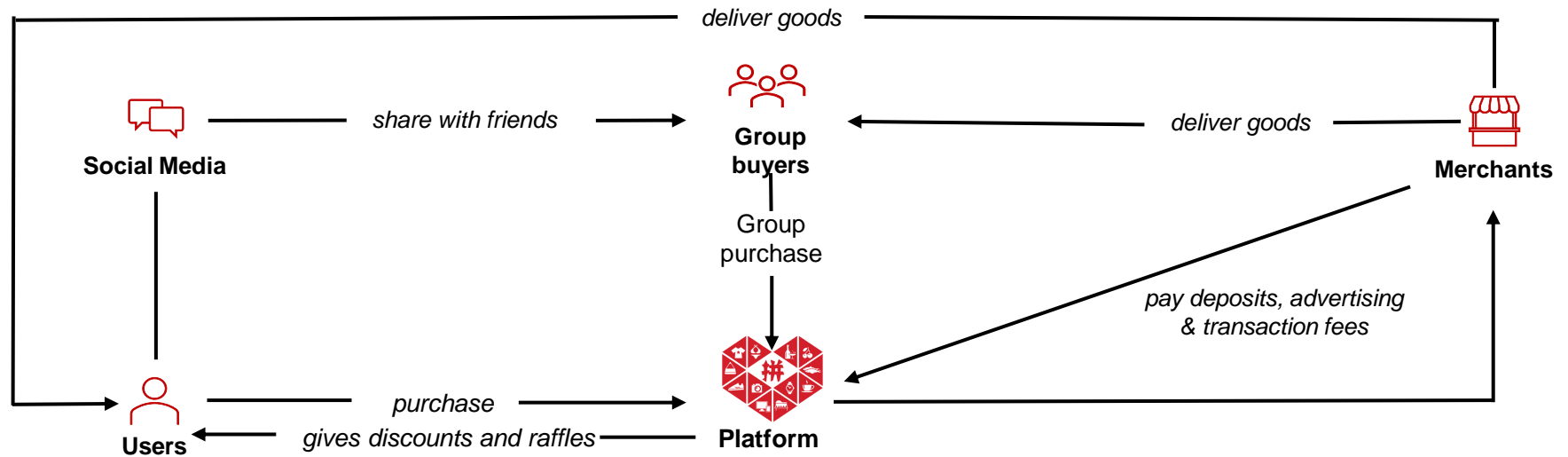
- **Zheng Huang**
Chairman & Founder
- **Lei Chen**
CEO since 07/20
- **Zhenwei Zheng**
Senior VP of Product Development since 01/16
- **Junyun Xiao**
Senior VP of Operation since 01/16
- **Jing Ma**
VP of Finance since 07/20

Shareholder structure



Business model

Together, maybe more savings for consumers, probably less fun for investors



Pinduoduo

- Products get **subsidized**
- Revenue Income: 90% comes from online marketing services & 10% from transaction

Merchants

- Pay deposits but no platform fees
- Ships goods via 3rd party logistic, mainly China post (pay on own)
- Pay **0.6%** of each **transaction** on platform as payment **fee**

Customers

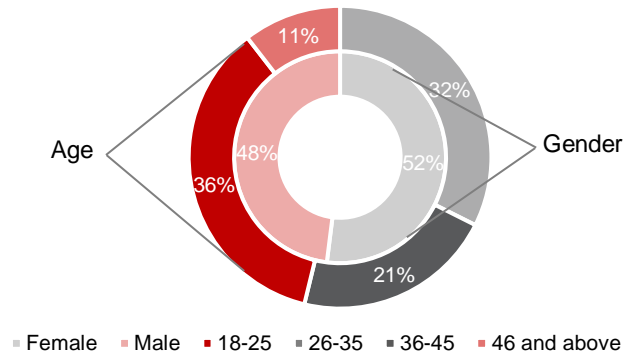
- Customer base = **not loyal**
- Price sensitive & benefit from **discounts** of up to **90%**
- Reside in **rural areas**

The business model is not sustainable as Pinduoduo is burning huge amounts of cash while not generating a loyal customer base

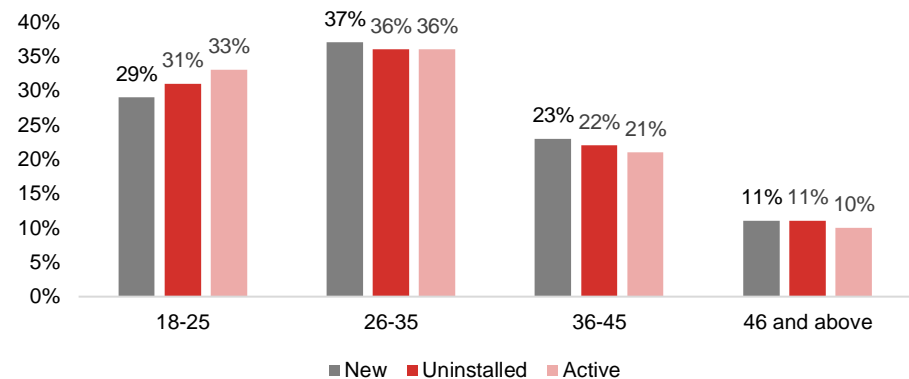
Target group & monetization

Pinduoduo monetizes its users through cheap advertising services for merchants

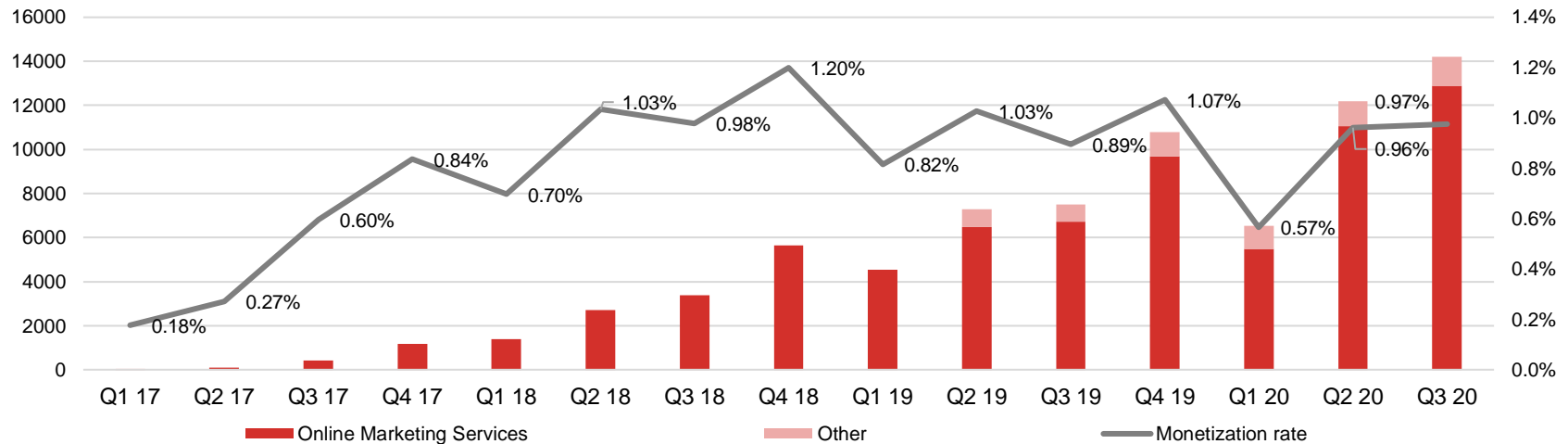
Distribution of PDD users (%)



User distribution by age (%)



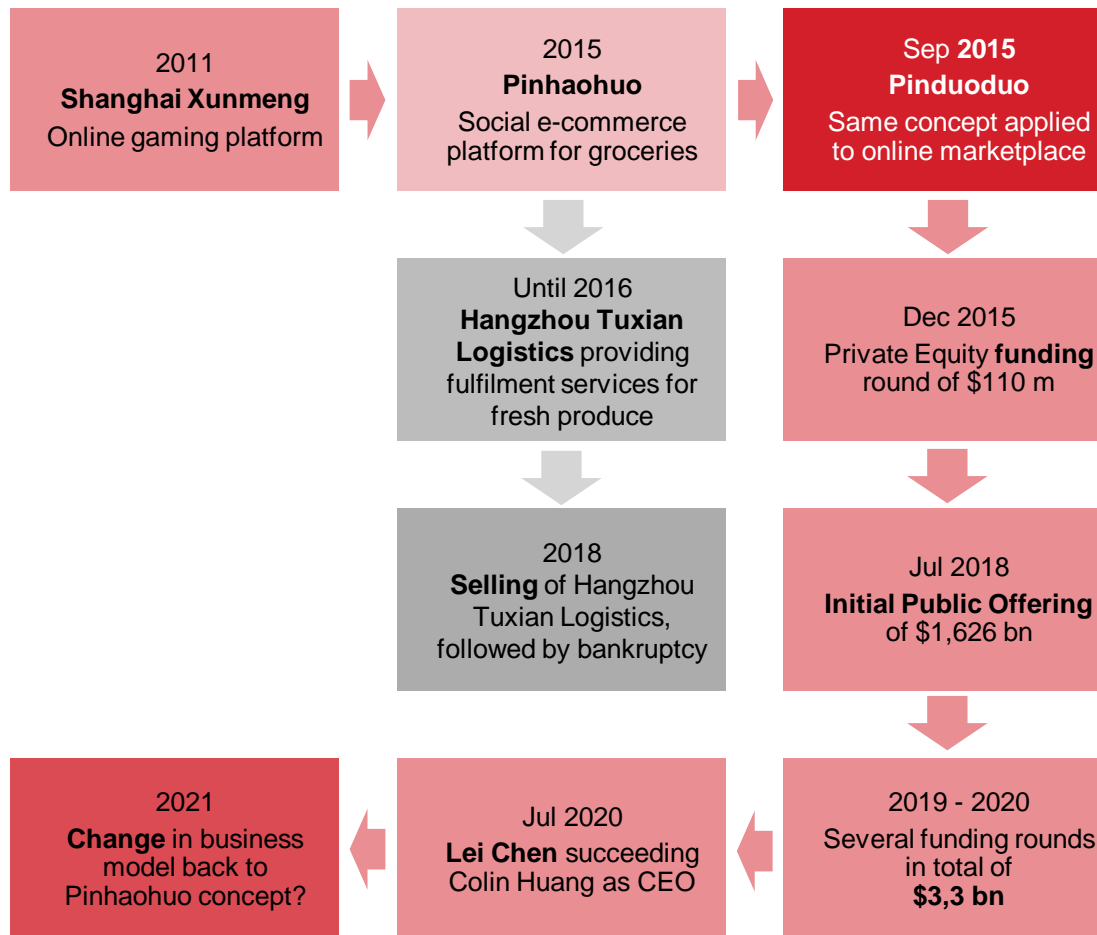
Revenue breakdown (RMB m) – The unusual case of a marketplace, not monetizing on sales



History

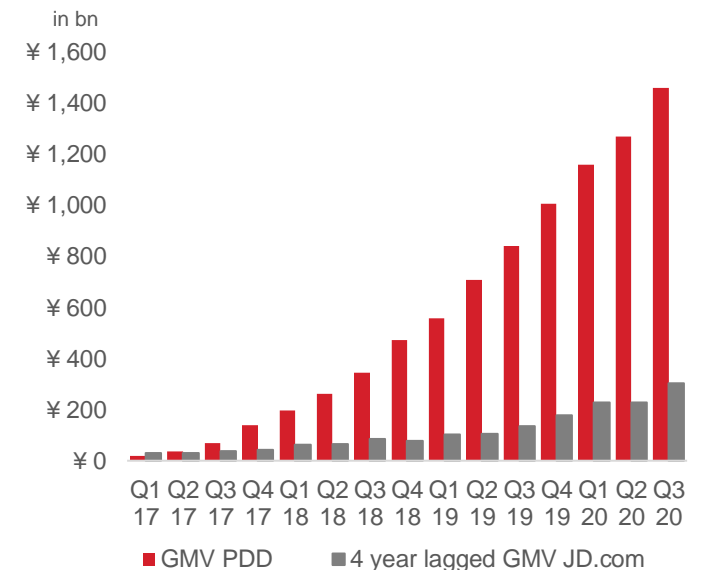
Founded in 2015, PDD is said to be China's fastest growing e-commerce company

Company Development



Unprecedented Gross Merchandise Volume growth

- Pinduoduo reached the **same GMV figure in 5 years** that its main **competitors** Alibaba and JD.com **needed more than 14 years** to achieve
- This might be best explained by Pinduoduo's **subsidy-fueled spending spree** to attract neglected lower tier consumers



"GMV": Total value of all orders for products and services placed on Pinduoduo, **regardless of whether actually sold, delivered, or returned**. Shipping costs are included.

Management

Two men concentrate Pinduoduo management functions between them, without a CFO

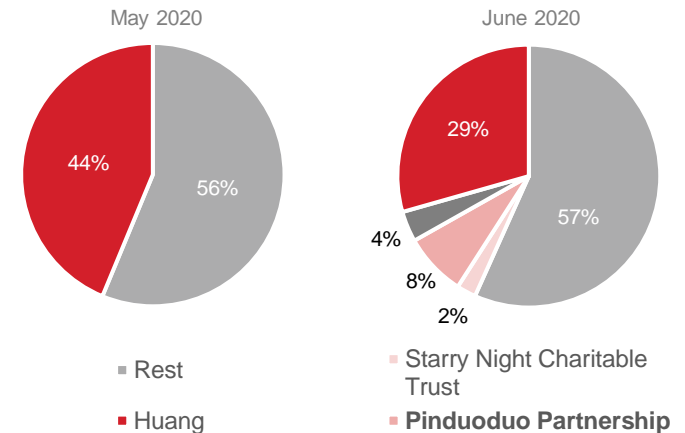
Founder & former CEO Zheng Huang



Born 1979/80 in Hangzhou

- MSc in Computer Science from the **University of Wisconsin** (2014)
- Worked on setting up **Google** China
- Serial entrepreneur & founder of Ouku.com (2007), Leqee (2009), & Lebbay (2011)
 - **No direct ownership** in any of these companies
- Transferred majority ownership in PDD's VIE to Lei Chen in May 2018
- **Stepped down** as CEO and transferred **35 %** of his shares in May 2020
- Has remained **chairman** of board of director
- First partner in **Pinduoduo Partnership**

Shareholder structure after Huang's resignation



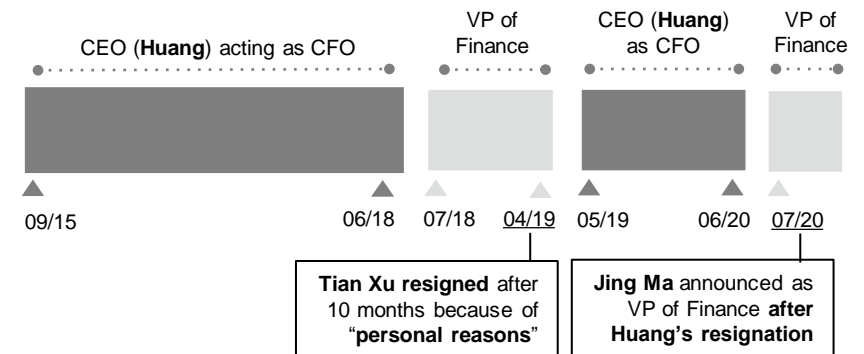
Current CEO Lei Chen



Born 1979/80

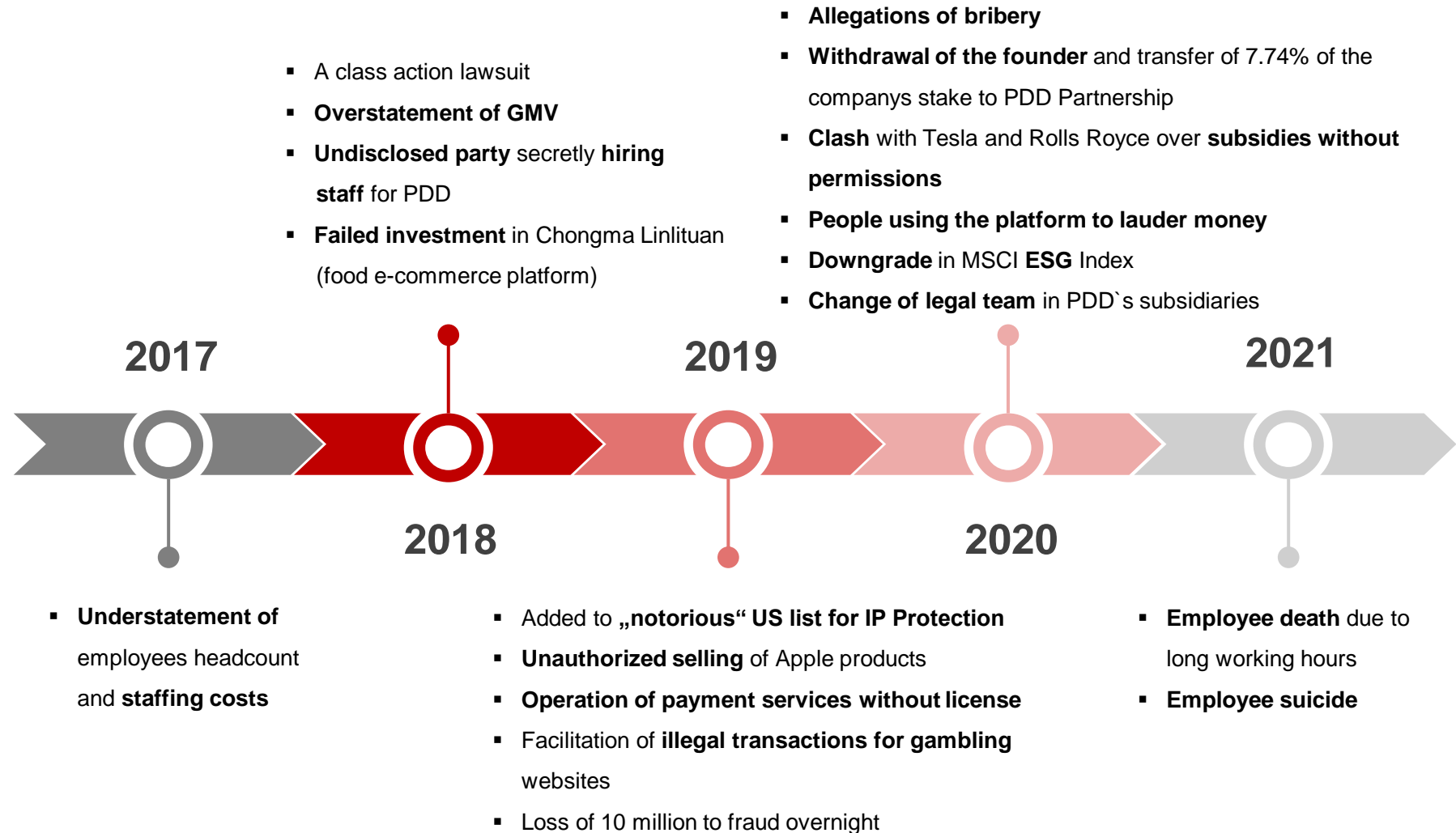
- **Founding member** & former **CTO**
- Doctoral degree in Computer Science from **University of Wisconsin**
- Interned at **Google**, Yahoo, IBM
- Worked at Ouku.com
- Second partner in **Pinduoduo Partnership**
 - Established with Huang's share transfer to "act as cultural guardian" and "assisting board of directors to **select directors and the CEO**"
- **Only two partners** are Huang and Chen

Vice President of Finance history



History of negative events

Pinduoduo has come under scrutiny several times





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Market outlook



Future scenarios

The company might be at the outset of pivoting its business model

01

Continuation with current business model until they run out of cash

Estimated probability: **70%** - Revenue YoY Growth Y1-3: 20% & >Y3: -5%

- Strategy to subsidize products to grow market share
 - Operating loss expanded from \$41 million to \$1.2 billion (2016-2019)
 - Disloyal & unsatisfied customer base
- Sustainable business model until external investments stop

02

PDD will become a medium-sized online retailer and stop subsidy program

Estimated probability: **20%** - Revenue YoY Growth Y1-3: -20% & >Y3: 5%

- Develop long-term sustainable business model
- Ordinary retailer without subsidizing products
- Marketplace similar to Amazon, no e-commerce grocery

03

PDD will implement & execute the e-commerce grocery business model

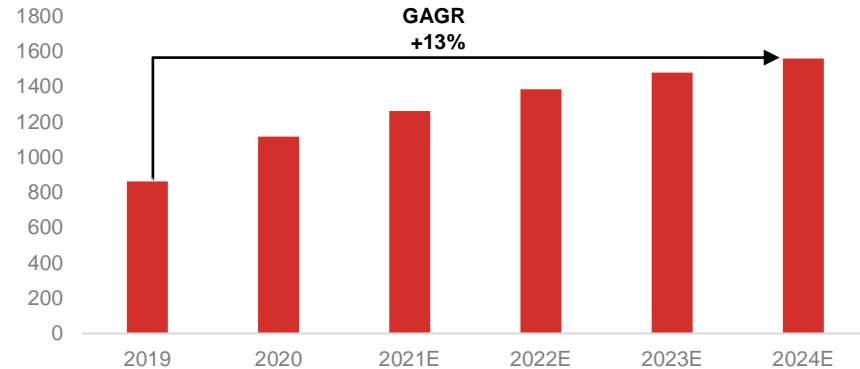
Estimated probability: **10%** - Revenue YoY Growth Y1-3: 10% & >Y3: 20%

- Pinduoduo will become the Webvan of China
 - Bankruptcy after 3-years of operation
 - Similarities to PDD – expansion without proving its business model; lack of complex infrastructure required
- Pinduoduo will become the Instacart of China
 - Platform – shop at various supermarkets in your local area & take advantage of stores special offers

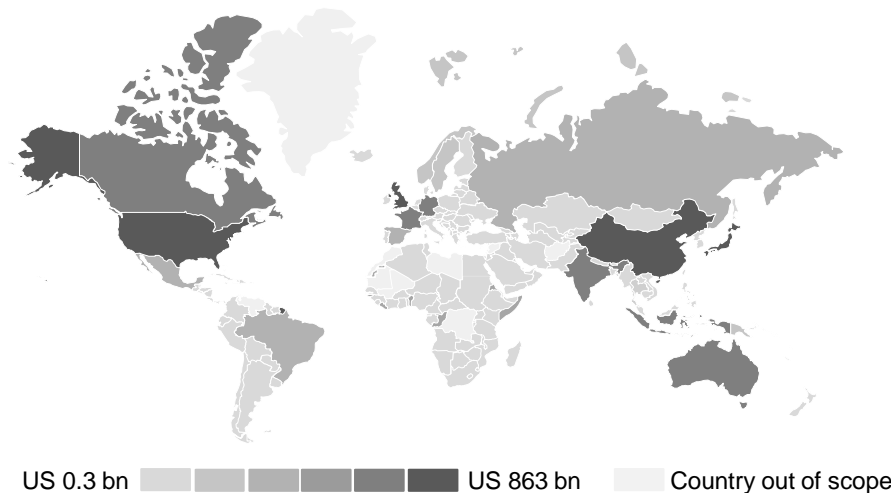
Market overview

The largest e-commerce market worldwide with high growth rate

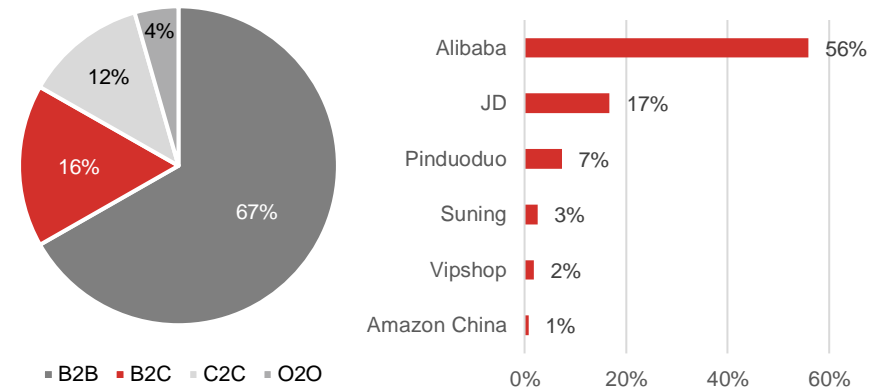
Chinese e-commerce market (billion, US)



E-commerce revenues by country (billion US) in 2019



Distribution of e-commerce market transaction value in China in 2019



Growth drivers



China's Internet penetration rate:

As of March 2020, around 64.5% of the Chinese population had used the Internet



Rural consumers:

Higher GDP growth in rural areas than in major cities, as well as more active users from lower-tier cities on e-commerce sites



Livestreaming:

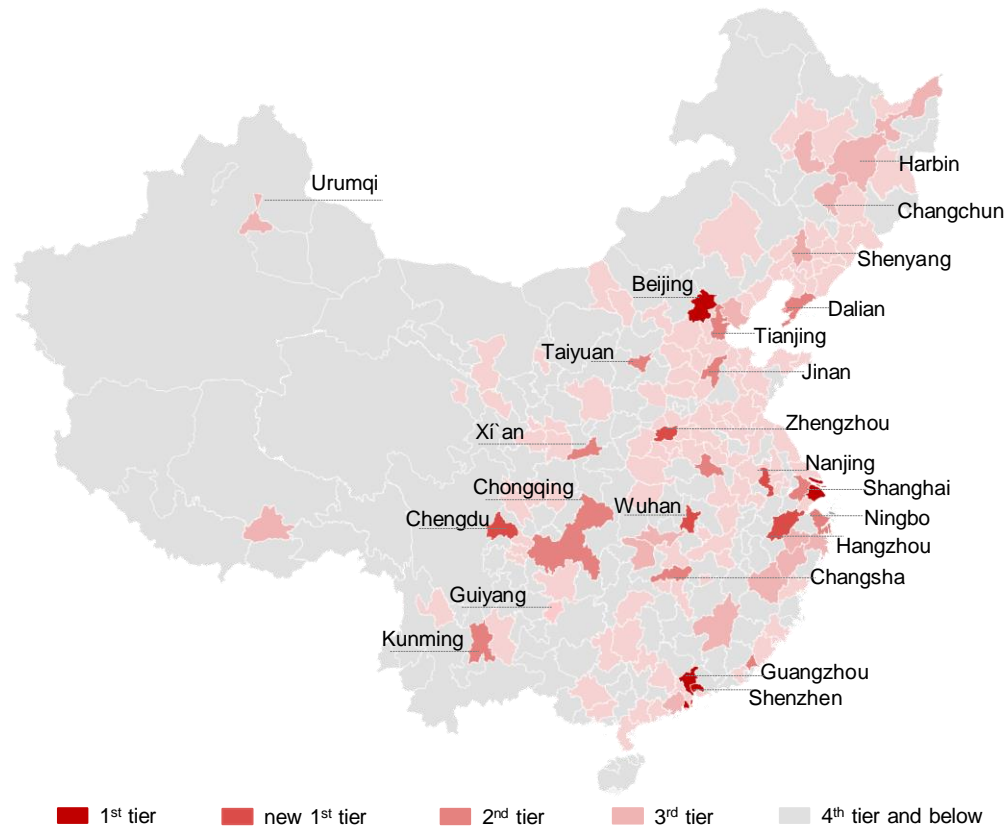
Livestreaming accounted for almost 9% of e-commerce sales in China in 2019

Market segmentation

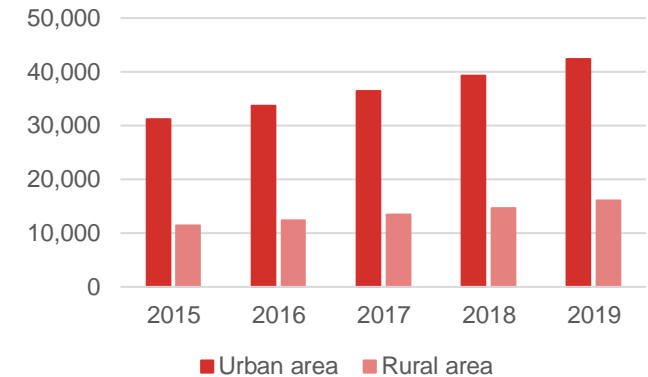
Rising online penetration rate and consumption in lower-tier cities fuel market growth

Tier-city distribution

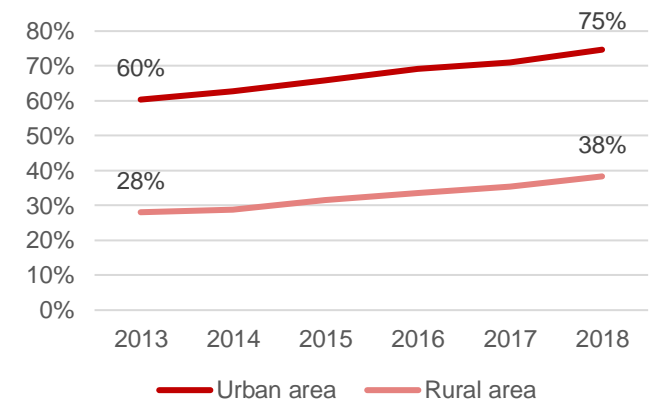
| City-tier classification | High tier-cities | | Low tier-cities | |
|--------------------------|------------------|--------|-----------------|------------------|
| | Tier 1/ new 1 | Tier 2 | Tier 3 | Tier 4 and below |
| Population | >15m | 3-15m | 0.15-3m | <0.15m |



China's per capita disposable income p.a. (RMB)



China's online penetration (%)



Agricultural company strategy

The claimed first-mover advantage has long passed and PDD faces massive hurdles

Questionable “Pioneer in digital agriculture”

2020 World Digital Agriculture Conference

- “PDD was named a pioneer in digital agriculture”
- “Systems approach tackling inter-related issues”
- “High quality, great value agricultural products”
- “PDD covers almost all agricultural production areas in China”

?

Hurdles & barriers to overcome

Market domination

- Obtaining sufficient market share to become efficient on unit economics and profitable

Low-profit margins

- Operating expenses are high
- Low basket value
- Increased costs
- Increased competition

Complex infrastructure

- Logistics and efficient delivery
- Last mile logistics is major challenge

Inventory Management

- Inventory control systems
- Product information software

Agricultural initiatives of e-commerce players – PDD is late to the game



JD Fresh

- Fresh food business unit, operating since 2016
- China’s largest frozen and chilled e-commerce warehousing and delivery network
- Line of premium stores 7Fresh



Freshipo

- Grocery retail chain of Alibaba, operating since 2015
- Low CAC and higher customer margin
- Low delivery costs, using existing logistics infrastructure and cold chain logistics



Suning Carrefour’s Fresh Food Channel/ Xiaodian

- Acquisition of 80% in Carrefour China, leading retailer with an extensive network of more than 210 supermarkets in China
- Xiaodian, retailer unit with about 5,000 convenience stores in China



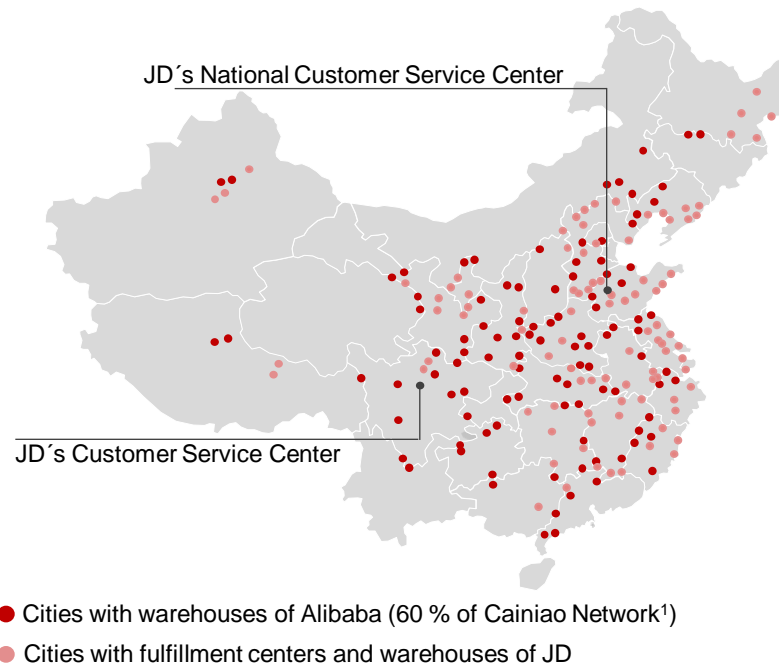
Meituan-Dianping

- Supermarket chain Xiaoxiang Shengxian with focus on fresh foods and catering
- Launch of autonomous food delivery system (2018)
- Pinhaofan, group-buying feature for food delivery (2020)

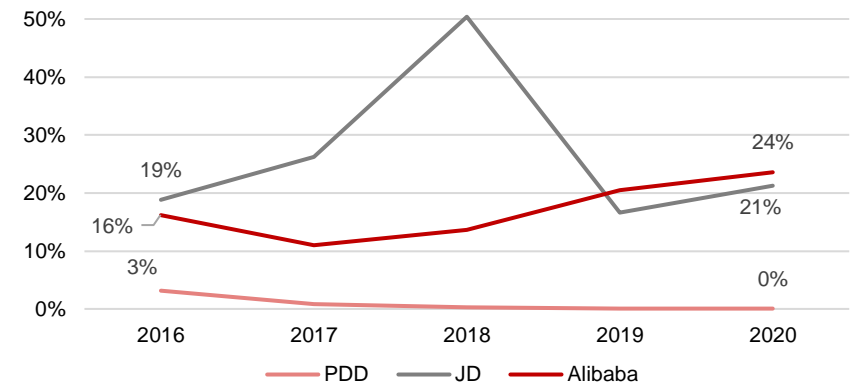
Despite claims to enhance rural e-commerce, PDD shows zero progress as of today

Logistics network of Alibaba and JD

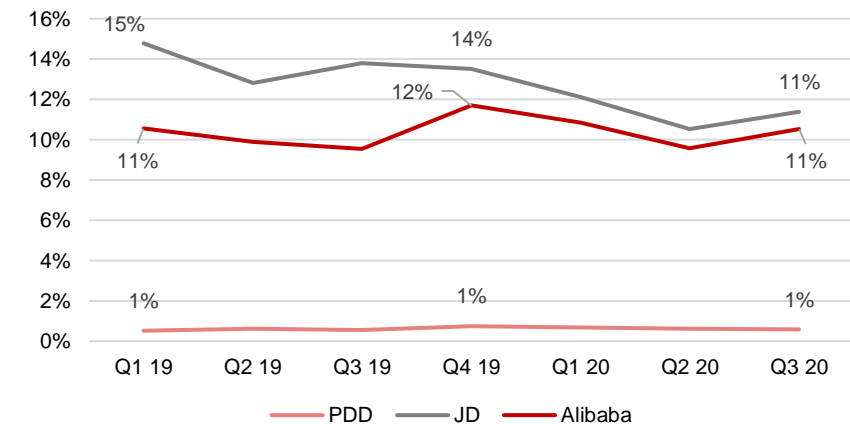
| Alibaba | JD | PDD |
|--|--|--|
| <ul style="list-style-type: none"> >200 warehouses 2.000 pick-up stations 42 mil package per day | <ul style="list-style-type: none"> 800 warehouses gross floor area - 20 million sq.m. 7.000 delivery stations | <ul style="list-style-type: none"> So far no updates on progress despite announcement of agricultural pursuit in 2019 |



Capex % Sales - PDD does not seem to invest much in PP&E



Right-of-use and fixed assets to total assets (%)



Logistics network of prime competitor JD

One of the largest fulfilment infrastructure of e-commerce companies in the world

Leveraging a network of 800 warehouses, delivering 90% of orders same-day

| in mm RMB | Q1 2017 | Q2 2017 | Q3 2017 | Q4 2017 | Q1 2018 | Q2 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | Q3 2019 | Q4 2019 | Q1 2020 | Q2 2020 | Q3 2020 |
|---|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|
| Sales | 5673.9 | 6267.2 | 6609.0 | 8758.8 | 6984.9 | 8299.0 | 8348.7 | 10311.3 | 10120.4 | 12969.9 | 11359.4 | 13003.4 | 12135.7 | 16679.1 | 15203.0 |
| Capex | (663.4) | (1,305.1) | (7,197.4) | (6,561.6) | (3,766.1) | (4,744.0) | (5,276.2) | (3,316.2) | (2,186.9) | (1,476.7) | (658.6) | (2,076.9) | (2,078.9) | (2,865.3) | (1,951.4) |
| QoQ% increase | 18.0% | 96.7% | 451.5% | -8.8% | -42.6% | 26.0% | 11.2% | -37.1% | -34.1% | -32.5% | -55.4% | 215.4% | 0.1% | 37.8% | -31.9% |
| Amount of warehouses at the end of each quarter | 263 | 335 | 405 | 486 | 515 | 521 | 550 | 550 | 550 | 600 | 650 | 700 | 730 | 750 | 800 |
| Amount of warehouses built during the quarter | 7 | 72 | 70 | 81 | 29 | 6 | 29 | 0 | 0 | 50 | 50 | 50 | 30 | 20 | 50 |
| Gross flow area (mil m2) | 5.8 | 7.1 | 9 | 10 | 10.9 | 11.6 | 11.9 | 12 | 12 | 15 | 16 | 16.9 | 17 | 18 | 20 |
| Delivery and pickup stations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Capex spend per warehouse | (94.77) | (18.13) | (102.82) | (81.01) | (129.86) | (790.67) | (181.94) | - | - | (29.53) | (13.17) | (41.54) | (69.30) | (143.27) | (39.03) |
| Capex/Sales Ratio | 11.7% | 20.8% | 108.9% | 74.9% | 53.9% | 57.2% | 63.2% | 32.2% | 21.6% | 11.4% | 5.8% | 16.0% | 17.1% | 17.2% | 12.8% |

JD revolutionizes global commerce by enabling more efficiencies



No. 1 logistics parks with the most advanced logistics centers in Asia, equipped with cutting-edge warehouse technologies



World's first e-commerce company to commercially deploy drones for rural deliveries



Cloud-based smart supply chain management, including autonomous delivery vehicles

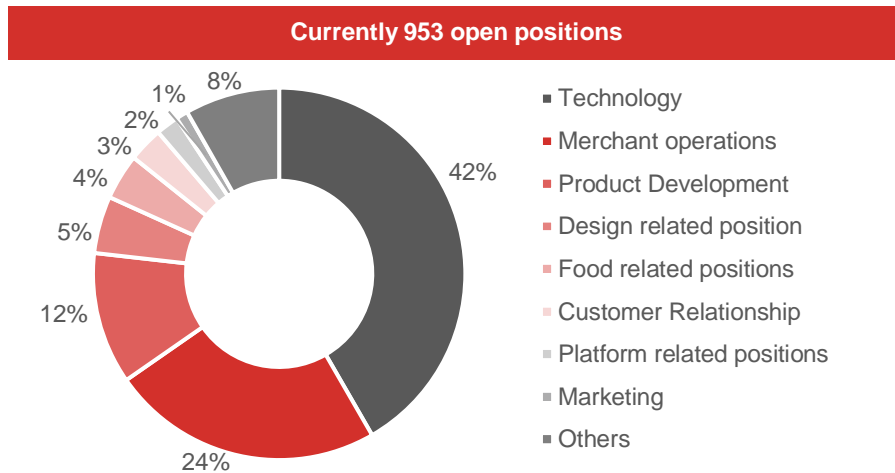
Number of warehouses PDD could build in a best case scenario

| | |
|--|----------------|
| JD's capex Sum (RMB) | (55,655.1) |
| JD's capex Sum (USD) | (8,562.32) |
| Capex per warehouse | (12.55) |
| Capex per warehouse excluding maintenance | (11.30) |
| PDD's (cash raised less 12 month 2020 burn rate) | (3,200) |
| PDD's number of warehouses | 283.20 |

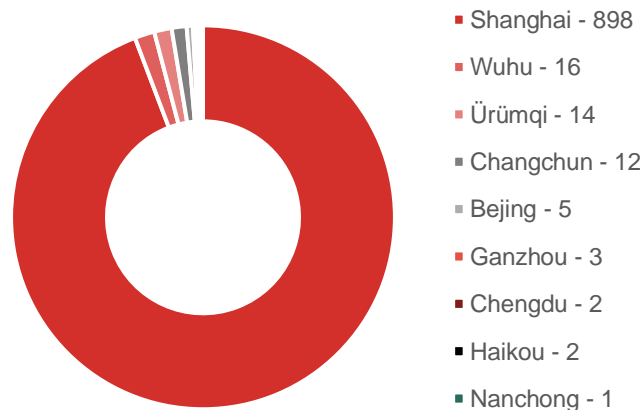
Human resources

HR analysis displays clear lack of engagement in infrastructure roll out hiring

Hiring - Open positions



Hiring - Locations



Locations

Ürümqi

„Warehouse“/Logistics/
Distribution

Changchun

Head of Distribution, Quality, Supervisor/
Business Development

Wuhu

Warehouse/ Distribution/
HR/ Purchasing/Manger/Quality Control

Shanghai

Key take-aways

1

PDD will **not** be able to **implement** and **execute agricultural business model** based on open positions

2

Management board has **no experience** in **supermarket/ infrastructure industry** & focus only on Shanghai

3

























Execution only possible by hiring personnel with demonstrated **track record**


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Competitive landscape





Competitive landscape I

Competitors act fast and have established powerful networks

| Marketplace | Ultimate ownership | Group buying | C2M | B2C | C2C | Agro initiative | Overview |
|--|---|--------------|-----|-----|-----|-----------------|---|
|  Pinduoduo |  | ✓ | ✓ | ✗ | ✗ | ✓ | Group-buying platform with low-priced products offering users to form a new or join an existing group of buyers |
|  JD |  | ✓ | ✗ | ✓ | ✗ | ✓ | The largest online retailer in China, which operates on the most advance logistics network |
|  Jingxi |  | ✓ | ✗ | ✓ | ✗ | ✗ | Group-buying app & WeChat mini-program, which targets consumers in China's lower-tier cities |
|  Vipshop |  | ✗ | ✗ | ✓ | ✗ | ✗ | Discount retailer for high quality and popular branded products |
|  Meituan |  | ✓ | ✗ | ✓ | ✗ | ✓ | On-demand food delivery service provider and China's leading e-commerce platform for in-store dining services |
|  Taobao |  | ✗ | ✗ | ✓ | ✓ | ✓ | C2C e-commerce platform designed for small businesses and individual sellers that uses big-data analytics to offer personalized shopping experience |
|  Tmall |  | ✗ | ✗ | ✓ | ✗ | ✗ | B2C e-commerce platform designed for brands and established retailers, accessible to both foreign and local sellers |
|  Kaola |  | ✗ | ✗ | ✓ | ✗ | ✗ | Cross-boarder platform selling "western" brands |
|  Suning |  | ✗ | ✗ | ✓ | ✗ | ✗ | Offline-to-online (O2O) smart retail company, which integrated capabilities that encompass, omni-channel operations, technology service and supply chain management |
|  Baozun |  | ✗ | ✗ | ✓ | ✓ | ✗ | Brand e-commerce company, a leading digital technology and solution company |
|  Yunji |  | ✗ | ✗ | ✓ | ✗ | ✗ | Social reselling platform offering trainings to social sellers and logistics and aftersales service to merchants |
|  Songshu Pinpin |  | ✓ | ✗ | ✓ | ✗ | ✗ | Group buying platform offering daily necessities that neighborhood representatives buy for the neighborhood and distribute from a central point in the area |

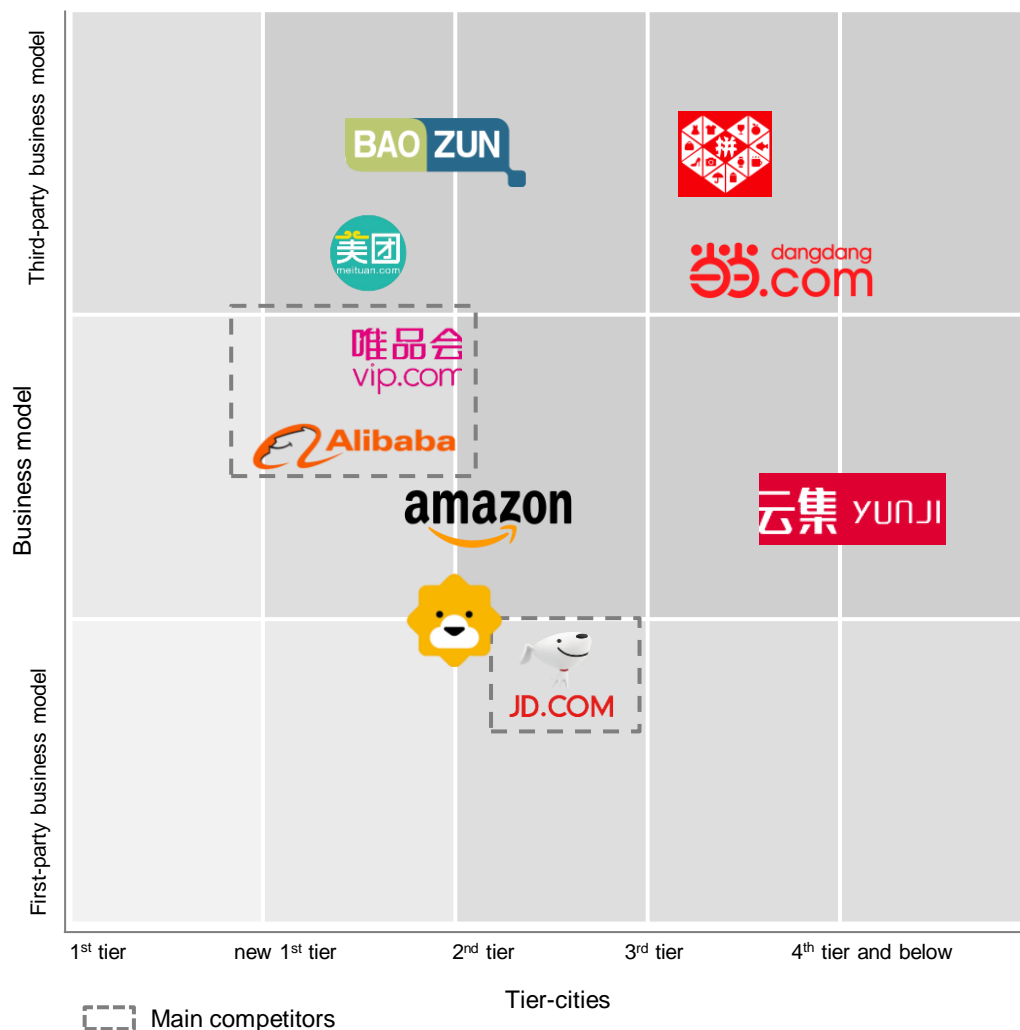
 Tencent ecosystem

 Alibaba ecosystem

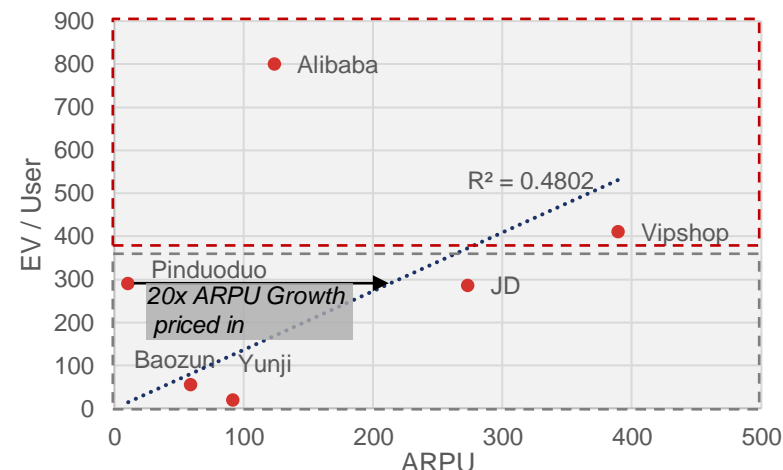
 Main competitors

Competitive landscape II

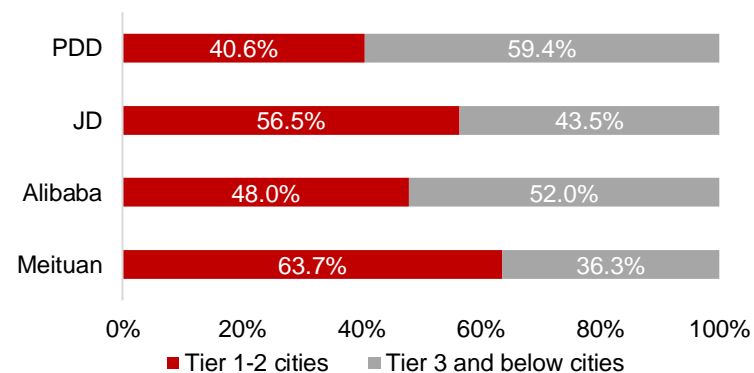
PPD is priced in line with top market players, despite having low monetization user profiles



EV/User vs ARPU – Pinduoduos monetization is priced in



Self-proclaimed user breakdown by tier-cities doesn't match ARPU



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Questionable financials

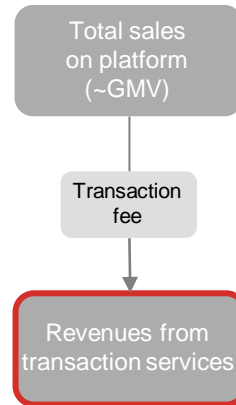


Signs for GMV delusion

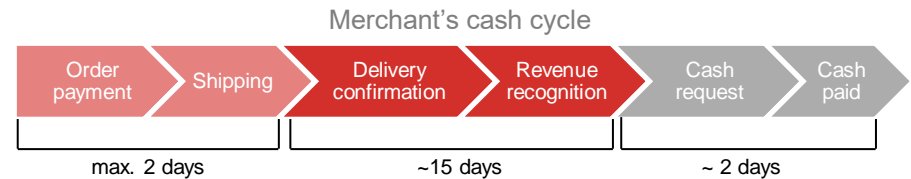
Reported numbers might be all show and no substance

Transaction fees

- Pinduoduo charging **0,6% of merchants' revenues** (GMV) as transaction fees recognized as **transaction services**
- Transaction **fees only collected** on behalf of third parties → recognition as **revenues questionable** per se
- **Preferential rates** rewarded according to the company's "discretion from time to time"
- Taking a **conservative** approach of 0,2% as average transaction fees, the **implied GMV is more than 50 % lower** than the reported figures

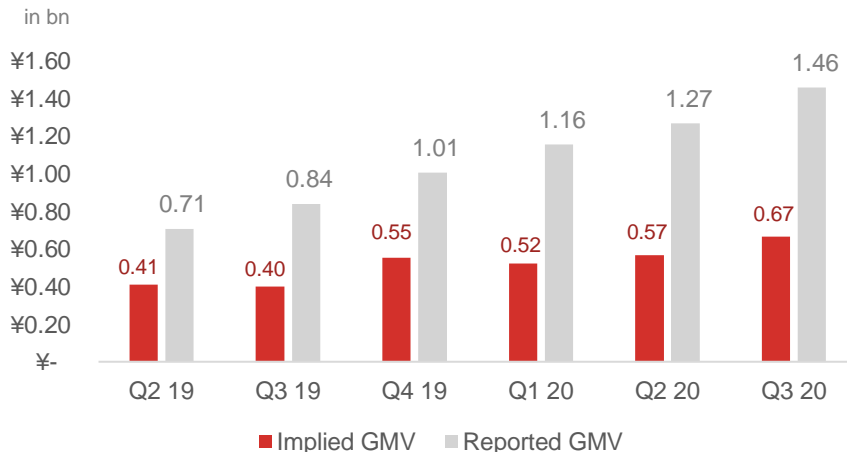


Payables to merchants

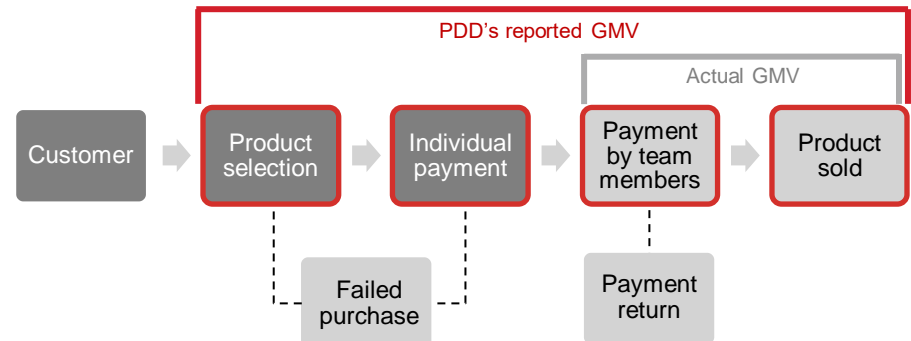


- Merchants' recognized revenues are kept as **payables to merchants**
- Pinduoduo's **reported numbers** suggest a cash cycle of approximately **10 days**
- Assuming a conservative cash cycle of 15 days, the **implied GMV is more than 30 % lower** than reported figures

Reported GMV vs. implied GMV with a transaction fee of 0,2%



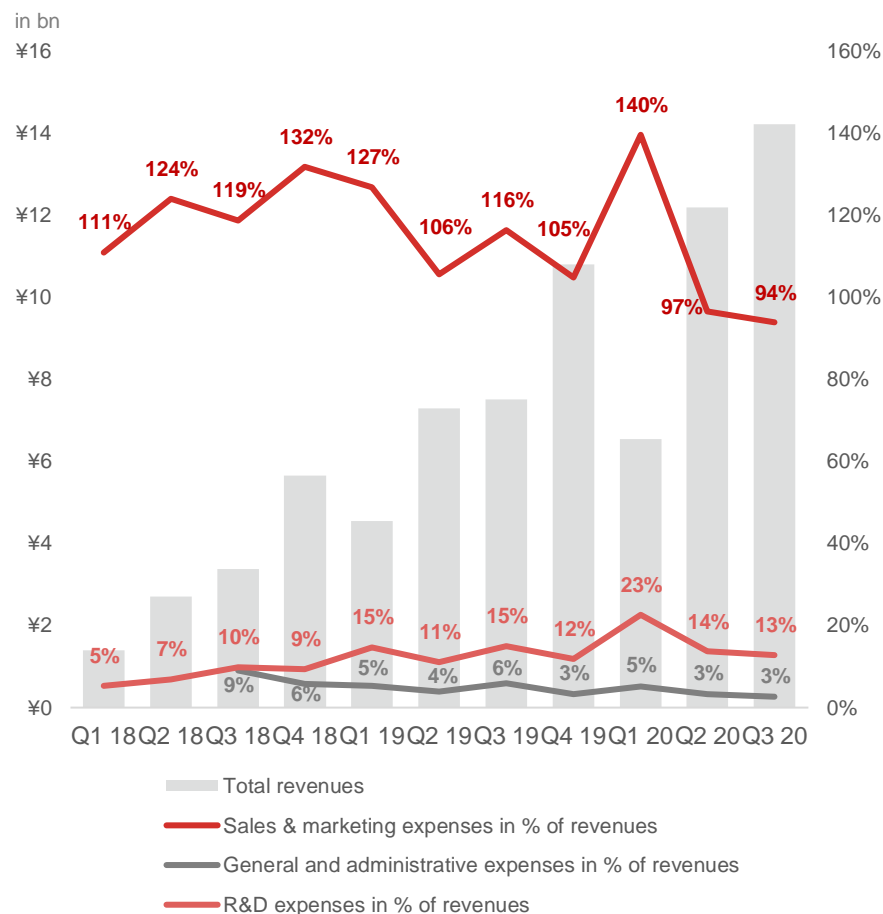
Shopping process



Explanations for absurd numbers

Related companies might help Pinduoduo in embellishing its numbers

Expenses as % of revenues – Little signs of margin improvement



Explanations for disproportionate sales & marketing expenses

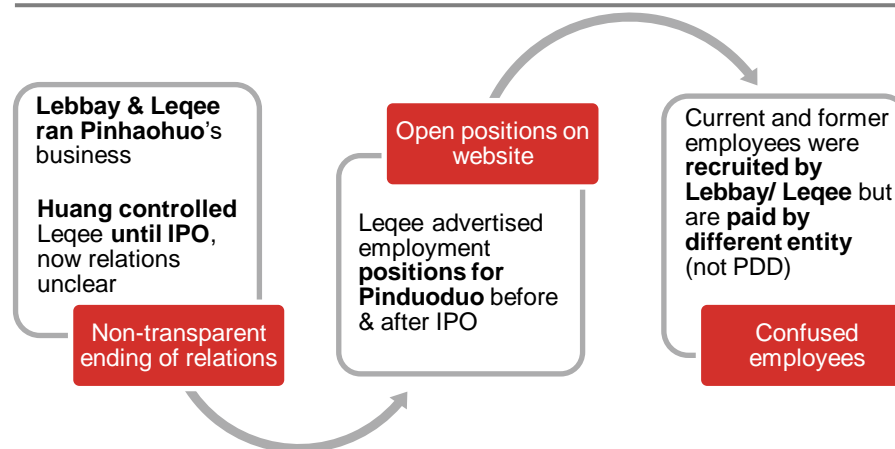
No business activity other than subsidizing purchases on platform

- By issuing **coupons** and subsidizing teams purchases, **Pinduoduo** partially **pays for the merchants' products** instead of customers
- Customer engagement awarded with "**cash redeemable credits**"
- New capital** raised whenever cash necessary to pay these coupons depleted

Alleged outsourcing of general & administrative and R&D expenses

- Compensation for employees could be paid by an **independent company** that is not mentioned in the financial reports
- Huang's earlier founded companies Lebbay** and **Leqee** are reasonable candidates

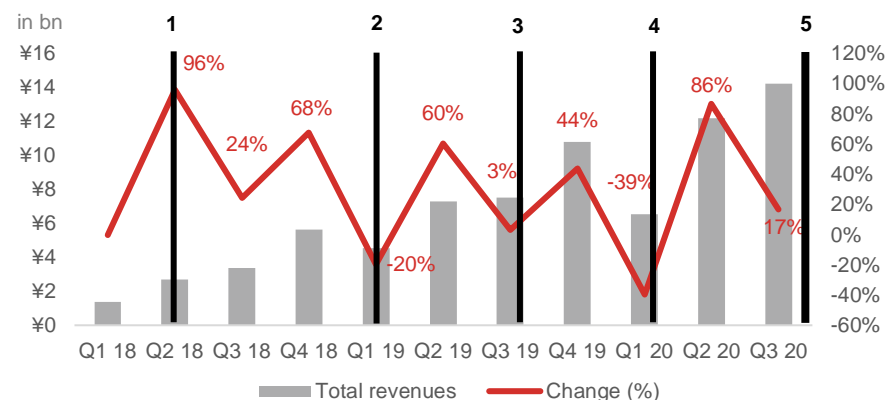
Signs for interference of Huang's earlier founded companies



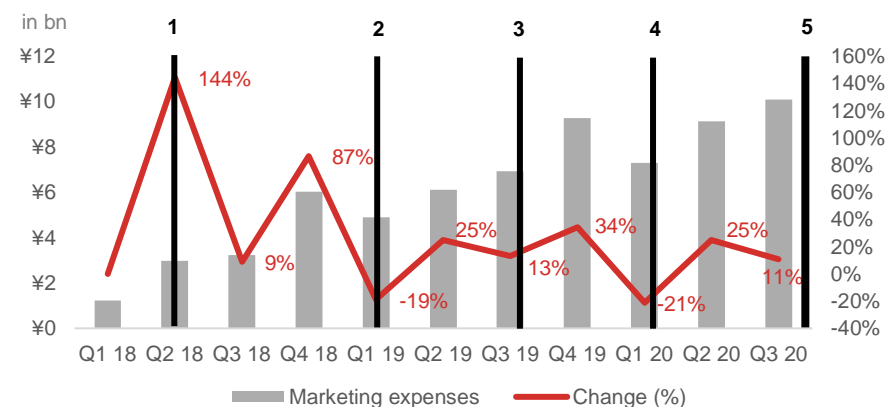
Usage of new capital

Pinduoduo is scrambling for cash injections every two quarters

Development of revenues



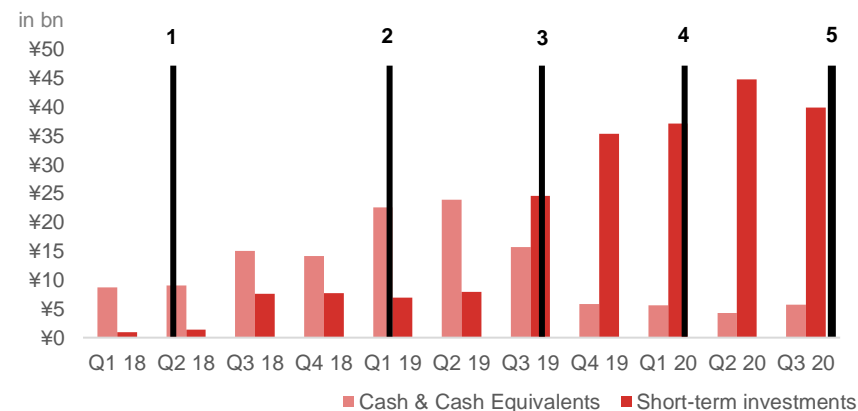
Development of marketing expenses



Founding rounds

| Nr. | Date | Type | Volume |
|-----|---------------|--------------------|--------------|
| 1 | Apr. 11, 2018 | Series D Equity | USD 3 bn |
| 2 | Feb. 8, 2019 | Secondary Offering | USD 1,375 bn |
| 3 | Sep. 29, 2019 | Post-IPO Debt | USD 1 bn |
| 4 | Mar. 30, 2020 | Post-IPO Equity | USD 1,1 bn |
| 5 | Nov. 17, 2020 | Post-IPO Debt | USD 1,75 bn |
| 5 | Nov. 18, 2020 | Post-IPO Equity | USD 3,59 bn |

Why is the raised cash used for short-term financial investments?





Pinduoduo

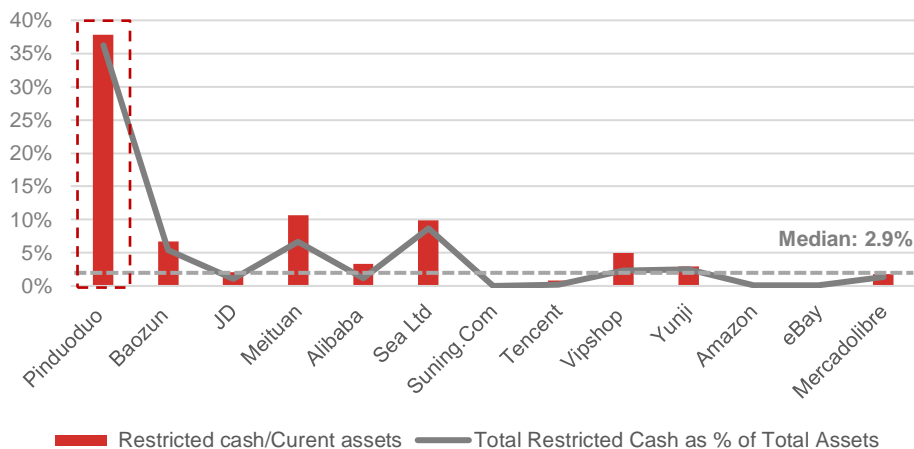
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Benchmarking

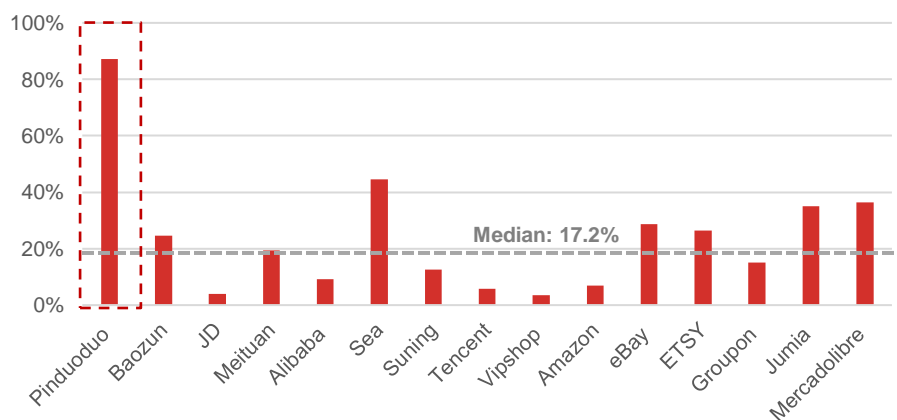
Financials

Pinduoduo is a negative outlier on every observable financial metric

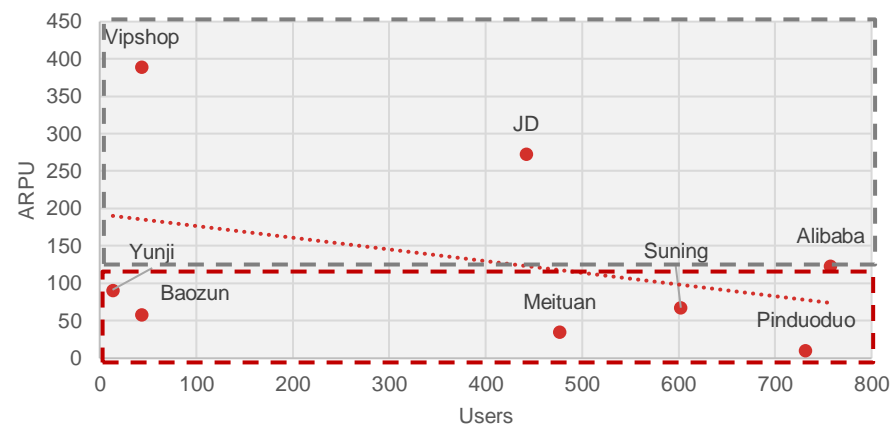
Restricted cash (%) – A potential for disaster going forward



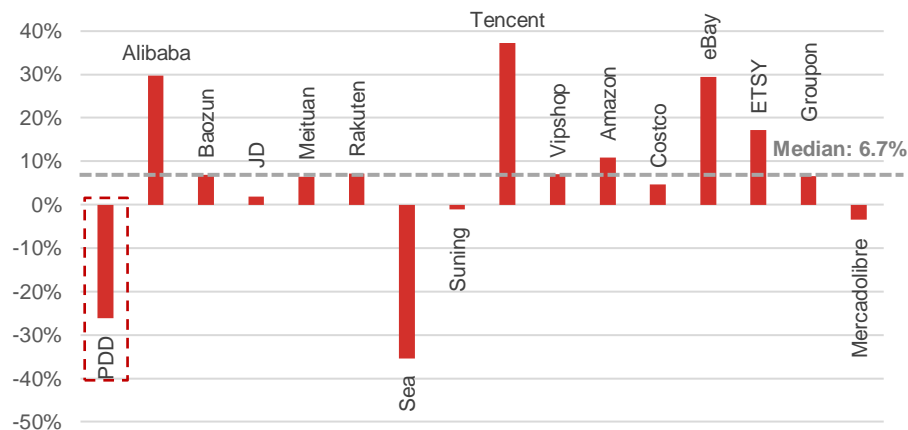
Marketing/Sales (%) – User growth at all costs



Despite claims of high user figures, PDD seems unable to monetize

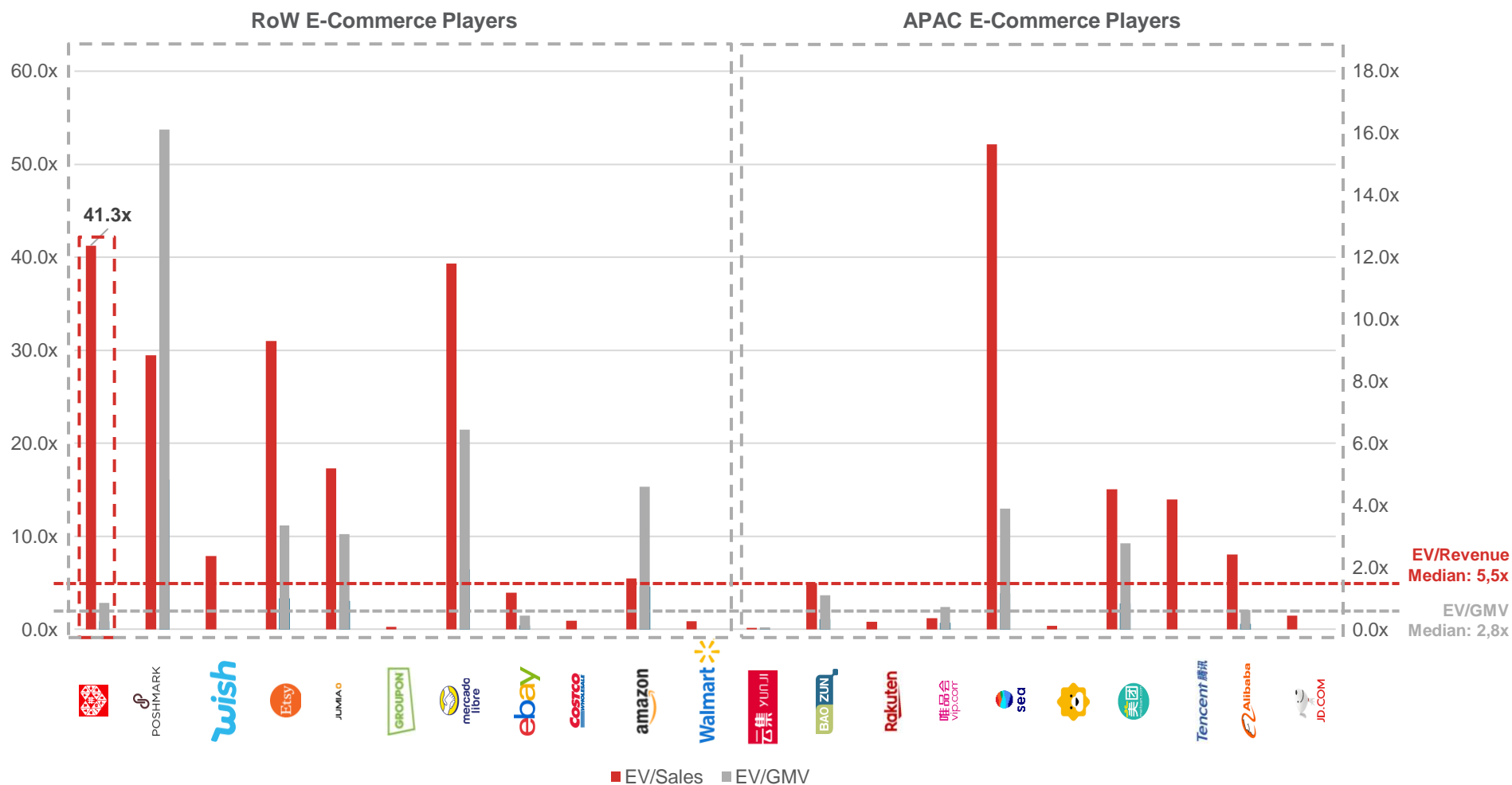


EBITDA margin (%)



Comparable company analysis

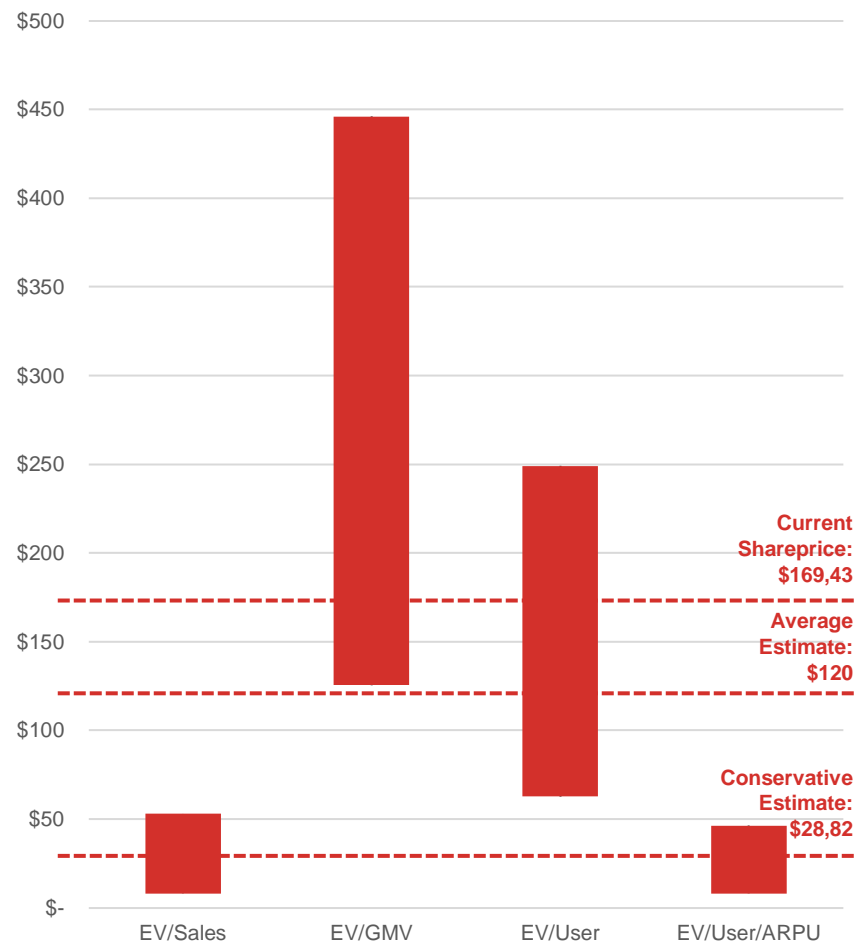
Pinduoduo is globally traded at surreal revenue multiples given its low-profile customer group



Comparable company analysis

Investors seem to be pricing in an overstatement in GMV, based on comparable APAC peers

Football Field Valuation – APAC E-Commerce Players



Adjustments for overinflated user figures

- As shown previously, we have reason to believe that PDD is overstating its GMV by ~ 30 - 150%
- Non-Adjustment for GMV and possible user metrics inflation yields an **Average Price-Target based on Median Peer Multiples of \$124,83 per share**, representing a **downside risk of 22,3%**
- Adjustment for **highly likely GMV inflation** and **user count inflation** yields an **Average Price-Target based on Peer Multiples of \$28,82 per Share**, representing a **downside risk of 82,1%**

Competition

- As shown previously, PDD is **solely outcompeting on user growth and GMV-based metrics**
- As these metrics seem to **distort investor perception** quite drastically and are **prone to manipulation**, we propose **additional ways of conceptualizing the future scenario** currently priced into the shares of PDD

ARPU Growth

- Assuming 731.3 mm active users and fairly **strong maturation**, PDD **would have to grow its user monetization by 900%** just to be **ON PAR** with its peers in terms of valuation

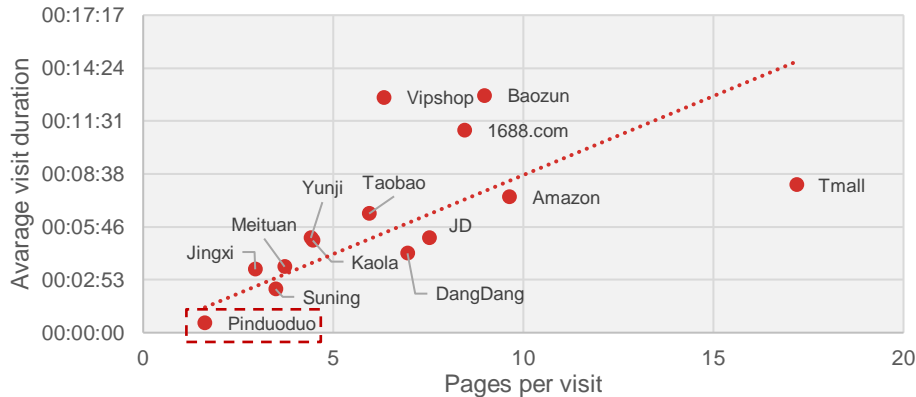
Agricultural hiring carnage

- Assuming **infrastructure and logistics rollout** in line with peers, PDDs workforce **would have to increase by approx. 16 times²** in order to service its users with its own delivery system

Benchmarking: Webpage statistics

A lack of interaction is observable compared to other e-commerce platforms

Pages per visit vs average visit duration

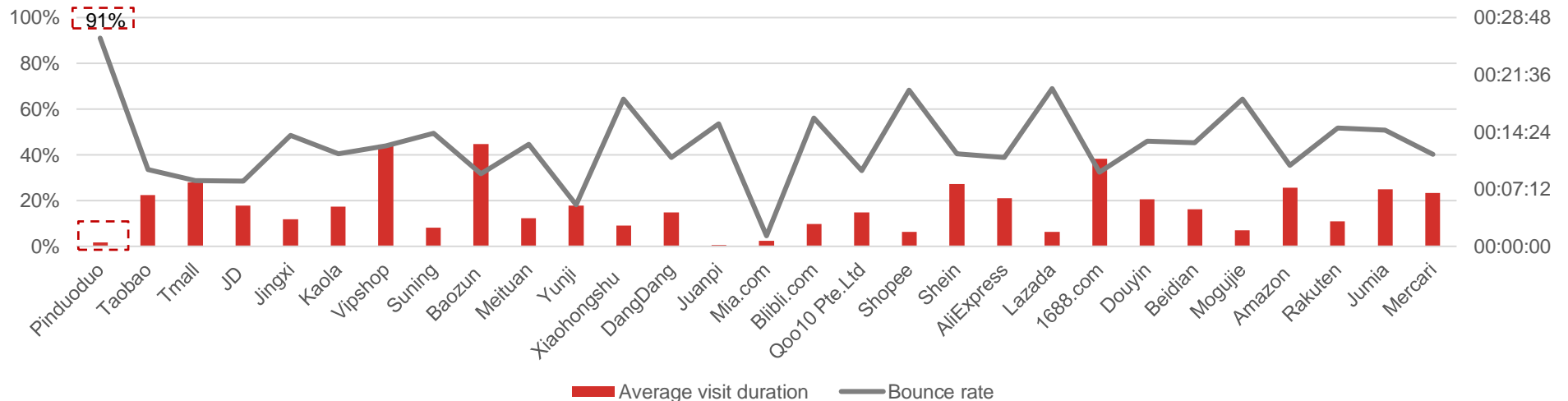


Low stickiness of users

Low engagement rate, despite high number of users

- **Bounce rate** measures the percentage of visitors to the website who leave without taking any further action
- Average bounce rate for e-commerce & retail platforms: **30-45%**
- High bounce rate for PDD of **90,97%**, indicating a rather poor user emerging experience or possible bot/ spam activity
- Incentivization of daily check-ins does not seem to provide actual stickiness of users to services

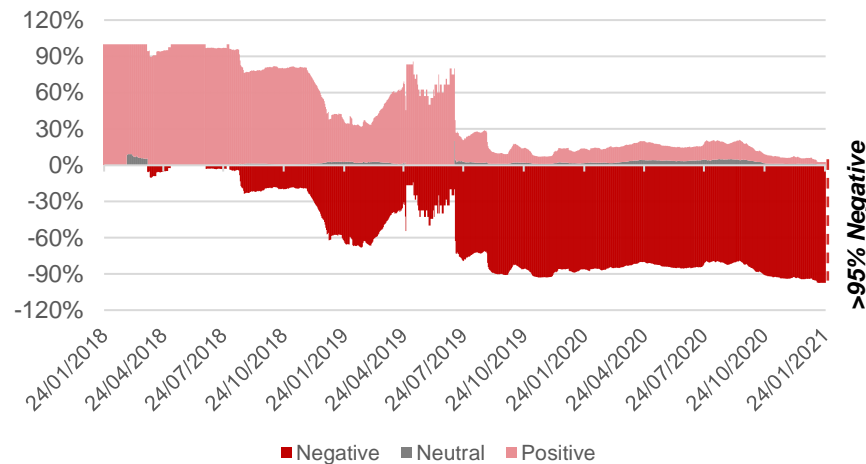
Average visit duration vs bounce rate of e-commerce companies



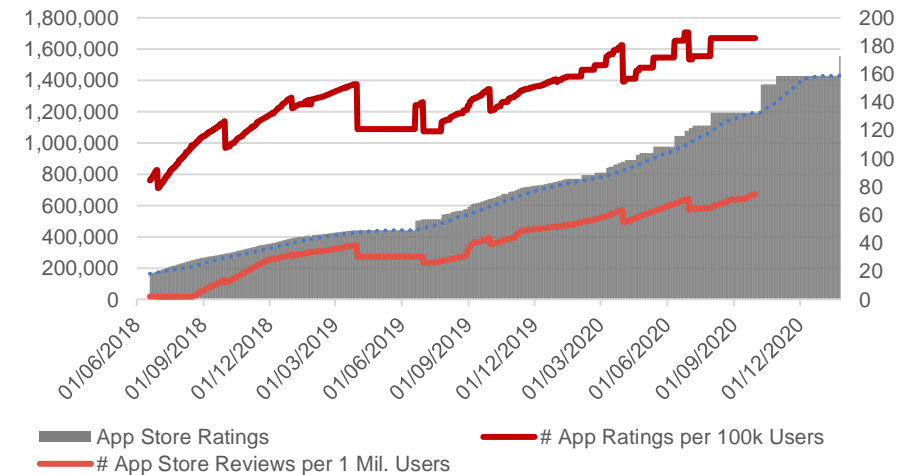
Appstore Reviews analysis

Consumer complaints are on the rise, becoming a challenge for keeping the user base

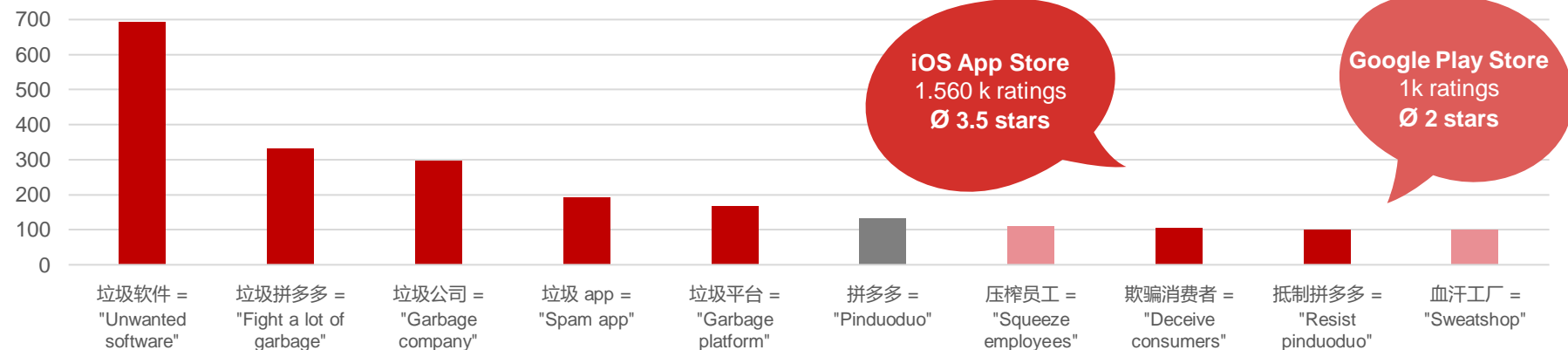
iOS App Store – Trailing 30-Days Review Sentiment¹



App Store Ratings have been steadily increasing since the launch



Most frequently mentioned words in PDD iOS Appstore reviews (61k reviews)² reveals true customer sentiment



Statements by various interviewees about PDD

The picture portrayed by the company does not match descriptions of interviewees

“We don’t use the app, its primarily been made for poor people from rural regions [...] Main difference between Taobao and Pinduoduo is that Pinduoduo is on average around 30% cheaper – We doubt the legitimacy”

- Chinese Locals, Tier 1 City

“I do not sell on Pinduoduo, goods are many counterfeits and many reseller using dropshipping to make margin, people often not want pay, not good reputation”

- Chinese Metal Consumer Goods Supplier, Tier 3 City

“Pinduoduo is most likely a fraud, atleast everyone thinks it is”

- Chinese Consumer, Tier 1 City

“I [think] mostly students use it to get [...] free groceries and gifts from promo campaigns”

- Chinese Consumer, Tier 3 City



Pinduoduo

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Risk analysis

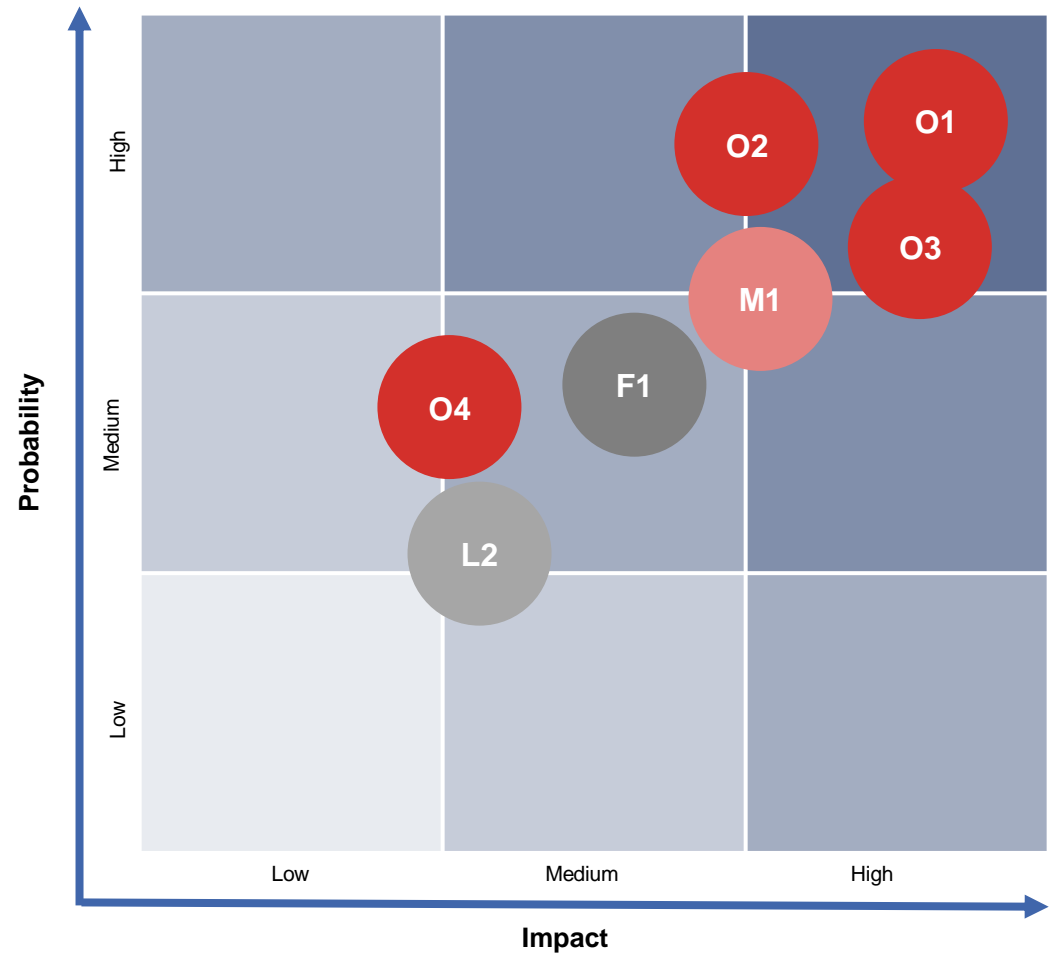
丰登杂粮铺

Risk Analysis

The risks Pinduoduo is facing are plentiful and various



Operations (O) – Market (M) – Financial (F)– Legislation (L)





Pinduoduo

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Catalysts



庆丰收!为老乡拼一单!







百亿补贴

中国农民丰收节 金秋消费季
“丰收节为老乡拼一单”

央视
新闻

Catalysts

A wide array of catalysts could further propel the shareprice upwards or cause prices to plummet

| Catalyst | Type | Estimated impact on share price |
|--|------|---|
| Larger shareholder cashing out | Soft | <ul style="list-style-type: none"> High, due to low overall real free float  |
| Chen withdrawal or going awol | Soft | <ul style="list-style-type: none"> High, as could be witnessed in past occurrences  |
| Acquisition of a logistics company | Soft | <ul style="list-style-type: none"> Medium, likely to lead to investor confidence in the short term  |
| Chinese government interventions | Soft | <ul style="list-style-type: none"> High, see e.g. Alibaba / Jack Mas recent disappearance & tender  |
| Massive customer churn due to service related issues | Soft | <ul style="list-style-type: none"> High, likelihood of equity issuance discontinuation / undersubscription  |
| Delisting risk | Soft | <ul style="list-style-type: none"> Very High, diminished capital influx for the stock could inevitably lead to funding risks  |



Pinduoduo

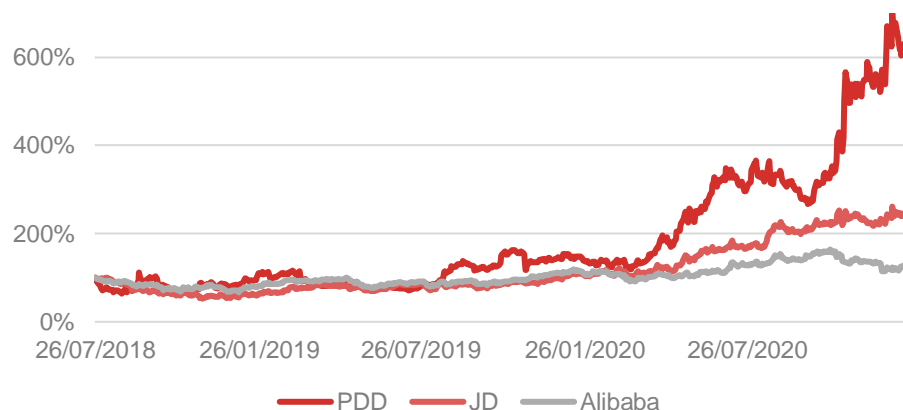
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Conclusion

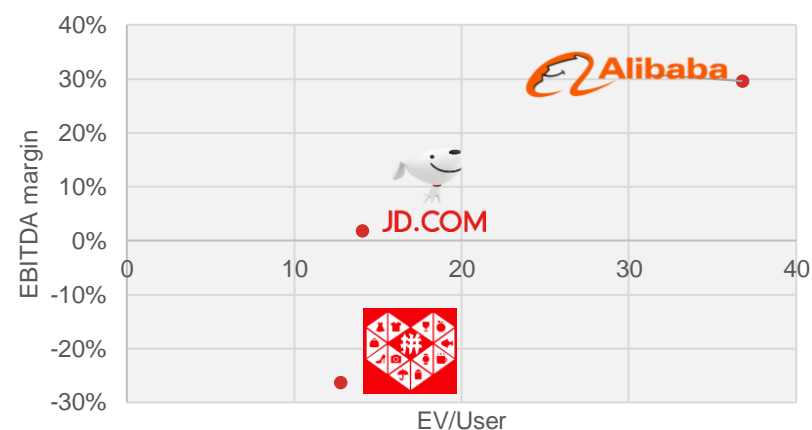
Conclusion

PDD underperforms its peers on every metric except share price and is deemed overvalued

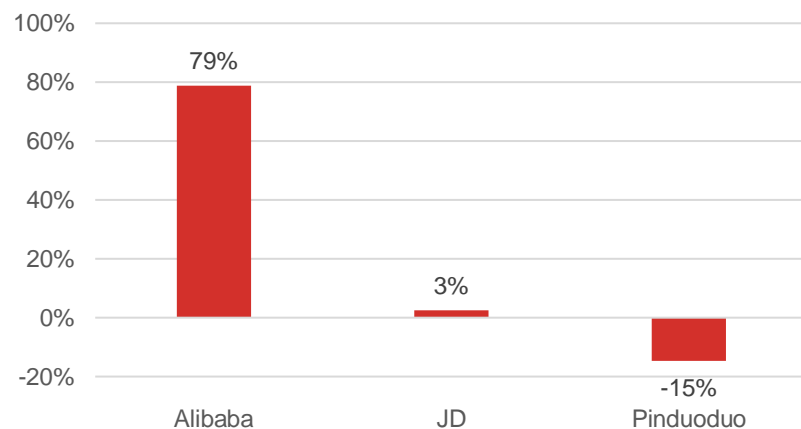
Share price performance



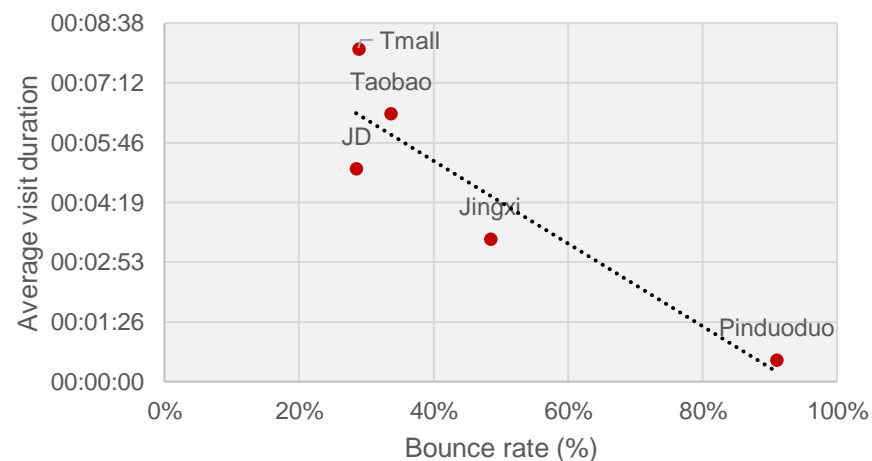
EBITDA margin vs EV/User



Profitability (net margin, %)



Webpage statistics



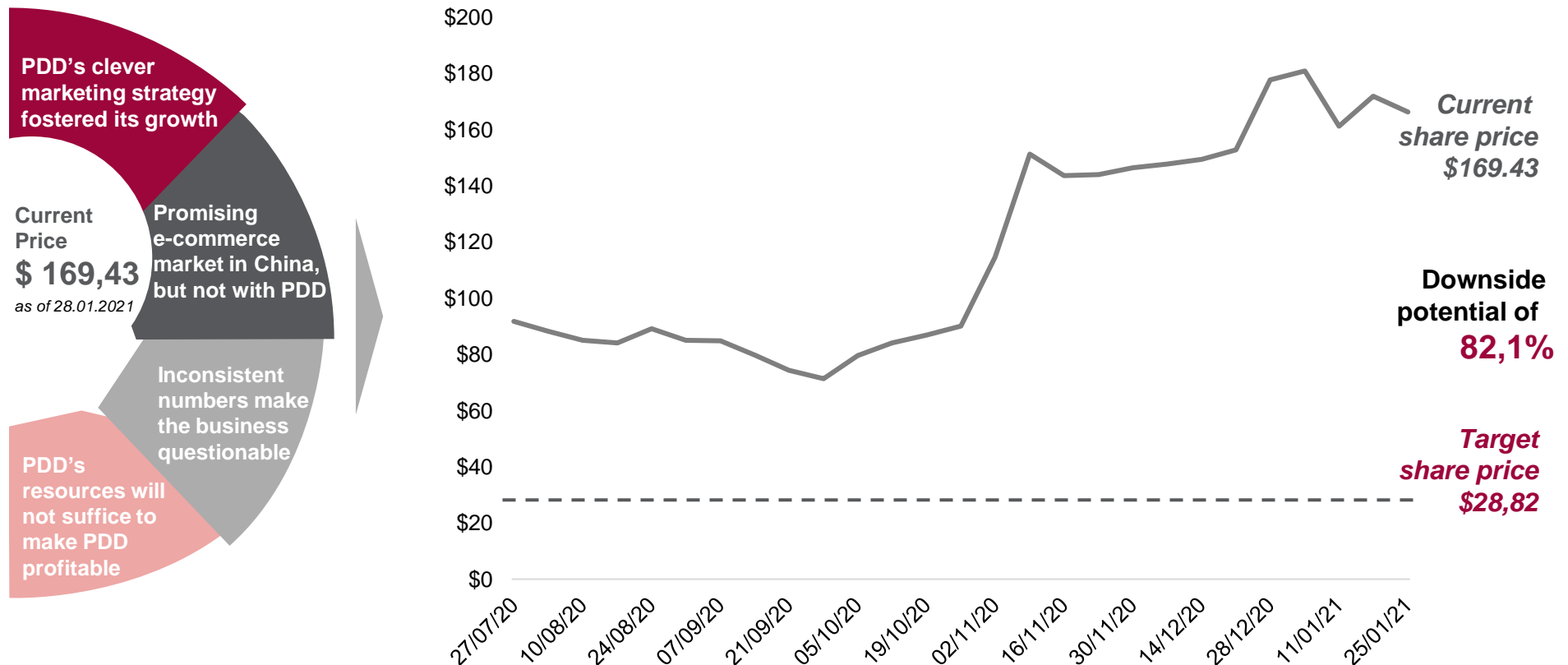
Conclusion

While the Chinese e-commerce market has large potential for further growth, Pinduoduo is not the right investment

In their IPO S-1 Filing, Pinduoduo's founder Colin Huang described the company's aspiration to become a mixture of Costco and Disneyland, a combination of great value products and fun entertainment.



Pinduoduo's share price performance





Pinduoduo

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Appendix

Checklist for fraud detection – Red flags

| Possible fraudulent activity | YES | NO |
|--|----------------------------------|-----------------------|
| Domination of management by a single person or small group without compensating controls | <input checked="" type="radio"/> | <input type="radio"/> |
| Rapid growth or unusual profitability especially compared to that of other companies in the same industry | <input checked="" type="radio"/> | <input type="radio"/> |
| Significant related party transactions not in the ordinary course of business without this fact being disclosed. | <input checked="" type="radio"/> | <input type="radio"/> |
| High turnover of senior management, counsel, board members or key employees may be an attempt to prevent them from learning too much about the firm. | <input checked="" type="radio"/> | <input type="radio"/> |
| Known history of violations of securities laws or other laws and regulations or claims against the entity, its senior management, or board members alleging fraud or violations of laws and regulations without this fact being disclosed. | <input checked="" type="radio"/> | <input type="radio"/> |
| Increasing number of complaints about products or service | <input checked="" type="radio"/> | <input type="radio"/> |
| Recurring negative cash flows from operations or an inability to generate cash flows from operations while reporting earnings and earnings growth | <input checked="" type="radio"/> | <input type="radio"/> |

Alleged business model economics

„Together, more savings, more fun“

Business model



Company

PDD represents an innovative approach to e-commerce by combining social media and e-commerce into a “social – commerce” platform and by their C2M approach



Pricing

Products are extremely low priced and cheaper than products of competitors. Users form teams of at least two people to unlock discounts of up to 90%



Revenue income

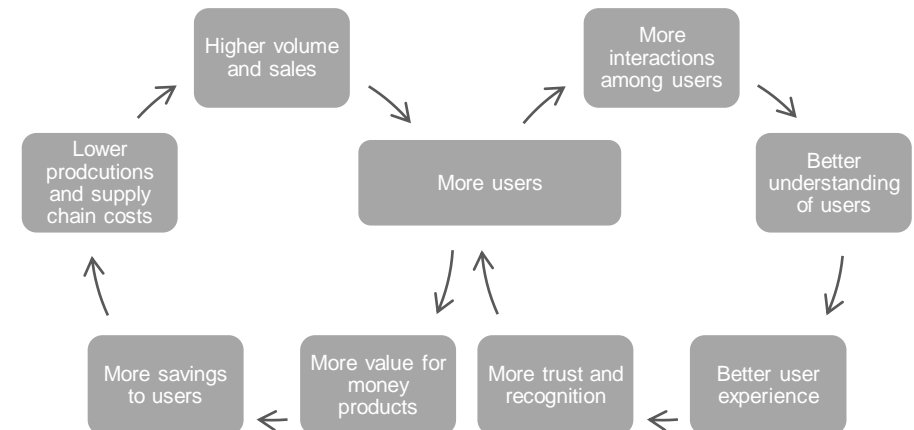
90% of revenues comes from online marketing services and 10% from transaction services

Growth & consumer-to-manufacturer approach

From “how much can we produce” to “how much should we produce”

- Human-oriented platform designed to stimulate potential demands
- Understanding of what different groups of users want
 - Claimed benefits for consumer
 - More tailored products
 - Lower prices
 - Claimed benefits for merchants, manufacturers, logistic provider
 - better inventory planning and management
 - lower production cost, better quality
 - better pick-up & delivery planning

Team Purchasing – self-reinforcing virtuous cycle



Implied cash cycle from reported numbers

The cash cycle inferred from GMV and payables does not match the real number of 15 days.

| <i>in RMB m</i> | Q1 18 | Q2 18 | Q3 18 | Q4 18 | Q1 19 | Q2 19 | Q3 19 | Q4 19 | Q1 20 | Q2 20 | Q3 20 |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|
| GMV | 198.700 | 262.100 | 344.800 | 471.600 | 557.400 | 709.100 | 840.200 | 1.006.600 | 1.157.200 | 1.268.700 | 1.457.600 |
| Payables to merchants | 8.594 | 9.318 | 10.794 | 17.276 | 15.657 | 17.831 | 19.820 | 29.926 | 28.714 | 33.979 | 40.300 |

$$\text{Payables to merchants} = \text{GMV} * \frac{\text{days in cash cycle}}{360}$$

| | | | | | | | | | | | |
|----------------------------------|------|------|------|------|------|-----|-----|------|-----|-----|------|
| Implied cash cycle (days) | 15,6 | 12,8 | 11,3 | 13,2 | 10,1 | 9,1 | 8,5 | 10,7 | 8,9 | 9,6 | 10,0 |
|----------------------------------|------|------|------|------|------|-----|-----|------|-----|-----|------|

Average implied cash cycle: 10,9

| | | | | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Implied GMV with cash cycle of 15 days | 206.262 | 223.637 | 259.051 | 414.622 | 375.772 | 427.937 | 475.672 | 718.236 | 689.135 | 815.484 | 967.196 |
| <i>% of reported GMV</i> | 104% | 85% | 75% | 88% | 67% | 60% | 57% | 71% | 60% | 64% | 66% |

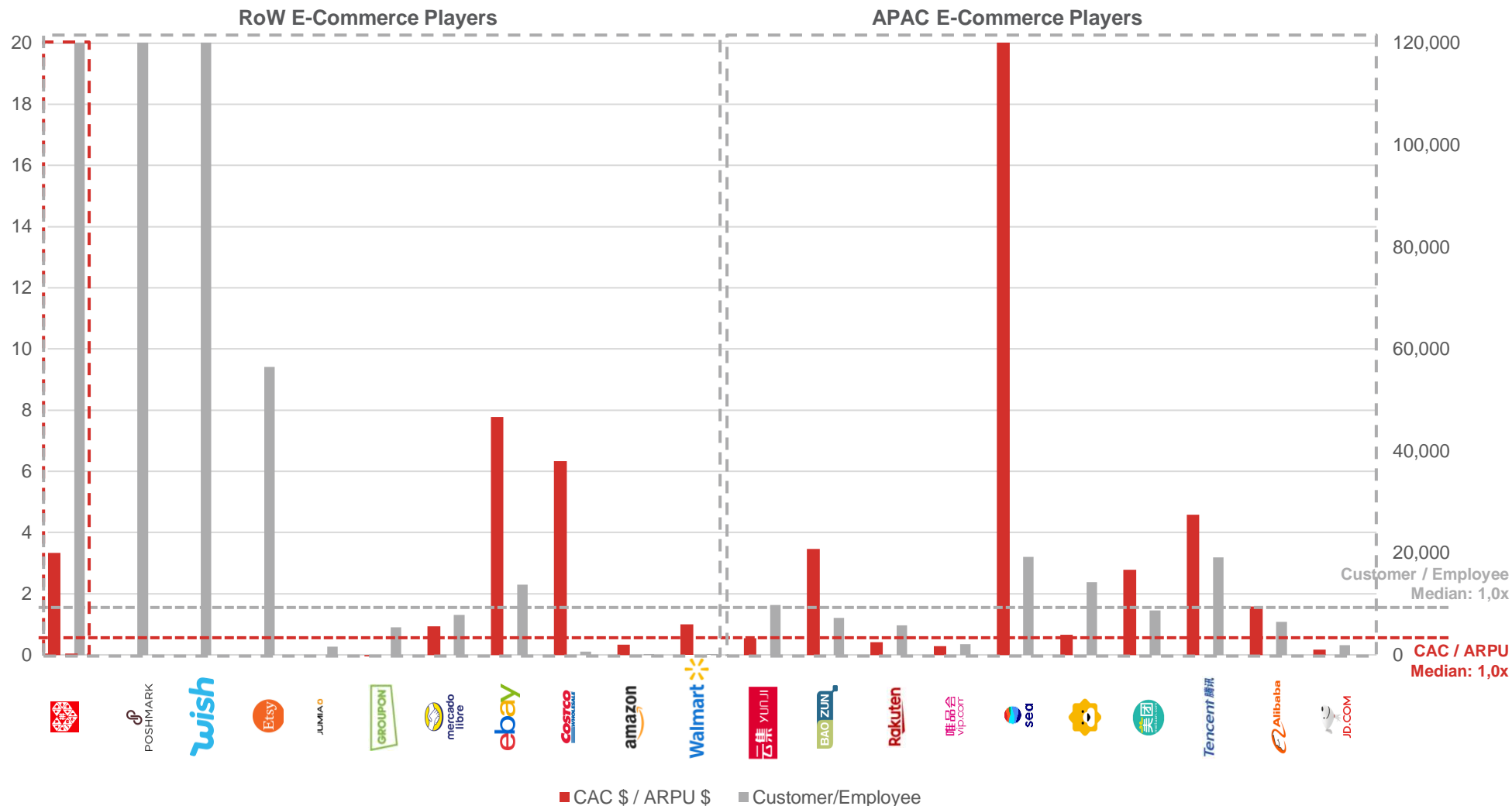
Comparable company analysis

Internationally, Pinduoduo lacks a competitive edge, limiting geographic scope to mainland china



Comparable company analysis

Low returns on CAC and – as evidenced by customer / employee ratio – a pureplay marketplace



Balance Sheet - Assets

PDD boasts a variety of suspect “assets” and odd ratios on their balance sheet

| Assets | Q4 17 | Q1 18 | Q2 18 | Q3 18 | Q4 18 | Q1 19 | Q2 19 | Q3 19 | Q4 19 | Q1 20 | Q2 20 | Q3 20 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Cash and cash equivalents | 3.058.152 | 8.634.289 | 9.030.874 | 14.960.018 | 14.160.322 | 22.501.691 | 23.851.940 | 15.694.045 | 5.768.186 | 5.526.736 | 4.209.623 | 5.715.676 |
| Growth | | 182% | 5% | 66% | -5% | 59% | 6% | -34% | -63% | -4% | -24% | 36% |
| Restricted cash | 9.370.849 | 8.058.398 | 8.785.138 | 10.166.809 | 16.379.364 | 14.717.548 | 16.812.226 | 18.672.032 | 27.577.671 | 26.972.389 | 32.468.267 | 38.813.084 |
| In % of revenues | 834% | 621% | 344% | 320% | 306% | 344% | 245% | 264% | 277% | 439% | 279% | 284% |
| In % of current assets | 71% | 44% | 43% | 30% | 41% | 31% | 33% | 30% | 38% | 37% | 38% | 43% |
| Growth | | -14% | 9% | 16% | 61% | -10% | 14% | 11% | 48% | -2% | 20% | 20% |
| Receivables from online payment platforms | 88.173 | 113.525 | 94.443 | 126.456 | 247.586 | 317.209 | 452.266 | 524.436 | 1.050.974 | 679.522 | 429.375 | 531.009 |
| Growth | | 29% | -17% | 34% | 96% | 28% | 43% | 16% | 100% | -35% | -37% | 24% |
| Short-term investments | 50.000 | 850.000 | 1.300.000 | 7.511.280 | 7.630.689 | 6.919.548 | 7.935.421 | 24.560.779 | 35.288.827 | 37.048.472 | 44.801.078 | 39.859.089 |
| In % of current assets | | 5% | 6% | 22% | 19% | 15% | 15% | 40% | 48% | 51% | 52% | 44% |
| Growth | | 1600% | 53% | 478% | 2% | -9% | 15% | 210% | 44% | 5% | 21% | -11% |
| Amounts due from related parties | 442.912 | 515.497 | 588.078 | 693.919 | 1.019.033 | 1.081.936 | 1.043.258 | 1.253.490 | 2.365.528 | 1.948.392 | 2.428.172 | 3.449.126 |
| Prepayments and other current assets | -- | -- | 673.405 | 784.945 | | 1.268.842 | 1.210.648 | 884.602 | 950.277 | 914.603 | 1.245.451 | -- |
| VAT recoverable | 33.364 | 32.475 | -- | -- | 63.005 | -- | -- | -- | -- | -- | -- | 371.127 |
| Prepayments | 35.104 | 110.882 | -- | -- | 667.113 | -- | -- | -- | -- | -- | -- | 570.658 |
| Rental and other deposits | 14.589 | -- | -- | -- | 64.902 | -- | -- | -- | -- | -- | -- | 566.654 |
| Staff advances | 3.689 | -- | -- | -- | 7.868 | | | | | | | |
| Payments made on behalf of merchants | 4.914 | -- | -- | -- | 8.234 | | | | | | | |
| Others | 7.097 | 37.219 | -- | -- | 6.805 | | | | | | | |
| Interest receivables | 26.529 | 27.909 | -- | -- | 101.062 | -- | -- | -- | -- | -- | -- | 249.146 |
| Loan to a third party | 2.456 | 2.365 | -- | -- | 35.000 | -- | -- | -- | -- | -- | -- | 45.000 |
| Total Current Assets | 13.137.828 | 18.382.559 | 20.471.938 | 34.243.427 | 40.390.983 | 46.806.774 | 51.305.759 | 61.589.384 | 73.001.463 | 73.090.114 | 85.581.966 | 90.170.569 |
| Property and equipment, net | 9.279 | 9.897 | 14.876 | 19.110 | 29.075 | 36.089 | 33.409 | 38.153 | 41.273 | 41.353 | 47.525 | 46.509 |
| Intangible assets | -- | 2.789.354 | 2.786.690 | 2.741.320 | 2.579.338 | 2.381.247 | 2.277.009 | 2.182.296 | 1.994.292 | 1.866.532 | 1.706.291 | 1.486.959 |
| Right-of-use-assets | -- | -- | -- | -- | -- | 218.836 | 307.735 | 316.239 | 517.188 | 486.894 | 514.926 | 534.076 |
| Loan to related party | 162.363 | 164.199 | 0 | 0 | 0 | -- | -- | -- | -- | -- | 0 | 0 |
| Other Non-Current Assets | 5.000 | -- | -- | -- | 182.667 | 340.819 | 436.938 | 449.990 | 503.120 | 691.994 | 3.049.958 | 7.172.813 |
| Total Non-Current Assets | 176.642 | 2.963.450 | 2.801.566 | 2.760.430 | 2.791.080 | 2.976.991 | 3.055.091 | 2.986.678 | 3.055.873 | 3.086.773 | 5.318.700 | 9.240.357 |
| Total Assets | 13.314.470 | 21.346.009 | 23.273.504 | 37.003.857 | 43.182.063 | 49.783.765 | 54.360.850 | 64.576.062 | 76.057.336 | 76.176.887 | 90.900.666 | 99.410.926 |

Competitors' share of restricted cash is less than 4 %

Competitors' share of short-term investments is between 7% and 20%

PDD gives no information of what is included in long-term investments and does not explain sudden spikes

Balance Sheet - Liabilities

Liabilities of the company largely remain a mystery to outsiders

| Liabilities | Q4 17 | Q1 18 | Q2 18 | Q3 18 | Q4 18 | Q1 19 | Q2 19 | Q3 19 | Q4 19 | Q1 20 | Q2 20 | Q3 20 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Amounts due to related parties | 76.057 | 142.003 | 294.201 | 571.816 | 478.113 | 921.418 | 1.412.517 | 2.085.604 | 1.502.892 | 2.635.849 | 1.928.353 | 3.298.767 |
| Customer advances and deferred revenues | 56.453 | 85.657 | 105.013 | 165.044 | 191.482 | 243.048 | 267.322 | 379.001 | 605.970 | 619.769 | 750.548 | 1.042.093 |
| Payables to merchants | 9.838.519 | 8.594.240 | 9.318.220 | 10.793.733 | 17.275.934 | 15.657.163 | 17.830.719 | 19.819.656 | 29.926.488 | 28.713.943 | 33.978.503 | 40.299.835 |
| Growth | | -13% | 8% | 16% | 60% | -9% | 14% | 11% | 51% | -4% | 18% | 19% |
| In % of Restricted cash | 105% | 107% | 106% | 106% | 105% | 106% | 106% | 106% | 109% | 106% | 105% | 104% |
| Accrued expenses and other liabilities | -- | -- | 971.103 | 1.082.774 | | 2.779.172 | 3.573.906 | 4.197.751 | 4.877.062 | 5.791.227 | 5.906.412 | -- |
| Payroll payable | 61.153 | 71.199 | -- | -- | 389.615 | -- | -- | -- | -- | -- | -- | 1.340.438 |
| Accrued expenses | 192.034 | 281.596 | -- | -- | 1.371.483 | -- | -- | -- | -- | -- | -- | 3.653.380 |
| VAT and other tax payable | 104.197 | 158.079 | -- | -- | 436.495 | -- | -- | -- | -- | -- | -- | 1.809.374 |
| Others | 3.009 | 6.022 | -- | -- | 28.074 | -- | -- | -- | -- | -- | -- | 101.761 |
| Merchant deposits | 1.778.085 | 2.414.648 | 3.194.609 | 3.629.887 | 4.188.273 | 4.908.578 | 5.833.878 | 6.654.130 | 7.840.912 | 8.639.172 | 9.923.180 | 10.574.559 |
| Growth | | 36% | 32% | 14% | 15% | 17% | 19% | 14% | 18% | 10% | 15% | 7% |
| Short-term borrowings | -- | -- | -- | -- | -- | -- | -- | -- | 898.748 | 2.114.541 | 2.754.466 | 2.773.023 |
| Lease liabilities | -- | -- | -- | -- | -- | 73.037 | 80.026 | 80.882 | 115.734 | 118.281 | 144.293 | 182.318 |
| Total Current Liabilities | 12.109.508 | 11.753.445 | 13.883.147 | 16.243.255 | 24.359.471 | 24.582.417 | 28.998.369 | 33.217.025 | 45.767.808 | 48.632.783 | 55.385.756 | 65.075.549 |
| Convertible bonds | -- | -- | -- | -- | -- | -- | -- | 5.140.305 | 5.206.682 | 5.430.487 | 5.572.449 | 5.504.873 |
| Lease liabilities | -- | -- | -- | -- | -- | 163.785 | 247.426 | 254.508 | 428.593 | 397.127 | 410.531 | 390.803 |
| Other non-current liabilities | -- | -- | -- | -- | -- | 8.435 | 8.171 | 7.949 | 7.389 | 7.050 | 38.071 | 36.040 |
| Total Non-Current Liabilities | 0 | 0 | 0 | 0 | 0 | 172.220 | 255.597 | 5.402.762 | 5.642.664 | 5.834.664 | 6.021.051 | 5.931.716 |
| Total Liabilities | 12.109.508 | 11.753.445 | 13.883.147 | 16.243.255 | 24.359.471 | 24.754.637 | 29.253.966 | 38.619.787 | 51.410.472 | 54.467.447 | 61.406.807 | 71.007.265 |

Restricted cash almost only consists of payables to merchants

PDD does not explain what is included in short-term borrowings and does not explain sudden spikes

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