

Pinduoduo Inc. (PDD US, BUY, TP: US\$197.00)

BUY

HOLD

SELL

Target Price: US\$197.00 Price: US\$146.79

Potential up/downside to TP +/-%	+34%
52-Week High/Low (US\$)	155.61/30.20
Market Cap (US\$m)	169,810
Shares Outstanding (mn)	1,157
3-mth ADTV (US\$m)	830
Free Float (%)	26
Major Shareholder (%)	
Zheng Huang	43

Price as of close on December 07, 2020

Source: FactSet

Key Changes

	New	Old	Diff
Rating	BUY	BUY	N/A
Target Price (US\$)	197.00	197.00	0%
2020E EPS (RMB)	(3.81)	(1.72)	-122%
2021E EPS (RMB)	(3.68)	0.96	-483%
2022E EPS (RMB)	4.09	9.26	-56%

Price Performance



Source: FactSet

China Renaissance vs Consensus (% Diff)

	2020E	2021E
Rev (RMBmn)	51,197 (-1%)	79,445 (+6%)
EPS (RMB)	(2.61) (+46%)	2.67 (-238%)

Note: Consensus estimates displayed, sourced from Bloomberg. Positive % diff = CR estimate above consensus; negative = CR estimate below consensus.

Entrance into fresh food retailing slows margin improvement

- Bigger losses in 4Q20E and full-year 2021E on higher spending in fresh food retailing.
- New initiative could attract more users and generate higher ARPU per user, both long-term positives.
- Maintain BUY and TP of US\$197.00 (20x 2021E P/S).

Non-GAAP operating loss set to widen in 4Q20E to 15% of revenue on heavy subsidies in fresh food retailing initiative. We estimate Duoduo Maicai, Pinduoduo's new initiative in fresh food retailing, has reached daily volume of around 10 million orders per day, based on our channel checks. Based on our estimates, PDD's average ticket size is just over RMB10 per order, with no more than 20% GPM; but its costs include around a 10% fee to owners of grocery pick-up stations, 10% in fulfilment, 5-10% in consumer subsidies, and 5-10% in other expenses, on our estimates. This results in an approximate 10-15% operating loss per order. After factoring in the heavy spending in this new business, we increase our forecasts for PDD's sales and marketing expenses by RMB2.7bn for 4Q20E and RMB4.9bn for full-year 2021E. On our new forecasts, PDD's non-GAAP operating margin is -15% in 4Q20E and -8% in 2021E, a 15ppt and 7ppt widening from our prior forecasts. This pushes out our expectation for PDD achieving breakdown, which we now expect in 2022.

We raise our user and ARPU forecasts on Duoduo Maicai ramp-up. Despite the short-term loss widening, we believe PDD will be able to attract more users and increase overall ARPU by generating more cross-category sales. On a standalone basis, Duoduo Maicai may remain a loss-making business for some time, but we believe PDD considers this new business an organic part of its total product offering to customers; thus we should also look at incremental sales that can be generated from other categories. We now forecast PDD's annual active buyers to increase to 761m by the end of 2020E and 814m by the end of 2021E, with ARPU rising to RMB2,188 in 2020E and RMB3,375 in 2021E. We believe the increase in the user base and rising ARPU will eventually drive the company's margin expansion, and we forecast PDD's non-GAAP operating margin to turn positive at 3.4% in 2022E.

Maintain BUY with TP of US\$197.00 on 20x 2021E P/S. We adjust our 2020E/21E/22E revenue estimates by 0%/-2%/3% and our EPS forecasts by -122%/-483%/-56% to reflect the higher investment in the fresh food retailing segment. **Key risks include:** Failure to acquire new users/merchants, intensifying competition, and higher-than-expected user acquisition costs of Duoduo Maicai.

Research Team

Charlie Chen

China Renaissance Securities (HK) Ltd
 +852 2287 1245
 charliechen@chinarenaissance.com

Veronica Shen

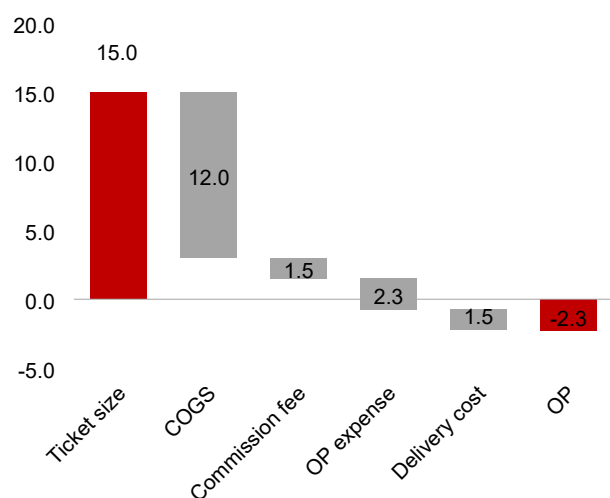
China Renaissance Securities (HK) Ltd
 +852 2287 1247
 veronicashen@chinarenaissance.com

Summary Financial Data

FY to Dec 31	2018A	2019A	2020E	2021E	2022E
Revenue (RMBmn)	13,120	30,142	50,869	84,334	114,491
Operating Income (RMBmn)	(3,958)	(5,981)	(7,342)	(6,452)	3,835
Net Income (RMBmn)	(3,376)	(4,266)	(4,900)	(4,790)	5,373
EPS (RMB)	(4.55)	(3.69)	(3.81)	(3.68)	4.09
P/E (x)	N/A	N/A	N/A	N/A	236.7

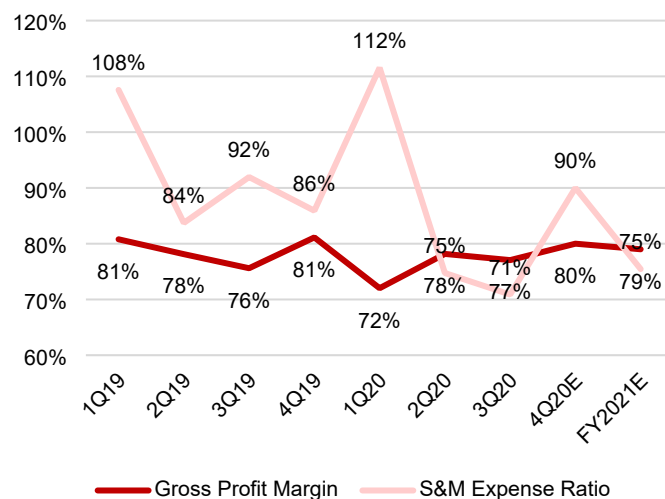
Note: Non-GAAP numbers for operating income, net income and EPS.

Exhibit 1: Duoduo Maicai per-order cost breakdown estimate (RMB)



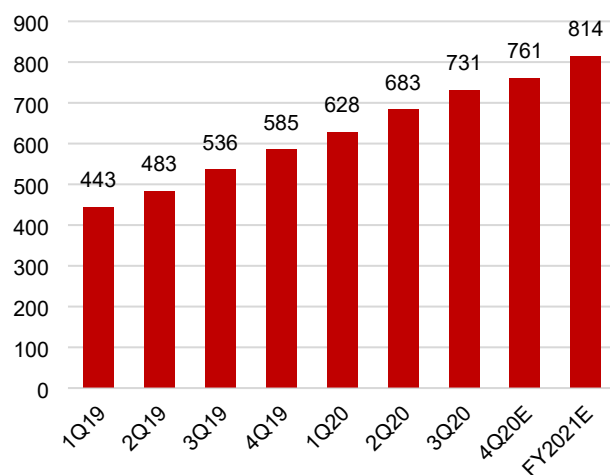
Source: CRSHK estimates

Exhibit 2: PDD's GP margin and S&M expenses ratio



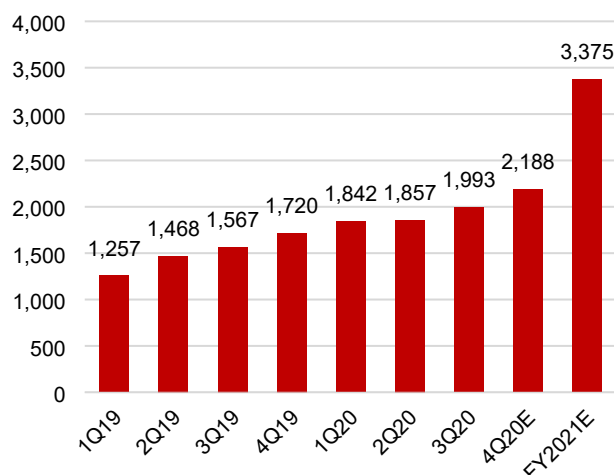
Source: Company reports, CRSHK estimates

Exhibit 3: PDD's annual active buyers (mn)



Source: Company reports, CRSHK estimates

Exhibit 4: PDD's annual spending per active buyer (RMB)



Source: company reports, CRSHK estimates

Exhibit 5: PDD – change in estimates

	New			Old			Diff		
Earnings summary (RMBmn)	2020E	2021E	2022E	2020E	2021E	2022E	2020E	2021E	2022E
Net Revenues	50,869	84,334	114,491	50,869	85,862	111,650	0%	-2%	3%
Operating income (Non-GAAP)	(7,342)	(6,452)	3,835	(4,653)	(558)	11,556	-58%	-1056%	-67%
Operating income (GAAP)	(11,097)	(8,982)	401	(8,408)	(3,134)	8,206	-32%	-187%	-95%
NI attr. to PDD's shareholders (GAAP)	(9,145)	(7,320)	1,939	(6,456)	(1,324)	8,812	-42%	-453%	-78%
NI attr. to PDD's shareholders (Non-GAAP)	(4,900)	(4,790)	5,373	(2,211)	1,252	12,161	-122%	-483%	-56%
EPADS (Non-GAAP) (RMB)	(3.81)	(3.68)	4.09	(1.72)	0.96	9.26	-122%	-483%	-56%
EPADS (Non-GAAP) (USD)	(0.54)	(0.54)	0.60	(0.25)	0.14	1.36	-122%	-483%	-56%
GMV(RMBbn)	1,664	2,747	3,658	1,664	2,700	3,567	0%	2%	3%
Take rate	3.1%	3.1%	3.1%	3.1%	3.2%	3.1%	0.0%	-0.1%	0.0%

Note: RMB: USD=6.8 in 2020, 6.6 in 2021E and 2022E.

Source: CRSHK estimates

Valuation

We maintain our target price for PDD at US\$197.00, based on a 20x 2021E target P/S multiple.

We make no change to our TP given only small adjustments to our revenue forecasts, which we change by 0%/-2%/3% for 2020E/21E/22E. Our EPS forecasts are lowered -122%/ -483%/ -56%, respectively, to reflect the higher investment in the fresh food retailing segment. We believe PDD deserves to trade at 20x forward P/S, similar to that of Alibaba (BABA US, BUY, TP: US\$355, covered by Ella Ji) in 2014 when the company had strong GMV growth. In setting our target price for PDD, we apply a 20x forward P/S multiple (which is the average of Alibaba's forward P/S in 2014).

Risks

- Failure to acquire new brands and add users.** The scale of sales on PDD's platform has encouraged its more than 1mn active merchants to offer increasingly competitive pricing, as well as customized products and services. Continuous cultivation of merchants is essential to PDD's growth outlook, in our view, although if merchants opt for other channels this could put a curb on merchant development. Such a slowdown could undermine PDD's competitiveness and impact its revenues.
- Intensifying competition.** The retail industry in China is very competitive, and PDD faces competition from many ecommerce companies and traditional retailers. Well-established ecommerce platforms such as JD and Taobao/Tmall in particular pose a competitive threat. For example, Taobao has launched "The Taobao Special" app, which targets the same segment as PDD. Merchants and buyers may opt for online retail platforms with longer histories, greater brand recognition, and longer-established merchant/buyer relationships.
- Counterfeit products damaging PDD's reputation.** The abundance of counterfeit products in China is a major issue for Chinese online retail platforms and presents a risk to PDD's growth and development, in our view.
- Reliance on social media platforms.** PDD relies heavily on social media networks; it uses platforms such as WeChat and QQ as access points for traffic, to attract and retain buyers. For example, PDD currently has a strategic cooperation with Tencent (700 HK, BUY, TP: HK\$660.00, Ella Ji & Alex Liu) that includes the WeChat mini-program, payment solutions, cloud services and advertising. This dependency poses a risk, if adequate support were to be withdrawn, or its position as a source of traffic became less effective.
- Prolonged COVID-19 outbreak may have a negative impact on the company's sales growth.** Retail sales might be significantly impacted with continuing disruption to logistics and deferred deliveries, which would hurt the company's revenue growth.



- **Higher-than-expected user acquisition costs of Duoduo Maicai.** We believe fresh food can increase PDD users' shopping frequency and user stickiness, which should help PDD to improve its cross-selling capability. However, if Duoduo Maicai fails to create synergies with PDD's main platform or achieve network expansion, the new initiative could have a negative impact on PDD's total revenue growth and net profit margin. In addition, user acquisition costs could be higher than the market expects, which could be a further downside risk for PDD.

Financials

Year to Dec 31 Income Statement

(RMBmn)	2019A	2020E	2021E	2022E
Online marketplace services	26,814	45,592	75,269	102,420
Commission revenue	3,328	5,277	9,065	12,071
Sales	30,142	50,869	84,334	114,491
Cost of Goods Sold	(6,339)	(11,338)	(17,710)	(24,043)
Gross Profit	23,803	39,532	66,624	90,448
SG&A (incl. R&D)	(32,341)	(50,629)	(75,605)	(90,047)
thereof R&D	(3,870)	(6,554)	(10,289)	(12,823)
thereof Sales & Marketing expense	(27,174)	(42,615)	(63,630)	(74,934)
thereof Admin expense	(1,297)	(1,460)	(1,687)	(2,290)
EBIT	(5,981)	(7,342)	(6,452)	3,835
EBITDA	(8,387)	(10,844)	(8,899)	484
Net interest income	1,396	1,625	1,586	1,804
Net interest expense	0	0	0	0
Pretax profit	(6,996)	(9,226)	(7,320)	2,281
Income Tax	0	0	0	(342)
Reported net income	(6,968)	(9,145)	(7,320)	1,939
EPS (reported) (RMB)	(6.02)	(7.10)	(5.63)	1.48
EPS (diluted, adjusted) (RMB)	(3.69)	(3.81)	(3.68)	4.09

Balance Sheet

(RMBmn)	2019A	2020E	2021E	2022E
Current assets	73,001	98,858	144,115	194,537
Cash & equivalents	41,057	64,121	104,668	150,846
Account receivables	1,051	1,774	2,941	3,992
Inventories	2	3	4	5
Other current assets	30,891	32,961	36,503	39,695
Non-current assets	3,056	2,585	2,225	1,951
PPE	41	49	54	56
Intangible assets	1,994	1,515	1,151	875
Goodwill	0	0	0	0
Other non-current assets	1,020	1,020	1,020	1,020
Total assets	76,057	101,443	146,340	196,488
Total Current Liabilities	45,768	76,543	126,230	171,005
ST interest bearing debt	2	3	4	5
Unearned revenue	5,483	9,254	15,341	20,827
Accounts Payable	29,926	50,506	83,731	113,672
LT interest bearing debt	0	0	0	0
Other Liabilities	5,643	5,643	5,643	5,643
Total Liabilities	51,410	82,186	131,873	176,648
Common Stock/Ordinary Capital	0	0	0	0
Share Premium	41,494	41,494	41,494	41,494
Retained Earnings	0	0	0	0
Shareholders Equity	24,647	19,257	14,468	19,841
Minority Interest	0	0	0	0
Total Liabilities & Shareholders Equity	76,057	101,443	146,340	196,488

Cash Flow

(RMBmn)	2019A	2020E	2021E	2022E
Reported net income	(6,968)	(9,145)	(7,320)	1,939
Depreciation & amortization	(638)	(485)	(371)	(284)
Net interest (income) / expenses	(64)	0	0	0
Other non-cash items (+/-)	2,609	3,755	2,530	3,435
Others (+/-)	0	0	0	0
Change in Working Capital	18,606	27,982	44,977	40,531
Cash Flow from operations	14,821	23,078	40,558	46,188
Capex	(27)	(27)	(27)	(27)
Acquisitions & Investments	(52,666)	0	0	0
Disposal of Fixed Assets and Investments	24,798	13	16	18
Other Investing Activities	(425)	0	0	0
Net Cash Flow from Investments	(28,320)	(14)	(11)	(10)
Dividends paid	0	0	0	0
Change in Debt	7,861	0	0	0
Equity raised / (purchased)	7,994	0	0	0
Other Financial Activities	0	0	0	0
Net Cash Flow from Financing	15,855	0	0	0
Net Cash Flow	2,806	23,064	40,547	46,178
Free Cash Flow	14,794	23,050	40,531	46,161

Key Assumptions

	2019A	2020E	2021E	2022E
GMV (RMBbn)	1,007	1,664	2,747	3,658
Take rate as % of GMV	2.99	3.06	3.07	3.13

Financial Ratios

	2019A	2020E	2021E	2022E
YoY (%)				
Revenue	129.7	68.8	65.8	35.8
EBITDA	22.3	(29.3)	17.9	105.4
Net Profit	31.8	(31.3)	20.0	126.5
EPS	56.3	(18.0)	20.8	126.2
Adjusted EPS	18.9	(3.2)	3.2	211.1
Profitability (%)				
EBITDA Margin	(27.8)	(21.3)	(10.6)	0.4
EBIT Margin	(19.8)	(14.4)	(7.6)	3.4
Net Margin	(23.1)	(18.0)	(8.7)	1.7
ROE	(28.3)	(47.5)	(50.6)	9.8
ROA	(9.2)	(9.0)	(5.0)	1.0
Liquidity (x)				
Current ratio	1.6	1.3	1.1	1.1
Quick ratio	1.6	1.3	1.1	1.1
Valuation Ratios (x)				
P/E	N/A	N/A	N/A	236.7
P/B	8.7	64.8	87.1	64.1
P/S	37.2	22.0	13.3	9.8

Source: Company data, CRSHK estimates

Appendix A

Analyst Certification

We, Charlie Chen, Veronica Shen, certify that the views expressed in this research report accurately reflect our personal views about any and all of the subject securities or issuers featured in this report. Furthermore, no part of our compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this report.

One or more research analysts responsible for this publication are not registered or qualified as research analysts with the Financial Industry Regulatory Authority ("FINRA") and may not be associated persons of China Renaissance Securities (US) Inc. and therefore may not be subject to applicable restrictions under FINRA rules on communications with a subject company, public appearances and trading securities held by a research analyst account.

Important Disclosures

Legal entities disclosures for global distribution

China Renaissance Securities (US) Inc. ("CRSUS") is registered with the Securities and Exchange Commission as a U.S. broker-dealer under Section 15 of the Securities Exchange Act of 1934 and is a member of FINRA and SIPC (<http://www.sipc.org>). CRSUS is located at 600 Fifth Avenue, 21st Floor, New York, NY 10020. China Renaissance Securities (Hong Kong) Limited ("CRSHK") is licensed by the Securities and Futures Commission for the conduct of dealing in securities, advising on securities, and advising on Corporate Finance. CRSHK is located at Units 8107-08, Level 81 International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong. China Renaissance Securities (China) Co., Ltd. ("Huajing Securities") is licensed by the China Securities Regulatory Commission for conducting securities investment consulting business. Huajing Securities is located at 25th Floor, Trinity Tower, No. 575 Wusong Road, Hongkou District, Shanghai, China (CRSUS, CRSHK and Huajing Securities are referred to as "China Renaissance" collectively).

The research group of China Renaissance produces and distributes research products for clients of China Renaissance on a global basis. Analysts based in China Renaissance offices around the world produce equity research on industries and companies, and research on macroeconomics and portfolio strategy. This research report is disseminated in **Hong Kong** by CRSHK; and in **the United States of America** by CRSUS. CRSUS has approved and agreed to take responsibility for any research report prepared by CRSHK or Huajing Securities if and to the extent CRSUS distributes it in the United States.

Country and Region-specific Disclosures

Distribution in the United States: See Company-specific Regulatory Disclosures below for any of the following disclosures required for companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. China Renaissance trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report. In addition to 1% ownership positions in covered companies that are required to be specifically disclosed in this report, China Renaissance, its affiliates, and their respective officers, directors or employees, other than the analyst(s) who prepared this report, may have a long position of less than 1% or a short position or make purchases or sales as principal or agent in the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. Recipients of this report are advised that any or all of the foregoing arrangements, as well as more specific disclosures set forth below, may at times give rise to potential conflicts of interest.

Unless prohibited by the provisions of Regulation S of the U.S. Securities Act of 1933, this publication is distributed in the U.S. in accordance with the provisions of Rule 15a-6, under the U.S. Securities Exchange Act of 1934 for Major Institutional Investors, as such term is defined in Rule 15a-6. To the extent that this publication is distributed to U.S. Institutional Investors other than Major Institutional Investors, this publication is distributed by CRSUS but not CRSHK or Huajing Securities (whether directly or indirectly). Any transactions by U.S. persons with CRSHK or Huajing Securities in any security discussed in this research report will be effected through CRSUS, in compliance with the requirements of paragraph (a)(3) of Rule 15a-6 of the U.S. Securities Exchange Act of 1934.

The following are additional required disclosures: **Ownership and material conflicts of interest:** China Renaissance's policy prohibits its analysts, professionals reporting to analysts and members of their households from owning positions in securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on overall revenues of China Renaissance, which includes investment banking revenues. **Analyst as officer or director:** China Renaissance's policy prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director, advisory board member or employee of any company in the analyst's area of coverage. **Non-U.S. analysts** are not registered or qualified as research analysts with FINRA. They may not be associated persons of CRSUS and therefore may not be subject to FINRA Rule

2241 or FINRA Rule 2242 restrictions on communications with subject company, public appearances and trading securities held by the analyst.

Distribution in by Hong Kong: This research report has been prepared solely for professional investors (as defined in the Securities and Futures Ordinance (CAP 571 of the Laws of Hong Kong) whose business involves the acquisition, disposal or holding of securities whether as principal or agent. This research report is not intended for disclosure to, and should not be relied upon by, any person other than a professional investor. For professional investors in Hong Kong, please contact CRSHK for all matters and queries relating to this report.

See Company-specific Regulatory Disclosures below for the disclosures which are made by CRSHK as per paragraph 16 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission ("SFC Code of Conduct"), and capitalized terms used below bear the same meanings as defined in paragraph 16 of the SFC Code of Conduct. A copy of the SFC Code of Conduct can be found on: www.sfc.hk.

Analyst Conflict of Interest

The research analyst(s) responsible for the preparation of this report receives compensation based upon a variety of factors, including the quality and accuracy of research, internal/client feedback, and overall firm revenues, which include investment banking revenues. Research analysts do not receive compensation based upon revenues from specific investment banking transactions

Company-specific Regulatory Disclosures

In the next three months, China Renaissance expects to receive or intends to seek compensation for investment banking services from: Pinduoduo Inc. (PDD US)

Distribution of Ratings and Investment Banking Relationships

Below is the distribution of research recommendations as of December 08, 2020.

Rating	Count	Percent	IB Count	IB%
Buy	99	67%	9	9%
Hold	42	29%	1	2%
Sell	6	4%	0	0%

China Renaissance assigns stock ratings of Buy, Hold and Sell. See 'Stock ratings and definitions' and 'Sector ratings and definitions' below.

Stock ratings and definitions: Stock ratings of Buy, Hold and Sell have a time horizon of twelve to eighteen months from the publishing date of the initiation or subsequent rating/price target change report issued for the subject company's stock. The following rating definitions were last updated on December 31, 2019:

Buy – The expected return on the subject company's stock price should outperform the typical benchmark market index for the subject company's primary listing exchange (e.g. the S&P 500 for U.S.-listed stocks) over the above-defined time horizon from the publishing date of the initiation of coverage or subsequent report announcing a rating change.

Hold – The stock price of the subject company is not expected to either appreciate or depreciate meaningfully from the typical benchmark market index for the subject company's primary listing exchange (e.g. the S&P 500 for U.S.-listed stocks) during the above-stated time horizon.

Sell – The expected return on the subject company's stock price should underperform the typical benchmark market index for the subject company's primary listing exchange (e.g. the S&P 500 for U.S.-listed stocks) over the above-defined time horizon from the publishing date of the initiation of coverage or subsequent report announcing a rating change.

Rating Suspended – China Renaissance has temporarily suspended the rating and, if applicable, the price target, for the subject company's stock because there is not a sufficient fundamental basis for determining, or there are legal, regulatory or policy constraints

around publishing, an investment rating or price target. The previous rating and, if applicable, the price target, should no longer be relied upon. A Rating Suspended designation is not a recommendation or a rating.

Not Covered – a company for which China Renaissance research report has not been published.

Sector ratings and definitions: Sector Ratings of Overweight, Neutral and Underweight are applied to the designated sector coverage group with a time horizon of twelve to eighteen months from the date of report publication. The following rating definitions were last updated on January 19, 2019:

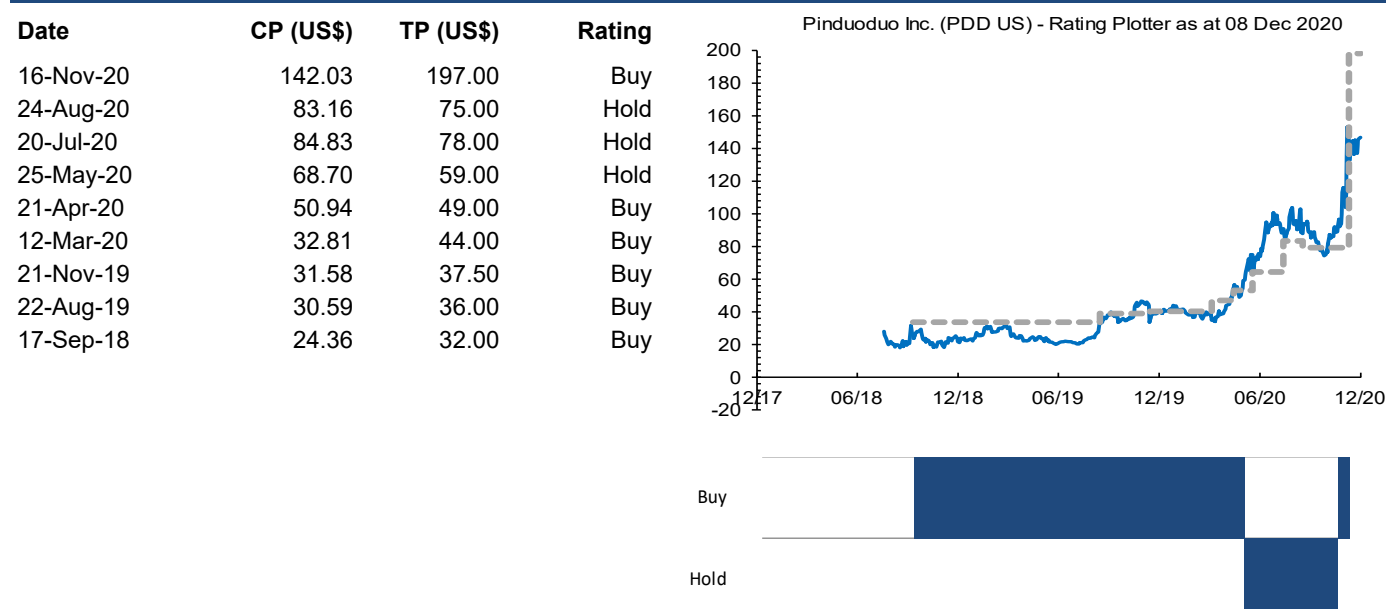
Overweight – Expect sector to outperform the relevant market. **Neutral** – Expect sector to perform in line with the relevant market.

Underweight – Expect sector to underperform the relevant market.

Stocks Mentioned

Pinduoduo Inc. (PDD US, Dec 7, 2020, US\$146.79, BUY)

History of investment rating and target price – Pinduoduo Inc.



Valuation and Risks - Pinduoduo Inc. (PDD US)

Valuation: Our target price of US\$197.00 is based on 20x 2021E P/S.

Risks: Downside risks include: 1) failure to acquire new brands/users, which could undermine PDD's competitiveness and impact its revenue; 2) intensifying competition from ecommerce companies and traditional retailers; 3) counterfeit products damaging PDD's reputation; 4) reliance on social media platforms as access points for traffic, and to attract and retain buyers; 5) Prolonged COVID-19 outbreak; and 6) higher-than-expected user acquisition costs of Duoduo Maicai.

General Disclosures

This research report is for institutional investors only. If you are an unintended recipient, you are requested to immediately notify and directly return this report to China Renaissance.

Other than disclosures relating to China Renaissance, this research report is based on current public information that we consider reliable, but we do not represent that any of the information contained herein is accurate, complete or up to date, nor shall China Renaissance have any responsibility to update any opinions or other information contained herein. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research report as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports to be published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate.

China Renaissance conducts a global integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our research group.

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research report. Our asset management area and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research report.

The analysts named in this report may have from time to time discussed with our clients, including China Renaissance salespersons and traders, or may discuss in this report trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analysts' published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks, which reflects a stock's return potential relative to its coverage group as described herein.

We and our affiliates, officers, directors, and employees, excluding research analysts named in this report, may from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research report.

The views attributed to third-party presenters at China Renaissance arranged conferences, including individuals from other parts of China Renaissance, do not necessarily reflect those of the research group and are not an official view of China Renaissance.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research report is not an invitation or offer to sell or the solicitation of an offer to buy any security or related financial instrument in any jurisdiction where such an offer or solicitation would be illegal. Any security or related financial instrument discussed herein may not be eligible for distribution or sale in all jurisdictions and/or to all types of investors. This research report is provided for information purposes only. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research report is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research report and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options disclosure documents, which are available from China Renaissance sales representatives or at <http://www.theocc.com/about/publications/character-risks.jsp>.

Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is China Renaissance responsible for the redistribution of our research by third party aggregators. For research, models or other data available on a particular security, please contact your China Renaissance sales representative.

No part of this report may be reproduced or redistributed in any manner without the written permission of China Renaissance. China Renaissance specifically prohibits the redistribution of this report, via the Internet or otherwise, and accepts no liability whatsoever for the actions of third parties in this respect.

Disclosure information is also available from Compliance, 600 Fifth Avenue, 21st Floor, New York, NY 10020 or at <https://research.chinarennaissance.com/en/disclaimer>.

©2020. China Renaissance.

All rights reserved. This publication or any portion hereof shall not be sold, reprinted or redistributed without the prior written consent of China Renaissance.