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Pinduoduo (Nasdaq: PDD)

Pinduoduo is the third largest ecommerce platform in China. We believe the stock is under-valued, as PDD is now trading at ~10.4x EV/FCF (adjusted for stock-based comp) or ~6.4x EV / FCF on 2025 estimates. This valuation seems far too cheap, for a company who is growing current revenues at +65% y/y (as of Q3 2022), expected to grow top-line at ~24% y/y over the next three years, and where we expect operating income to 2 - 3x over the same timeframe[1].

It seems the basis of this opportunity, lies in the investment community's broad aversion to Chinese equities (especially internet companies), in addition to several company specific concerns:

1. **The Recent Chinese Equity Sell-off is Due to Politics, Not Fundamentals:** At the lowest point on Oct 24th, PDD's stock price was down by -34% in a single day, due to foreign capital fleeing the Chinese equity markets after the President Xi's "landslide" reelection victory and the appointment of his loyalists to the Politburo Standing Committee. Foreign investors feared that this consolidation of power would mark the beginning of China's changing stance towards capitalism.

   In contrast, we feel that these issues have been well communicated for years (it was expected that Xi would receive a 3rd term since 2018, for example), and don't signify a deviation from previously announced Party goals. In fact, we thought the event may actually give Xi more leeway to aggressively pursue the needs / betterment of Chinese society & economy, without having to worry about his political position or competing factions within the CCP.

   After Oct 24th, we indeed saw a flood of positive news – from support of China's real estate sector, to loosening of China's zero-Covid policy, to improving relations with foreign countries.

2. **Lack of Communication with Investors:** Pinduoduo has long been an enigma for the investment community. The company hasn't had a CFO for years, refuses to provide granular disclosure for the analyst community, and doesn't break out its different business segments in an easily understandable format.

   For example, Pinduoduo's grocery business line segment results are hidden within its "Transaction Services" revenue line. The company also just launched Temu (its international business), but doesn't provide investors with any information regarding its business strategy / planned investments within the division. On earnings calls, the

[1] The exact magnitude depends on the timing of Duoduo grocery reaching profitability, and the degree of investment spend into Temu.

management team even deliberately answers most analyst questions with a seemingly scripted answer, often simply reiterating what it's already stated in past calls.

Because of this, the company's earnings results have always deviated materially from the market's consensus (and often to the upside). This lack of transparency and concerns about corporate governance have prevented some investors from investing in the company.

However in our view, just because a company doesn't give investors disclosure doesn't necessarily mean they don't care about investors. In order to understand management's thinking, we have to analyze past *actions* instead of what they say to ensure the correct decisions were made. Analyzing current initiatives requires more effort on the investor's part, and requires deeper analysis to break-down how the business' true financial condition, in addition to primary research to source our own information (versus simply relying upon company guidance).

3. **Growth Ceiling Concerns:** As Pinduoduo approaches 900M active buyers, which captures almost all of China's mobile internet users, there's concerns that the company's room for growth within China is shrinking. In addition, PDD's take-rate is starting to exceed Alibaba's, which calls into question just how much higher it can go.

   Investors have historically viewed BABA's take-rates as the "ceiling" in China's ecommerce industry. However, we view this as an arbitrary limit – especially since China has one of the lowest ecommerce take-rates globally (historically due to the intense competition between the large ecommerce platforms). We think this is shifting, and take-rates can continue to rise as long as Pinduoduo can provide more value to merchants, than what they capture-back in the form of commissions & ads. We'll discuss this in more detail below.

4. **Fears that Strong Results are Temporary:** There are concerns that Q2 & Q3 2022's impressive results are from one-off windfalls and won't be sustainable. The fear is that merchants' urgent needs for destocking during a period of overall weak Chinese economic consumption, allowed PDD to command higher take rates (via increased merchant advertising). Additionally, PDD skews toward lower tier cities, where users were proportionally less exposed to COVID lock downs.

   While these concerns are valid, we don't believe it impairs PDD's long-term thesis. The company is increasing its mix of high-value / branded items, which is allowing it to court higher-tier residents. Additionally we believe that with the 2nd largest consumer base, merchants will be inclined to spend an increasing amount of their advertising budget to reach these users. Pinduoduo is actively creating value for merchant's businesses (and thus expanding merchant's margin profiles), as we'll describe below. This incremental value operates in a "closed-loop", is then recaptured by the platform.

Business Overview

Pinduoduo was launched in 2015, and over the last seven years has quickly ramped up its user pool to 900 million users. It's now the third largest e-commerce platform in China in terms of GMV, with ~24% market share.

Instead of competing head-to-head with Alibaba and JD's search-based platforms, PDD focused on creating an interactive and entertaining platform. A search-based shopping experience is where a customer already wants to buy a specific item, and then searches different varieties / prices for that particular item on the platform.

Pinduoduo's model is based on entertaining users and giving them the chance to get deep discounts instead. The user behavior differs, since customers log onto the platform without a specific item in mind – only logging on out of boredom or to see what deals are available that day.

The best analogy is like that of a "sushi conveyor belt" (LINK). Deeply-discounted, "deals of the day" items are shown on the app, and users scroll down the page only until they find something that catches their eye. The discounts and items on sale differ every day, so users never know what they'll find when they log on next (making it a fun, "treasure-hunt" experience). There were also daily check-in rewards and mini-games, where users could earn rewards and get free items or additional discounts on the site, thus encouraging frequent engagement.

This is compared to a search-oriented platform, which is like a traditional store – items sit on a shelf, and customers browse the aisles looking for what they need. The items offered don't change much over time, so customers can shop at the store reliably.

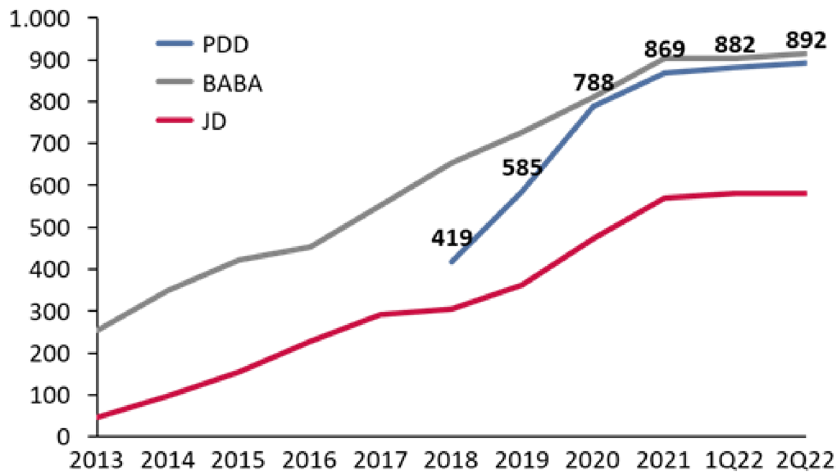
Key to its meteoric rise, is also PDD's innovative "team purchase model". In the early days, users could either pay full-price or receive a discount when they "teamed-up" with other users to purchase together. All the buyers needed to complete the purchase within 24 hours, or else have the entire group's order canceled. This incentivized users to quickly invite friends and family (often through WeChat groups), to get the same great deal together. These new users would then invite additional people within their WeChat friends list, as they formed their own groups for additional purchases.

With the team purchase model providing large bulk-orders within a condensed time frame, this then allowed PDD to use these aggregated orders to go directly to manufacturers through a consumer-to-manufacturer model ("C2M"). PDD partnered directly with millions of factories, who traditionally manufactured items for national and foreign brands. PDD could provide the order sizes required to justify having a separate "white-label" production line for the platform, while also allowing factories to cut out several layers of middlemen and thus realize higher profit margins on the sales channel (we'll discuss this more later).

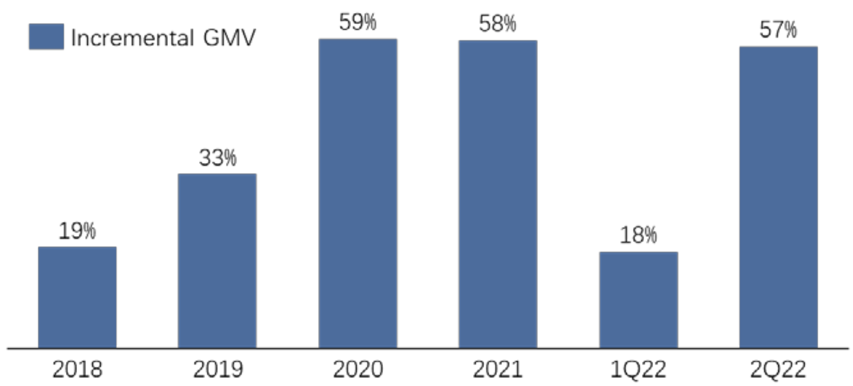
Also since items are sold on a "deal of the day" basis, users don't expect the same SKUs to always be available on the platform. As such, factories could run PDD specific production-lines only when they had excess capacity. Factories received the group-orders beforehand, so they knew exactly many items to produce (reducing wasted inventory), and also meant PDD didn't need to hold inventory (since orders are shipped directly to the buyer's home, vs. sitting in a warehouse waiting to be sold).

This provided PDD with a structural price advantage, due to the ability to cut out all the middle-men distribution layers, and resulting in the cheapest price possible. It's this value-for-money focus that differentiated it from other e-commerce names – especially among value-seeking customers, within Chinese lower-tier cities.

Pinduoduo Now Has Similar Number of Active Buyers as Alibaba
Source: Company filings; Hayden estimates



PDD's Captured % Share of Incremental GMV
Source: Company filings; Hayden estimates; NBS Data



In addition, PDD wisely leveraged its partnership with Tencent in the early days, benefiting from the cheap traffic WeChat provided. PDD utilized social interactions and viral marketing, which encouraged users to share deals among their friends group-chats, which in turn accelerated platform trust in the early days[2]. This user engagement from social sharing on WeChat allowed PDD to ramp up its users quickly.

Nowadays, the platform has created its own captive user base and is less dependent upon Tencent traffic, as it has greatly matured after 2019. However, this growth-hack was key to its rapid growth in its early days.

Additionally, PDD's early success can be attributed to it targeting an under-penetrated ecommerce segment – users in lower-tier cities. Whereas Alibaba and JD both traditionally focused on Tier 1 & 2 consumers with higher disposable incomes and technology familiarity, they both missed the early trend that was happening in lower tier cities with the rise of smartphones. Combined with the seamlessness of Alipay & WeChat pay, online shopping suddenly became accessible to everyone with a cheap Android smartphone between 2010 – 2015.

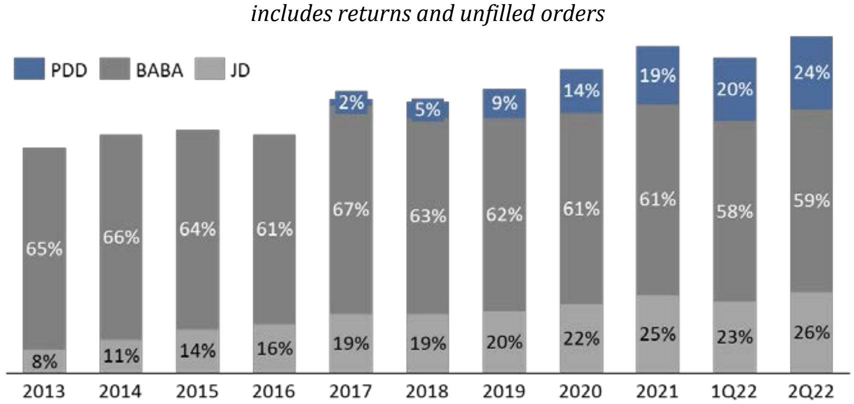
These cities tend to have fewer entertainment options, so users spent more time engaged on their phones[3]. They also had lower-disposable income, which meant many were willing to expend extra effort to get a great deal (such as sharing & promoting deals within group chats or playing games for discounts).

These users were unique to PDD, and exhibited higher stickiness versus other cohorts. Today, users order from the platform an average of ~6.5x per month, and it's this stickiness that has allowed the company to retain ~900M users without much incremental marketing.

In recent years, PDD has expanded its users to higher tier cities. Together with these deal-seekers, the platform has captured the majority of China's incremental ecommerce sales. In just a couple years, PDD has changed the competitive landscape in Chinese ecommerce, with Alibaba being the primary share donor.

China Ecommerce Market Share

Source: Company filings; MS estimation on BABA GMV; NBS Data; Top 3 GMV exceeds NBS e-commerce sales as GMV includes returns and unfilled orders



[2] When PDD first launched, it encouraged users to share product listings among their friend group-chats, and if other signed up / purchased, the entire group would get a discount on the item (i.e. Team purchases). While these new users may not trust a nascent platform like PDD, they certainly trusted their friends and family recommendations, and thus increased their likelihood of trying the platform.

[3] "Lower tier" cities (meaning Tier 3 and below) are still large by Western standards, with populations of several million each (LINK).

In the immediate future, PDD's core business is going to be driven by three primary tailwinds:

1. Factories are over-supplied, and brands need to destock inventory. This leads to brands increasingly willing to try new channels (especially those with large captive user bases), and ultimately drives advertising revenue as merchants spend to gain user attention on these platforms.

2. China's economic growth is slowing, which will encourage consumers to seek out more value-for-money shopping opportunities. Pinduoduo specializes in white-label products, that are at significant discounts to branded items. It's particularly strong in daily goods / household items that have high repeat purchase rates, and the average order is just $6 USD.

3. Lower-tier cities will exhibit stronger consumption growth going forward. Any incremental new users will likely come from these regions, as ecommerce is already mature within larger cities. Additionally, lower-tier cities comprise >70% of China's population, and >60% of its GDP (LINK). Brands are also starting to focus on this segment too, exemplified by the marketing term 'Xiachen' (下沉) – meaning downward marketing, or specifically targeting users in lower-tier cities as opportunities are exhausted in more populous cities.

On top of PDD's core ecommerce business, the company also launched an online grocery business (group-purchase model) in Q4 2020. When it first launched, Duoduo Grocery faced competition from all of the major Chinese tech giants (Alibaba, JD, Meituan, etc.). However in just two years, Duoduo Grocery has proved itself to be the winner of this trillion RMB market, with the highest market share and with the other players retrenching in defeat.

We will discuss this development in depth below, and why Duoduo Grocery could be an overlooked valuation-driver over the next few years.

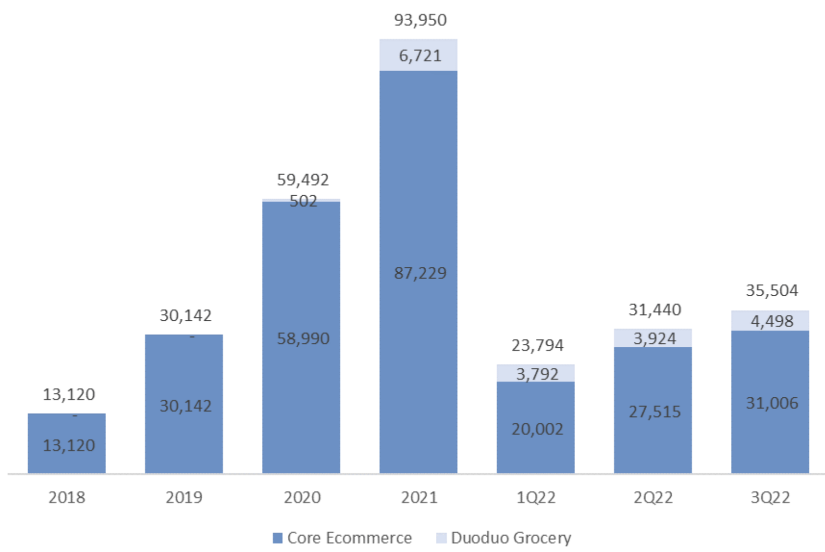
Pinduoduo's Business Model

Pinduoduo's business consists of primarily two segments: the core ecommerce platform, and Duoduo Grocery. Duoduo Grocery hasn't turned a profit yet, so the company's profits today are entirely driven by the ecommerce business.

PDD also launched Temu, it's international business, in September 2022 (LINK). It's still very small, but will comprise a third segment going forward. While it's still too early to estimate the future of this new initiative (i.e. the magnitude of GMV or revenue contribution), we do have some insight into its budgeted capex plans which we'll discuss later.

PDD Segment Revenues

Source: RMB in millions; Company filings; Hayden estimates



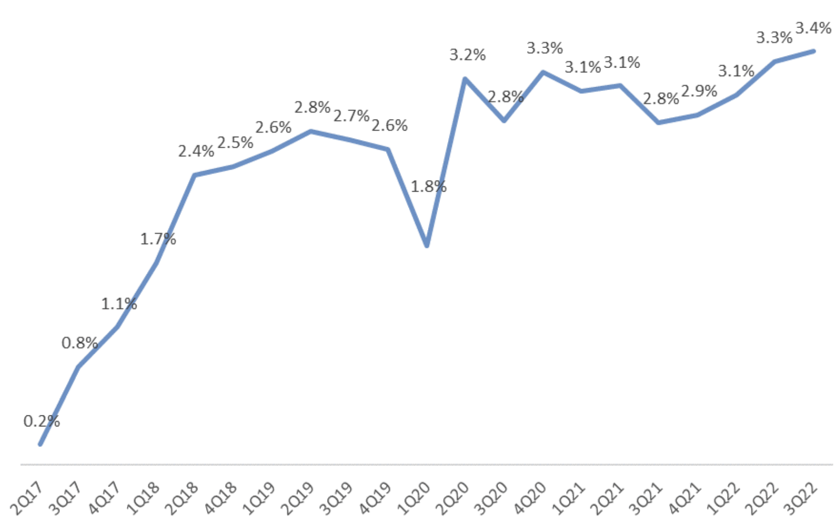
Core Ecommerce Platform

Pinduoduo is a third-party ecommerce platform, and therefore acts as marketplace model and holds very little inventory itself. Like other 3P marketplaces, merchants pay marketing fees to get priority listings and traffic on the platform. This online marketing fee contributed ~80% of PDD's total revenues last quarter.

The take-rate for online marketing fees have been growing steadily in recent years. Apart from the COVID dip in Q1 2020, the take rate has expanded ~90bps from ~2.5% at the beginning of 2019, to ~3.4% of GMV in Q3 2022.

PDD's Online Marketing Service Take-Rate

Source: Company filings; Hayden estimates



PDD's GMV is a function of Average Order Value (AOV) x Order Frequency x Number of Active Customers.

The company's AOV is structurally lower than competitors, consistently ~ RMB 40 - 50 per order. Alibaba meanwhile has an AOV ~RMB 95, and JD's AOV is ~RMB 400[4]. There are a few reasons for this:

1. PDD doesn't have a shopping cart function. There is simply one item per order, while competing platforms have multiples items in an order. This feature incentives consumers to make purchases quicker (and occasionally on impulse), increasing conversion, and lower the risk of shopping cart abandonment.

   Additionally, this makes sense for PDD's business model, as the company doesn't hold inventory and is not responsible for fulfillment. Once an order is placed and confirmed with the merchant, the merchant is the one who handles the fulfillment and then utilizes 3rd party logistics providers to deliver the package to the buyer. Since each item is likely coming from a different merchant anyways, there wouldn't be any benefit to grouping items in a shopping cart.

2. PDD's average selling price (ASP) is generally lower than similar products on Alibaba's sites, or JD. This is since PDD focuses on working directly with factories, to sell "while label" goods, or items that are manufactured directly by factories without the added expense of a brand or the marketing costs associated with it.

   This PDD – manufacturer relationship is what differentiates the platform, as multiple layers of middlemen and brand-related expenses are saved, by working directly with the manufacturer. PDD creates value for these manufacturers, by offering them a direct channel & relationship with the end-customer, that these manufacturers didn't have before. By working with factories to reduce the price, this also fulfills the primary attribute PDD's customers come to the platform for – "value-for-money".

3. PDD also has a different category mix than competitors. The most popular categories are lower ASP, such as groceries, daily home goods, and apparel. Meanwhile, the platform trails in high-priced categories, such as appliances and beauty.

   The company has recently been adopting strategies to increase it's AOV, and is making a push to attract more brands (versus the traditional white-label factories). At the same time though, it has stuck with its core value proposition of being a platform that offers the best value for cost-conscious shoppers.

   For example, we recently checked 20 of the highest-ranked premium / luxury brands across Alibaba's categories, and found that half of these had also opened flagship stores on PDD. We believe this is in-line with PDD courting more users from higher-tier cities, and is starting to position PDD as a destination for shoppers of all types who are looking for a good deal.

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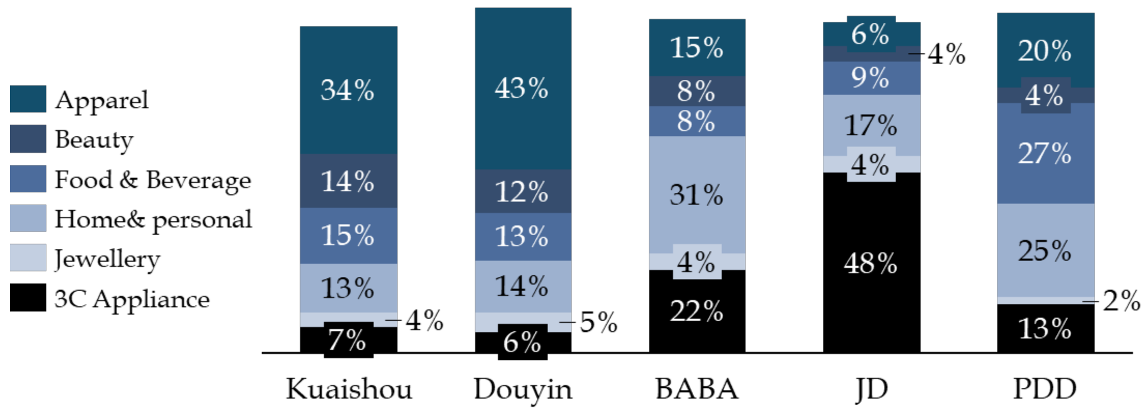
[4] Alibaba stated in 2018 that annual active customers spend ~RMB 9,000 per year, across 92 orders.

Ecommerce Platform GMV Breakdown (2021)

Source: Bigone Data; Morgan Stanley AlphaWise Estimates

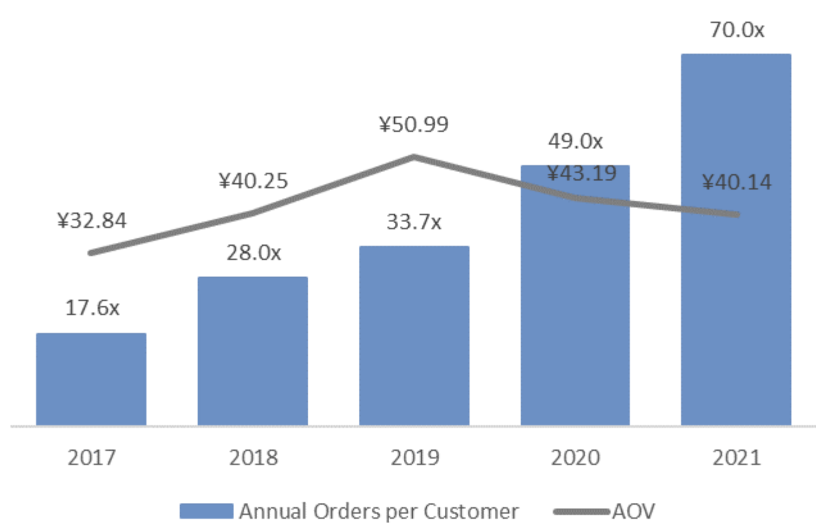


This category expansion and brand expansion (i.e. expanding the platform's offerings both horizontally and vertically), should help to increase customer's purchase frequencies. This is the opportune time to do so, given PDD has already found its core value proposition within the value-conscious segment, and has captured over 80% of China's mobile internet population as a result[5]. As such, the company needs to expand outside of this to continue growing, and creating more value for different users.

Over the last few years, order frequency per user has increased from just 18x orders per year in 2017, to now ~75x orders per year (~6.3x per month; 2022 estimate). We believe this is the best indication of user stickiness. But there's still ample room to grow, before this catches up with Alibaba's average 90+ orders per year.

Annual Orders per Buyer Keep Increasing, While AOVs Are Stable

Source: Company filings



[5] 900M customers out of China's 1.1BN mobile internet users.

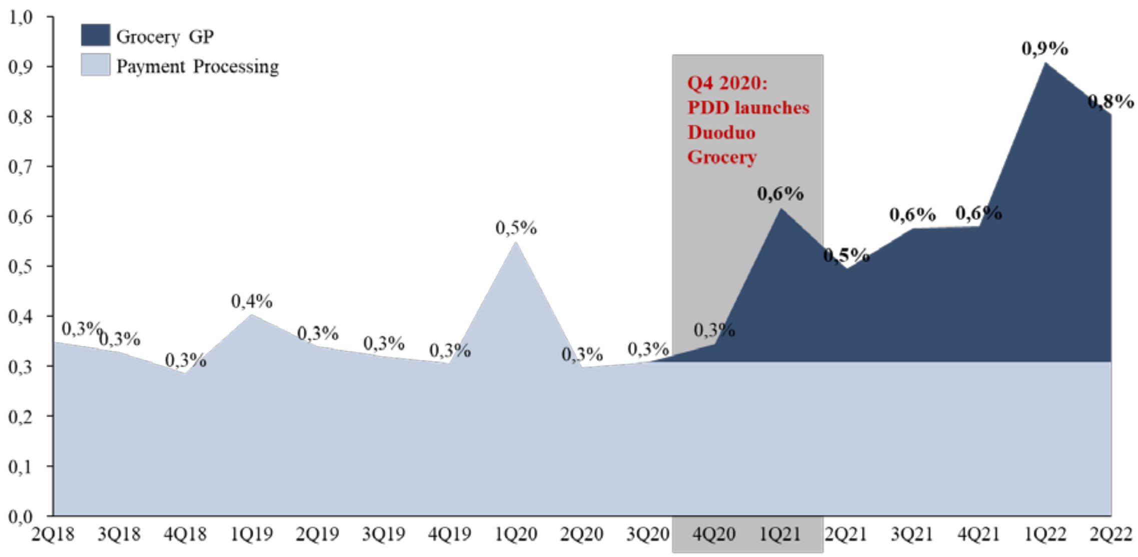
Duoduo Grocery

In typical Pinduoduo fashion, the company has never disclosed the details of its recently launched (Q4 2020) Duoduo Grocery business. In order to understand the business' development and economics over the past two years, we need to comb through its financials, and parse out its economics from the consolidated figures.

First, PDD "hid" Duoduo Grocery' net gross profits in "transaction services" revenue. This line-item historically was ~0.3% of GMV, which represented the payment processing fee paid to Tencent for WeChat Pay. Tencent's payment processing fees have remained the same, and yet transaction services as a % of GMV ballooned immediately after Duoduo Grocery launched. So if we back this out, we should be able to make a reasonable estimate for Duoduo Grocery's gross profits.

Duoduo Grocery Gross Profits Are Hidden Inside "Transaction Services" Revenues

Source: PDD filings; Assuming payment processing fees remains at 0.31% of GMV



During this time, PDD also started including "delivery and storage fees" (2020 20-F) and "fulfillment fees" (2021 20-F) in its definition of cost of revenue. Since PDD doesn't handle delivery or fulfillment for its core ecommerce business, it's obvious that these cost items are attributable to Duoduo Grocery[6].

Within this period, RMB 21.3BN was used for fulfillment, logistics and warehousing for the grocery business. In addition, PDD spent ~5 - 10% the grocery GMV, as a commission for grocery group purchase leaders (essentially local PDD ambassadors, who promoted & took orders). This equated to ~RMB 5BN. Finally the other costs are for bandwidth / traffic and overhead, and which needs to be allocated between the core ecommerce and grocery divisions.

[6] PDD very briefly experimented with 1P sales. But this really only lasted a few quarters, peaking in Q4 2020. So some of these costs are also associated with that business, but it's not meaningful today (and yet these fulfillment costs have continued to increase, indicating the bulk is for grocery).

If we assume this and SG&A are shared proportionally to the core ecommerce business, an additional ~2.3% of GMV would be added to Duoduo Grocery's operating expenses.

In total, we estimate PDD spent ~RMB 27BN to build Duoduo Grocery from scratch, and with accumulated losses of ~RMB 20BN. We believe that gross margins have expanded meaningfully in 2022, which has resulted in significant operating leverage and narrowing of losses. In some geographies, Duoduo Grocery has even achieved break-even, and we believe will likely become profitable as a whole starting in 2023. We'll discuss Duoduo Groceries' current economics and outlook further in this memo.

Thesis #1: PDD's Core Ecommerce Monetization Will Grow, Setting a New Industry Standard

In Q2 2022, PDD's gross take-rate exceeded BABA's for the first time. This event has sparked the question, of whether Alibaba's ~4% take-rate really is the ceiling for China's ecommerce sector, or whether this long-held "rule of thumb" is outdated and arbitrary.

Conventional wisdom suggested that Alibaba has more branded merchants, higher user LTV, and greater concentration in high-margin businesses, such as cosmetics. Therefore, Alibaba's take-rate should logically be higher than both JD's (which has high electronics exposure and thus lower-margins / take-rates) and PDD's (which focused on lower-priced, unbranded items).

However, our research has indicated a different story – that PDD's take-rate in fact has *more* headroom to grow, above Alibaba's ~4% take-rate.

<u>Merchant Expansion Will Continue to Drive Monetization Growth</u>

We think the market is underestimating the runway PDD still has left, in monetization. The conventional perception is that when the user ramp-up stage is over, the monetization rate will start peaking as well.

However, we believe it's actually a vibrant and competitive merchant-base that actually drives the monetization engine and pushes up the take-rate. In other words, it's the competition among the supply-side of the platform that drives take-rates, rather than the demand-side.

When a platform achieves a large user-base, merchants are increasingly incentivized to sell on the platform as well, in order to capture a piece of this demand. However, it's not just the number of merchants that's important, but also the number of merchants per category[7]. It's this "crowding"

[7] A platform with 1 merchant across each of 10 categories, will likely make less advertising revenue versus a platform with 10 merchants all trying to sell in 1 category.

among merchants in the same product category, that encourages them to spend more on advertising and promoted listings.

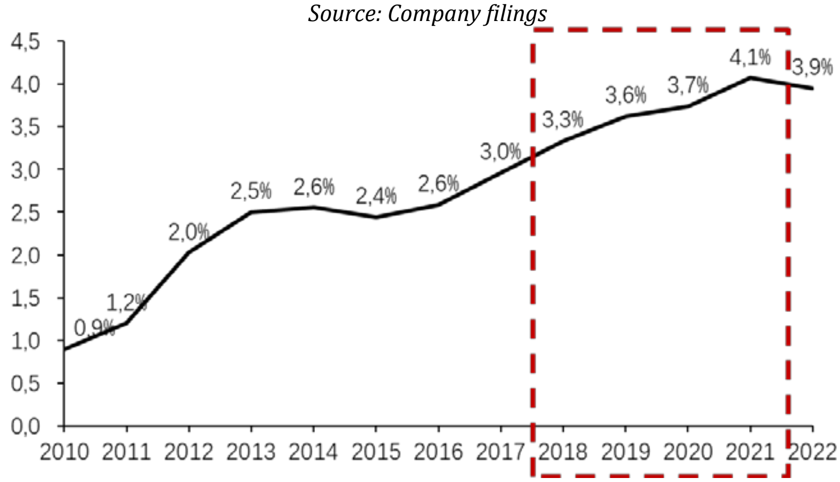
For years, PDD acquired users so efficiently, that merchant growth lagged behind user growth. It's only recently, as merchants started to realize the value of PDD's ~900M users and new merchants became attracted to this large user-base, that the merchant-side of the platform has become more crowded[8]. As basic supply vs. demand theory dictates, as supply starts to increase while demand growth slows, this will encourage suppliers to spend more on marketing to increase visibility on the platform, thereby driving up monetization.

We can see an example of this dynamic with Alibaba's own take-rates. BABA's merchant count peaked around 2018, and then gradually declined to half of this over the next few years. During the rapid merchant / supply-side growth phase between 2013 – 2018, BABA was able to increase its take-rate by ~80bps. And even after merchant count started to decline, BABA's monetization momentum still allowed it to "squeeze" another ~80bps from their merchants.

Compare this with PDD, which is still at the early part of merchant growth. Merchant count is still growing at a rapid pace, mirroring BABA in the 2015 – 2018 stage. As such, we believe there's still ample room for PDD to increase its take-rates, even after merchant count peaks (which still hasn't happened yet).

Alibaba's Take-Rate Over Time

Source: Company filings



Vertical merchant expansion within a product category is what creates traffic / merchant competition, and drives up platform monetization. However, this also starts to eat away into a merchant's margins & ROI, so we have to ensure that merchant economics remain healthy as well (which we show below).

In sum, we believe that PDD's cash flow profile has reached an inflection point in the last couple years, given its merchant growth is now exceeding user growth. Horizontal merchant expansion helps drive an increased product assortment, and thus GMV and order frequency. Vertical

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[8] A conceptual way to think about this, is the ratio of Orders : Merchants, within a particular product category.

merchant expansion helps boost take-rate levels within that particular category. Both of these help to drive a more profitable and attractive ecommerce ecosystem.

We estimate PDD's online marketing service take-rate has at least another +100bps of headroom to grow in the next few years, from its current ~3.4% of GMV to ~4.4% of GMV in 2025E.

PDD Creates Unique Value for Merchants, Increasing Willingness to Pay Higher Take-Rates

In order to ensure these industry leading take-rates are sustainable, we have to be confident these merchants can afford to pay a higher take-rate in the first place. And if PDD wants to charge a higher take-rate than competitors, it has to create value for these merchants that they can't achieve on other platforms.

We believe the answer lies within PDD's C2M business model. The C2M model helped these factories to scale & make their own operations more efficient, by providing large bulk orders from PDD's customers and bypassing middlemen. Especially during a time of weak economic growth (such as during the recent Covid period), many factories are operating under capacity, and these bulk orders help to utilize this capacity in the short-term, while allowing factories to build their own brands / direct consumer relationships in the long-term.

These factory merchant also earn higher margins & greater absolute profits by going direct to the customer, via PDD's platform versus being an OEM manufacturer or selling through distributors[9]. Now that these factories have gotten a taste of the higher ROI's through PDD's platform, we expect this to be their preferred channel even after this current period of weak economic growth ends.

The best way to illustrate this, might be through a real-life example of one of the merchants we spoke with. This particular merchant is a cosmetics factory with an annual revenue of ~RMB 300M, where its OEM manufacturer segment contributed 90% of its revenue. The factory only makes a razor-thin margin of ~6.5% gross profit margin and ~1.1% EBIT margin from the OEM business.

It just started selling on PDD in 2020, and isn't fully scaled yet. However the owner told us that the ROI from selling on PDD is already far superior, at ~2.4x ROI. Even though their skin care set is one of the cheapest on PDD's platform, they still earned a ~26% EBIT margin – much higher than the ~1.1% margin from the OEM segment or ~16.5% margin from the distributor channel.

By selling on PDD, the owners were able to make an incremental RMB 1 million of profits, or a +12.5% boost to their bottom line. The factory owner even stated, "Thanks to PDD, we bought two Tesla's last year for the family."

[9] OEM manufacturer means producing products for another brand (not its own). The distributor model involves producing products under its own brand, but having to utilize distributors (and giving them a cut of margins) to sell via traditional channels.

The most rational choice for such factories going forward, is continuing to operate the OEM and distributor channels to build scale & cover fixed operating costs, while utilizing PDD's platform as channel for incremental profit upside[10].

Factory Merchant Unit Economics

Source: Primary research with the owner of a cosmetic factory; Selling price used is its best seller on PDD, a skincare set of 4, selling price RMB 29.5; Cosmetics have above-average take-rates

UE Merchant 1	PDD	OEM	Distributor	Comment
Selling price	**29.5**	**9.2**	**11.8**	
COGS	(7.0)	(7.0)	(7.0)	
Depreciation	(1.6)	(1.6)	(1.6)	
Gross Profit	**20.9**	**0.6**	**3.2**	
GPM	*70.8%*	*6.5%*	*27.1%*	
Overhead	(0.3)	(0.3)	(0.3)	
S&M	**(3.2)**	**(0.05)**	**(0.7)**	
S&M - Specialist or Agency	(1.7)	-		9,000 pieces per month
Logistics	(5.1)	(0.15)	(0.25)	(+) Reverse logistics / Returns
Return/customer services cost	(3.0)	-		
EBIT	**7.68**	**0.10**	**1.95**	
EBIT Margin	*26.0%*	*1.1%*	*16.5%*	
S&M ROI	**2.4x**			

Morgan Stanley AlphaWise also confirms this, where they conducted a survey of CMO's who indicated that selling via PDD and other ecommerce platforms provided the highest ROI's versus other direct-to-consumer channels. Our primary channel checks and conversations with merchants corroborates this, and indicates that in some categories, PDD's ROI can be as high as 4-5x compared with 2-3x on Taobao (Alibaba) or JD.

If we were to use the aforementioned merchant as an example – and if PDD were to increase its take-rates by +15%, this would lower the merchant's ROI on marketing spend from 2.4x to 2x. However this is still a ~24.4% EBIT margin, which is still far higher than its OEM or distributor channels. As this illustrates, there's still a lot of headroom left with PDD's factory merchants and their ability to afford higher take-rates.

Manufacturers Prefer PDD's Platform, Over Other Ecommerce Platforms

So if this direct-to-consumer channel is so attractive for manufacturers, why haven't the other Chinese ecommerce giants been able to persuade a larger number of manufacturers to join their platforms? Part of this is PDD's aforementioned C2M model, which aggregates demand and thus helps the factory predict and plan its production more wisely. Additionally, it seems that PDD culturally understands factory-owner needs much better, and have catered their efforts around this particular seller cohort.

For example, all of the merchants we interviewed mentioned that PDD offers the easiest to use marketing suite. These merchants are less savvy (they are factory owners, not professional marketing experts), and found BABA's legacy marketing mechanism too complicated to use. As

[10] OEM and distributor volumes are less volatile, so utilizing these orders to cover fixed operating costs makes sense. PDD's channel carries higher margins, but sales are also less predictable.

a result, the merchants who were on BABA's platforms were forced to use 3rd party agencies to navigate and to survive on the platform.

And further enhancing this edge, PDD recently debuted a new set of automatic marketing tools too. Merchants can specify a level of marketing spend and target ROI, and the platform's algorithm will automatically work within these parameters to maximize profits. No other Chinese e-commerce platform had launched an algorithm based, automatic marketing suite which optimizes for ROI & profits before[11]. Most of our merchant channel checks reacted positively to this new tool, in terms of generating them superior ROI, and there were few complaints around this feature reducing the amount of unpaid traffic.

Furthermore, this automatic marketing product suite may make the ecommerce marketing agencies / specialists redundant to some extent. Factory merchants may shift the budgets that would have been spent on internal marketing staff or external agencies, to increased marketing budgets directly on the platforms. As the merchants are able to save money and increase margins with this tool, they will likely reinvest it back into the platform, thereby pushing PDD's monetization rate up.

Our primary research indicates, for a typical ~RMB 2 million GMV manufacturer on PDD, they will spend an average of ~RMB 12K on a marketing specialist or 3rd party outsourced marketing agency. If this tool can help such less savvy merchants save on this staffing cost, a 50% reinvestment of savings back onto the platform via increasing the automatic marketing budget would result in an additional +10% uplift in PDD's online marketing services revenue.

More importantly, we believe this new marketing tool is another example of PDD's management possessing a greater understanding of the needs of smaller & unsophisticated sellers. It not only helps retain these sellers on the platform, but also benefits PDD by improving merchants' own economics, which in turn gets reinvested as marketing spend on the platform. By raising merchant's margins, PDD also increases its own ability to raise take-rates.

In sum, we believe that the PDD C2M model enhanced its "value-for-money" proposition, and created a win-win situation. PDD's customers enjoy a cheaper price, while manufacturers acquire a channel for incremental and higher-margin profits. Since we believe these merchants still have ample willingness and ability to pay higher take-rates, we have strong conviction that the core e-commerce business will be able to continue growing at ~22% growth y/y in the medium-term.

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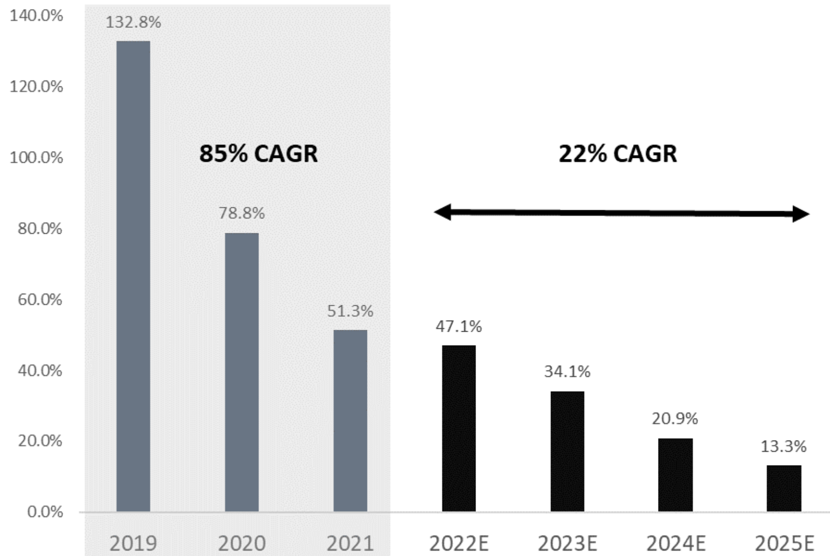
[11] Alibaba has a similar tool, but it optimizes for GMV. This benefits the platform, since take-rates are charged as a % of GMV. But it may not create the optimal profit structure for the merchant.

For example, let's say a merchant has 2 products listed on the platform – one high margin, but low-priced. The other low-margin, but high-priced. Optimizing for GMV will allocate the marketing budget skew to the higher-priced, low-margin product. Even though greater marketing budget allocation to the low-priced product might generate higher profits for the merchant.

Optimizing for ROIs requires more information & trust from merchants, who need to effectively share their SKU economics with PDD.

PDD Online Marketing Services – Revenue Growth Y/Y

Source: Company filings; Hayden estimates



Thesis #2: Duoduo Grocery is Vastly Under-Appreciated, and Is PDD's Next Growth Engine

We believe that Duoduo Grocery is the hidden gem inside PDD's business, and is being under-valued (or even not being ascribed any value at all) by the market. We believe the current valuation only reflects PDD's core ecommerce business, due to its proven unit economics and growing cash flows. Meanwhile, Duoduo Grocery is where we have the largest variant view on PDD's stock, and we believe its economics will soon become apparent to the market. As core ecommerce matures, Duoduo Grocery will drive the next leg of PDD's growth over the medium-term.

The market currently seems uncomfortable giving credit for Duoduo Grocery, as the business unit's economics are obscured with the consolidated financials, management is hesitant to give any details on the business to investors, and the segment has been losing money over the past few years. However, we believe this business is starting to reach an inflection point – it has proven itself the leader in this category over the past year, and we believe the business will soon reach profitability next year.

As an overview, PDD launched Duoduo Grocery in Q4 2020, as adoption for online groceries grew in the midst of Covid. Working with its agricultural partners / farmers, PDD followed a similar model to its C2M model with factories, and aggregated bulk orders from users to allow farmers to directly sell their produce to consumers. The goal was to shorten the supply chain, resulting in higher margins for farmers & fresher produce for consumers. Achieving this would be a win-win for both sides, while allowing PDD to grow its GMV, generate higher loyalty and order rates from its users, and create a new profit stream.

In less than two years and starting from scratch, PDD built the number one grocery business in China – exceeding even all the brick & mortar grocery store chains (including Sun Art, Yonghui, and Walmart China). PDD invested only ~RMB 27BN in capex to achieve this, surpassing both traditional grocery store chains that have been operating for decades, and forcing new online competitors to retreat / scale back from the space (including BABA's Hema, JD Fresh, Meituan, MissFresh, etc).

In terms of profitability, we believe the segment will reach breakeven within 2023, and its moat will only widen over time. Conservatively, we expect the business will contribute at least ~RMB 14BN in EBIT in 2025E.

What is Grocery Group Purchase, and How Large is the Opportunity?

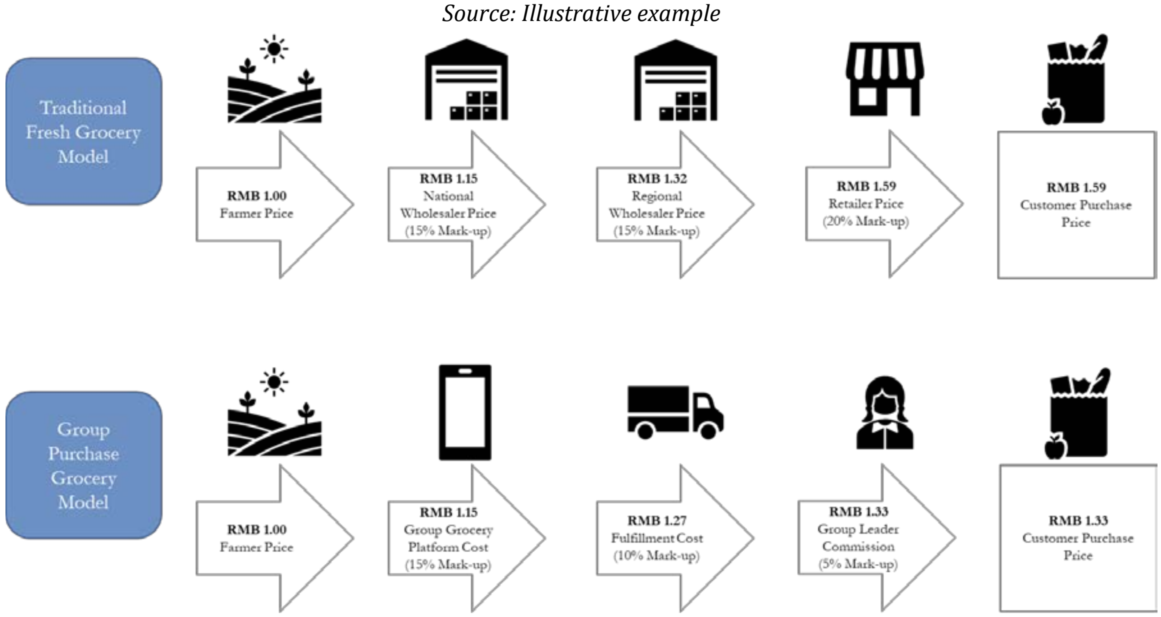
There are two types of online grocery business models in China – grocery group purchase, and direct grocery delivery.

The grocery group purchase model involves the ordering of fresh groceries, FMCG, and other SKUs, which is then delivered the next-day to a local "group leader" or pick-up point. This model was originated by Xingsheng Youxuan in 2017, targeting price sensitive customers ([LINK]). The key value-add of this model is the ability to eliminate middle-men in the supply chain, and therefore offer fresher groceries at a lower price.

The platform's role is to aggregate orders from buyers, connect these orders with farmers on its platform, and then deliver to the pick-up points near the customer's community compound the next day. Customers then pick up their groceries from their group leader or pick-up point (such as a local convenience store).

Traditional vs. Group Purchase Business Models

Source: Illustrative example



The second model is direct grocery delivery, used by Alibaba's Hema or Walmart China online. This model targets high-tier city customers, who value convenience. A courier picks up the groceries from a local brick & mortar store, and delivers to the customer's door within an hour (similar to Instacart or Postmates in the US). The key value proposition is high quality fresh ingredients, immediate delivery, and an omni-channel experience. Because this model adds an extra layer of labor on top of retail grocery-store prices, the price tends to be much higher than the group purchase model.

Why Does the Grocery Group Purchase Business Model Work in China?

Grocery group purchase isn't a suitable model for most countries. However, China has certain structural characteristics, which allows it to work there & be profitable at scale. The major difference is simply living density.

In China, almost everyone in an urban environment lives in an apartment complex. Additionally, Chinese apartments are often clustered – with multiple buildings built by the same developer, organized around a central shared courtyard, and with gated entrances to the larger complex[12].

A Typical Chinese Apartment Complex

The Zhongyuan Complex in Shanghai

According to the official "China standard for urban residential planning and design", population density should be such, that ~5,000 – 12,000 people should live within a 5-minute walking radius. It's this living density that allows community grocery group purchase economics to work.

For example, within a typical apartment complex there might be a "north entrance" and a "south entrance", with convenience stores, restaurants, barber shops, etc. right outside the complex gates. The neighborhood grocery pick-up point might be a convenience store right outside the gate – which allows customers to conveniently pick up their groceries on their way back home, or within a maximum five minute walk. The neighborhood pickup points are likewise incentivized,

[12] Compare this with New York City, for example, where individual buildings are built directly along the street.

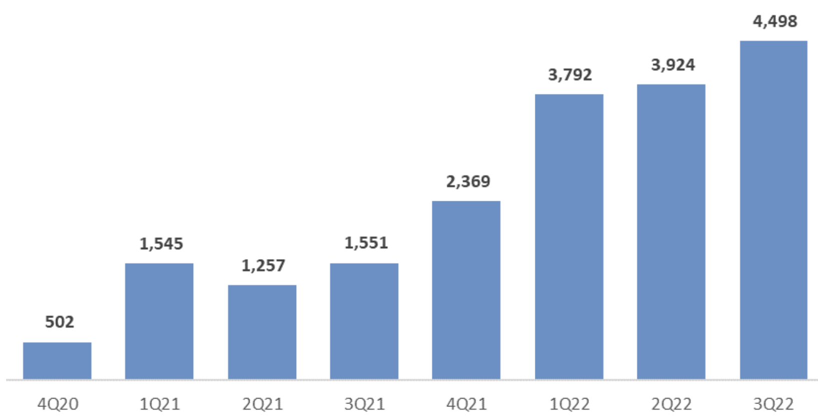
as there are enough people (and thus order density) living within a five minute distance, to justify offering the service (and also helping bring in incremental foot-traffic to their store).

Covid also helped accelerate the business model, by forcing users to try this type of service for the first time and drive market penetration. For example, during Shanghai's two month lock down earlier this year, many residents had no other options for groceries. Brick & mortar stores were out of stock, and residents had to remain inside their apartments most of the time. Online grocery purchase was the only way to access fresh and perishable products.

The "group" element reduced contact in spreading the virus, and therefore was recognized, allowed, and praised by central and local governments as the primary way to supply people's daily needs. Going through this tough period though, helped to educate and promote the grocery group purchase model among consumers. We can see evidence of this penetration acceleration due to these lockdowns, in the Q1 - Q3 2022 results.

Duoduo Grocery – Net Gross Profits

Source: PDD financials; Hayden estimates; RMB in millions



How Did Duoduo Grocery Beat its Competitors and Triumph?

During 2020 & 2021, all of China's Internet giants were rushing into the online grocery battleground, spurred by the Covid-induced demand. Alibaba, JD, Meituan, Didi, Pinduoduo, and many others poured capital into their grocery businesses, recognizing this market as the second phase to their growth trajectories.

By the second half of 2020, Meituan and PDD had established a national presence for their online grocery divisions. This rapid expansion then forced BABA, JD and Didi to respond more aggressively with their own initiatives in early 2021.

However, Duoduo Grocery managed to always stay one step ahead of these competitors, due a different set of business and execution methods:

1. Agile Culture: PDD's internal culture remained that of an agile startup. Where competitors might require decisions to be made by higher-up executives, PDD used a "horse race style" management to delegate decisions to city-level managers. This allowed PDD to expand quickly across the country – acquiring new users and building order

density, before competitors could respond. A handful of employees would be "dropped" into a new city, and within days / weeks the service would be fully operational.

2. Asset-light: PDD also was the only company to follow an asset-light model, which outsourced the warehousing and logistics functions (in-line with their core ecommerce business practices). This allowed them to conserve capital, while also launching in new cities quickly.

3. Leveraging Existing Users: The company had an unfair advantage – user traffic. PDD leveraged its main ecommerce app, and hosted / promoted the new grocery business within its existing app. This meant that existing users were exposed to the grocery functionality while browsing normally in the PDD ecommerce app, and the company could easily promote to these users without establishing new user habits.

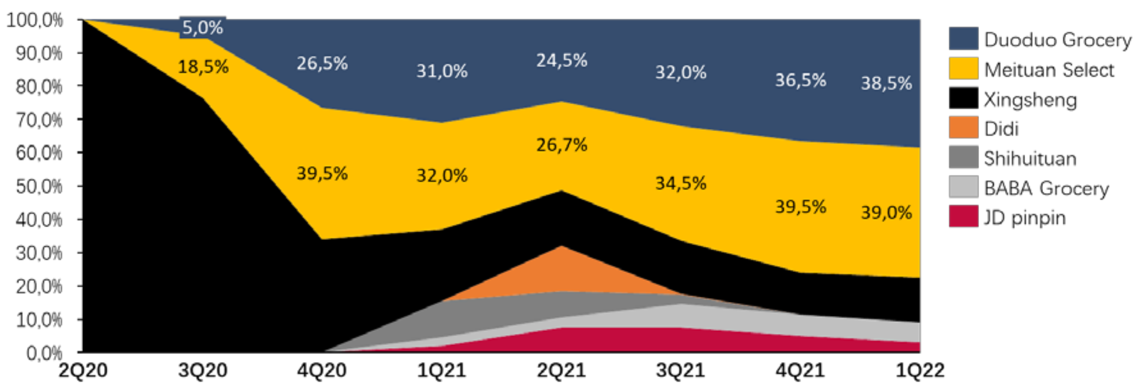
   Competitors in contrast, launched a brand new app for their grocery businesses. This required getting their existing user base to download a completely new app, and then they had to remember / get into the habit of opening that app when they needed groceries.

   Additionally, this captive traffic allowed Duoduo Grocery to rely less on group leaders for user acquisition. During the competitive peak, Meituan was paying RMB 35 for a new user and 15% commissions to group leaders, while PDD paid no user acquisition rewards and less than 8% commissions.

4. Algorithmic Procurement: Unlike other competitors, Duoduo Grocery did not rely upon a team of human buyers and their experiences / judgement to procure SKUs. Instead of a central procurement team, PDD developed a algorithm-based supplier bidding system. The system takes into account the pricing dynamics and the supplier's fulfillment ability to decide on which SKUs to offer, and which suppliers to direct traffic to.

Duoduo Grocery Gained Market Share, at the Expense of Incumbents[13]

Source: Companies' filings; CICC estimations



After two years of intense competition, PDD is effectively the last man standing. Shihuituan went bankrupt (LINK), and Didi significantly scaled back its business after suffering ~RMB 21BN of accumulated losses (LINK). JD and BABA both closed ~90% of their geographic

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[13] This data only goes to Q1 2022. Duoduo Grocery has continued to gain share and surpass Meituan Select since then.

locations, after suffering large losses (~RMB 5BN each) in the group-buying model. Xinsheng, the original pioneer, has also retrenched to become a regional player.

Finally, Meituan, the long-time market leader decided on a strategic retrenchment of its group-buying business last quarter, after accumulating ~RMB 38.4BN in losses, and will instead focus on the instant direct grocery delivery model.

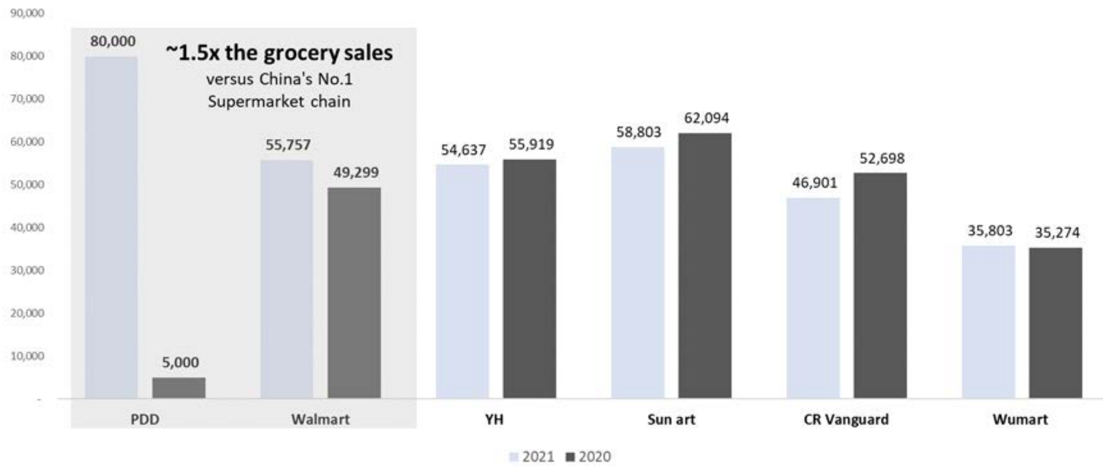
Duoduo Grocery's Moat Will Widen Over Time

PDD's Duoduo Grocery became the largest grocery seller in China in 2021, just a year after launch. Duoduo Grocery achieved a GMV of ~RMB 80BN, which exceeds the sales of all of China's top grocery chains. In fact, the company sold 1.5x more groceries than even Walmart China[14]. We estimate this grew by another ~69% y/y in 2022, to ~RMB 135BN.

The key value-proposition driving this success, are the cheaper prices offered on the platform. We believe this is a structural advantage with PDD and Duoduo Grocery's business model.

Duoduo Grocery GMV vs. China's Top 5 Supermarket Chains

Source: Company filings except CR Vanguard, a non-public listed company. CR Vanguard data collected from China Chain Store Association 2021 announcement; Walmart % of grocery from annual report; Others use 60% estimation, where YH disclosed a 42% of revenue were fresh products; figures are for grocery sales only, excluding hard goods, apparel, etc.



Some of the factors that contribute to Duoduo Grocery's ability to offer lower prices are the company's decision to offer far fewer SKUs versus competitors (i.e. a Costco model), and also to focus on white-label suppliers versus branded products (i.e. similar to a Trader-Joes model).

For example, Duoduo Grocery only has 1,000 – 1,500 SKUs available, while Walmart China offers 100K+. By leveraging white-label suppliers, PDD has greater bargaining power with these suppliers, which allows them to negotiate better pricing.

14 Note, this is just comparing to Walmart grocery sales. It doesn't include other categories (like apparel, home goods, etc.).

Duoduo Grocery – White-Label Brands as % of Category

Source: Duoduo Grocery App

Top 20 in Categories				
Brands	**White-Label Brand**	**Domestic Brand**	**International Brand**	**% White-Label Brand**
Biscuit	12	6	2	**60.0%**
Laundry	12	6	2	**60.0%**
Cleaning	11	6	3	**55.0%**
Beverage		1	16	**0.0%**
Instant food	11	8	1	**55.0%**

Additionally, these suppliers also prefer selling on Duoduo Grocery, as the company offers them unprecedented "T+1" payment times. While Chinese supermarket chains can have 3 – 6 months account payable days, PDD's suppliers can receive payment the next day within the seller app.

Our channel checks with suppliers confirmed this, and one supplier even told us that he'd "love to offer a 10% discount, in exchange for a quicker cash recycle timeline."

Lastly, as previously mentioned, the other platforms rely on a central procurement center and the experience / connections of human team members to make procurement decisions. PDD, on the other hand, developed an algorithm-based supplier bidding system to decide on suppliers, SKUs, and traffic allocation. The system automatically measures the characteristics of suppliers (pricing, ability to fulfill in timely manner, responsiveness, etc), gives preference for local sources (which shortens logistics and increases likelihood of fresher groceries), and works to maximize platform profits.

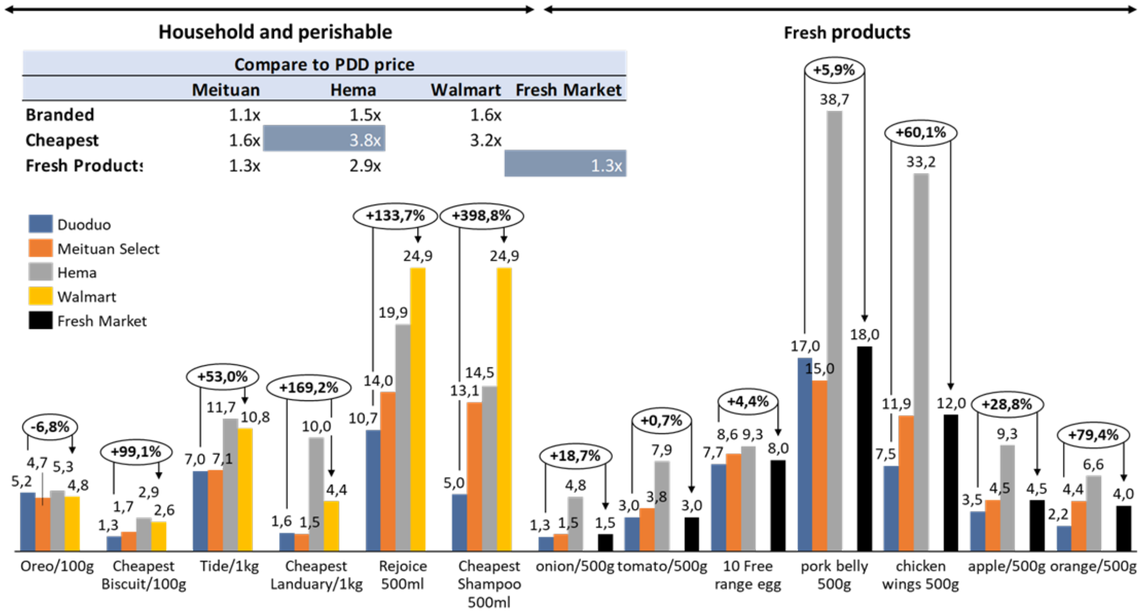
But most importantly, there's a "data competitive advantage" in this model. The more data that's fed into the algorithm over time, the more precise the algorithm, and the more effective decisions that will be made. For example, it's hard to know a supplier's ability to fulfill or responsiveness or quality of their products, until actually working with them. Over time, the system will quickly cull out the lower-quality suppliers and cease directing traffic to them, while promoting the higher quality suppliers.

All of these competitive edges combined, contribute to Duoduo Grocery's price leadership. For example, we compared the branded and white-label prices between PDD, Meituan, Hema (the online grocery delivery model of Alibaba), Walmart China, and a local fresh market.

We can see from the findings below, that PDD has a lower price on almost all items. And counter-intuitively, Duoduo Grocery has even lower prices on branded grocery items than Walmart China, and lower priced fresh produce than the local fresh market. Not surprisingly, Duoduo Grocery has a white-label option available in every category, and the prices offered were unmatched by any competitor (such as a RMB 5 ($0.70 USD) 500ml shampoo, which is -62 – 80% cheaper than competitors' lowest offerings).

Duoduo Grocery Prices vs. Competitors

Source: Company apps; Fresh Market prices from physical visits



With the highest order volume, quicker payment for its suppliers, a concentrated SKU assortment, and advanced procurement algorithms, Duoduo Grocery should continue to enhance & grow its price leadership over time. We expect this segment's gross profit margins to increase from its current ~12% to a healthy ~15 - 18% margins, in-line with Chinese brick & mortar grocery stores.

Duoduo Grocery Prices vs. Competitors

Source: Company apps; Fresh Market prices from physical visits

	Products	PDD	Meituan	*as % of PDD*	Hema	*as % of PDD*	Walmart	*as % of PDD*	Fresh Market	*as % of PDD*
Branded	Oreo/100g	$ 5.2	$ 4.7	***91.8%***	$ 5.3	***103.7%***	$ 4.8	***93.2%***		
Cheapest	Cheapest Biscuit/100g	$ 1.3	$ 1.7	***130.7%***	$ 2.9	***226.5%***	$ 2.6	***199.1%***		
Branded	Tide Detergent/1kg	$ 7.0	$ 7.1	***101.3%***	$ 11.7	***165.3%***	$ 10.8	***153.0%***		
Cheapest	Cheapest Laundry/1kg	$ 1.6	$ 1.5	***93.7%***	$ 10.0	***609.8%***	$ 4.4	***269.2%***		
Branded	Rejoice 500ml	$ 10.7	$ 14.0	***131.1%***	$ 19.9	***187.0%***	$ 24.9	***233.7%***		
Cheapest	Cheapest Shampoo 500ml	$ 5.0	$ 13.1	***261.6%***	$ 14.5	***290.3%***	$ 24.9	***498.8%***		
Fresh	Onion/500g	$ 1.3	$ 1.5	***118.3%***	$ 4.8	***378.4%***			$ 1.5	***118.7%***
Fresh	Tomato/500g	$ 3.0	$ 3.8	***127.2%***	$ 7.9	***265.1%***			$ 3.0	***100.7%***
Fresh	10 Free Range Eggs	$ 7.7	$ 8.6	***112.1%***	$ 9.3	***120.7%***			$ 8.0	***104.4%***
Fresh	Pork Belly/500g	$ 17.0	$ 15.0	***88.3%***	$ 38.7	***227.5%***			$ 18.0	***105.9%***
Fresh	Chicken Wing/500g	$ 7.5	$ 11.9	***158.9%***	$ 33.2	***442.5%***			$ 12.0	***160.1%***
Fresh	Apple/500g	$ 3.5	$ 4.5	***129.3%***	$ 9.3	***266.5%***			$ 4.5	***128.8%***
Fresh	Orange/500g	$ 2.2	$ 4.4	***197.5%***	$ 6.6	***297.5%***			$ 4.0	***179.4%***
Branded				**108.0%**		**152.0%**		**160.0%**		
Cheapest				**162.0%**		**375.5%**		**322.4%**		
Fresh Products				**133.1%**		**285.4%**				**128.3%**

Duoduo Grocery's competitive position has only improved further, after the aforementioned competitors downsized / exited the market completely over the past year. Even Meituan, the former category leader, has de-emphasized its grocery segment (Meituan Select / Xingsheng) from its main app after suffering ~RMB 38BN in losses.

We believe due to its pricing advantage and combined with a less competitive operating environment, Duoduo Grocery will continue to gain market share. China's National Bureau of Statistics reports that online food retails sales has consistently been growing ~16% y/y (LINK), while Duoduo Grocery GMV should grow ~69% this year[15]. As PDD captures incremental market share, we expect its online grocery market share to increase to ~59% by 2024, or RMB 218BN in GMV.

Duoduo Grocery is Near Profitability, and Will Achieve >5% EBIT margins by 2025.

We believe Duoduo Grocery is approaching profitability within the next few quarters, and will achieve a >5% EBIT margin by 2025. Note, this would still be below average brick & mortar grocery margins in China, despite PDD having a more efficient model, indicating room for further expansion.

The key factors driving this, are an uplift in gross profit margins (due to category expansion into higher-margin packaged foods, such as biscuits, condiments, etc.) and operating leverage from logistics and warehouse efficiency.

We interviewed delivery drivers, pick-up point managers, and warehouse suppliers to estimate the current fulfillment expenses. Our calculations indicate that ~9.1% of GMV is spent on fulfillment today, which is just half that reported in PDD's 2021 financials. With higher order density and more pick-up point locations, the number of drops made by delivery drivers and also the number of orders per drop will increase.[16] We estimate that this increased efficiency would decrease logistics costs as a % of AOV, from ~7.1% today, to just ~3.4% in 2025.

If our research is even approximately correct, this is substantial improvement within just a few quarters, and indicates that Duoduo Grocery is closer to profitability than the market currently thinks.

Duoduo Grocery Unit Economics

Source: Company filings; AOV from primary research of pick-up points; Logistics & commissions estimates are from channel checks and interviews with 5 pickup point managers, and 2 delivery drivers. Warehouse costs are from channel checks with warehouse suppliers.

UE Grocery	Q2 2022	2023	2024	2025	Long-run
RMB					
AOV	100.0%	100.0%	100.0%	100.0%	100.0%
COGS	(87.7)%	(84.4)%	(83.2)%	(82.0)%	(80.0)%
GPM	12.3%	15.6%	16.8%	18.0%	20.0%
Discount/Subsidies	(4.0)%	(3.0)%	(2.0)%	(2.0)%	(2.0)%
Warehousing	(2.0)%	(2.0)%	(1.9)%	(1.9)%	(3.0)%
Logistics	**(7.1)%**	**(5.2)%**	**(4.1)%**	**(3.4)%**	**(2.0)%**
Commission	(5.0)%	(4.0)%	(3.0)%	(3.0)%	(3.0)%
SG&A	(2.0)%	(2.1)%	(2.3)%	(2.2)%	(2.4)%
EBIT Margin	**(7.8)%**	**(0.7)%**	**3.4%**	**5.4%**	**7.6%**
GMV (mn)	32,000	175,231	218,477	264,765	500,000
as % of China edibles		1.5%	1.7%	2.0%	
oup grocery market sha	43.5%	53.0%	59.0%	65.0%	
Absolute EBIT (mn)	**(2,495)**	**(1,190)**	**7,328**	**14,358**	**37,830**

[15] We estimate this to decelerate to ~30% y/y in 2023 due to the lapse of the Covid step-up, and decelerate further to ~25% y/y in 2024.

[16] Number of drops: refers to the number of pick-up point stops a delivery driver makes along their daily route. Each pick-up point is 1 drop. Pick-up points will increase, as orders increase and justifies adding additional locations.

Number of orders per drop: refers to how many daily orders for one pick-up point location. This is a function of daily order density, within a geographic radius.

Duoduo Grocery Logistics Costs

Source: Logistics costs are from interviews with pick-up point managers and delivery drivers

Logistics Estimation	Q2 2022	2023	2024	2025
RMB				
Driver+ Truck per day	$ 500	$ 500	$ 500	$ 500
Drops per day	20	22	24	26
Cost per drop	$ 25	$ 23	$ 21	$ 19
Orders per drop	35	38	39	41
Cost per order	**$ 0.71**	**$ 0.61**	**$ 0.53**	**$ 0.47**
AOV	10	11	12	13
as % of AOV	**7.1%**	**5.2%**	**4.1%**	**3.4%**

Given Duoduo Grocery's expected revenue growth and margin expansion, we believe the market is under-appreciating Duoduo Grocery's profitability potential. Gross profit margins are expanding, and continued order growth will drive logistics and warehouse efficiency, which in turn will increase operating margins.

Together with the decrease in sales & marketing as competition abates, we believe Duoduo Grocery will turn profitable in the second half of 2023, and report profitability for full year 2024. As the online grocery industry and Duoduo Grocery continues to grow, profits should scale even quicker due to the embedded operational leverage. Knowing PDD's culture, we wouldn't be surprised if the company were to finally break-out segment financials around this time, when Duoduo Grocery proves itself as self-sustaining and threat of competition is lower. This may also provide the catalyst needed for the market to fully appreciate this (currently) hidden asset.

In the long-run, we think Duoduo Grocery can achieve a ~8% EBIT margin, with mature GMV of RMB 500BN (~RMB 38BN EBIT)[17].

Thesis #3: PDD's Management Team is Long-Term Oriented, with a Smart Capital Allocation Track-Record

Admittedly, this last point is less a "thesis", and more of a difference in perception regarding the quality of PDD's management team. When we speak to other investors about PDD, one of the first complaints we hear is regarding the disclosure and transparency the company provides (most often from Western investors), and in turn how we can trust such a team's decision-making.

This seemed to reach a crescendo this year. The poor stock performance in China's tech sector has spurred many such investors to throw in the towel on the stock, especially since the company communicates very little to reassure investors, even in this tough environment.

For example, the company will routinely dodge questions regarding its key financial metrics during earnings calls. PDD also refuses to attend industry conferences, or meet with most

[17] For context, PDD reported RMB 10.6BN EBIT in Q3 2022, or ~RMB 42BN EBIT annualized. Duoduo Grocery division alone has the potential to double PDD's total profits today, over time.

investors. Listen to one of their earnings calls, and you'll hear analysts keep asking the same questions about the GMV or take-rate, and the company responding with the same answers (sometimes verbatim) such as this:

"And for the financial metrics such as GMV and revenue, they are mainly a reflection of the value we create. So for us, the most important thing is to constantly increase value creation. We will continue to invest to encourage engagement. And for building up our technology capabilities, this will lay the foundation for our long-term development."[18]

We concede these concerns are valid and understand the investor community's agony. However, where we differ, is that we recognize that lack of communication does not automatically equate to a lack of capability or flaws in management's decision-making process. So if we can't rely upon management's investor communications to build confidence, how can we?

We believe (historical) actions speak louder than words, and are a better gauge of how the management team thinks than any investor presentation could be. Through analyzing past decisions (with the available information at the time) we believe this team has showed signs that any long-term shareholder would wish to see: smart capital allocation, fundamental understanding of the business drivers and its customers, and best-in-class execution.

<u>Understand the Company's History, and What Influenced its Culture</u>

Zheng (Colin) Huang is PDD's founder and former Chairman & CEO. He formally resigned in Q3 2021 to pursue other interests, but remains the largest shareholder and a key influence in the company.

Colin was born in 1980, and earned his degree in Computer Science from Zhejiang University. Colin interned at Microsoft's Beijing and Redmond offices, and also amazingly became friends with NetEase founder William Ding during this time.

William then introduced Colin to China's most famous value investor and entrepreneur – Duan Yongpin (who had built up a ~10% stake in NetEase in the early 2000's, as well as well-timed investments in Apple and Tencent later on; LINK)[19]. Duan was known as the brains behind Subor in the 1990's, which made the popular Chinese video game console Xiao Ba Wang, and left to co-found BBK, which eventually became Vivo and Oppo today[20].

Duan recognized Colin's talent, and invited him – having only just finished grad school at the University of Wisconsin-Madison – to a lunch with Warren Buffett in 2006. Through these early experiences, it's an example of Colin's uncanny ability to surround himself with high-caliber mentors and colleagues, which gave him an advantage when starting his businesses[21].

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[18] This is just an example, but most of the company's responses sound something like this. A lot of words, but not much substance…

[19] NetEase's stock price is up ~700x since then.

[20] The Xiao Ba Wang video game console (LINK). I had the keyboard version myself, as a kid.

[21] For more background, the Acquired Podcast has a great episode on Pinduoduo, which details this period in Colin's life (LINK).

Colin Huang with Warren Buffett

Source: Warren Buffett Charity Lunch in 2006

Today, Colin remains the single-largest owner in the company, with a ~28% ownership stake (equivalent to ~$30 Billion USD). Additionally, he has donated another ~7% to the Pinduoduo Partnership. As a stand-alone entity, this partnership is the 3rd largest shareholder, after Colin and Tencent (which owns ~15.5%). Colin, the Pinduoduo Partnership, and Tencent combined own ~50.7% of the company.

The goal of the Pinduoduo Partnership is to transfer ownership to a group of partners (no more than 5), who can act as long-term stewards for the company, and further insulating decision-making from short-term investor pressure. This group has the right to nominate 2 or 3 directors to the board (depending if there are less or more than 5 total directors on the board), and also the CEO. The board of directors then has the right to reject these nominees.

The members of this Partnership are nominated and elected annually, and are determined based upon their contribution, service, and shared values with the firm. Additionally, partners are required to hold a certain amount of equity in the company, and all decisions must receive 75% of joint partners' approval to be enacted.

The Pinduoduo Partnership was established at the time of the 2018 IPO, which indicates to us that Colin had been planning to step-back from the company for several years (and wasn't a response to the 2020 China tech regulatory crack-down, as some investors believe). Colin also relinquished his super-voting rights and delegated the remaining voting rights to the board of directors, further removing his individual power within the company.

Colin once said in an interview, that he doesn't believe the public should pay attention to businessmen and hopes that he'll eventually be forgotten. He believes entrepreneurs are like coral, which all eventually die. But even so, the reefs they formed still remain intact, for fish [i.e. society] to utilize and grow within long after the coral's own death.

We believe these are positive indications of Colin's character, considering he could have maintained his ~90% voting rights. Instead, he chose to relinquish this decision-making power, believing that the company's future is bigger than himself, and entrusted key-decisions to a Partnership.

Having said this, Colin still has substantial informal influence within the company, and is one of the members of the Pinduoduo Partnership. For example, it's rumored that he's the force behind launching Duoduo Grocery, and more recently, Temu, the international business.

To understand Colin better and why he decided to step-back at the top of his career (and at just 40 years old), we believe it's crucial to understand his mentor Duan's life – who has coached Colin for the past 20 years and given advice during several pivotal moments in his career. This is especially important, since the prevailing narrative out there seems to be that Colin was pushed out by China's tech regulatory crack-down (which we disagree with).

For example, Duan is well known to be reclusive and rarely gives interviews. The best way to describe Duan's work philosophy, is "Keep your head down, and don't talk about things that haven't happened yet. Just do honest & good work, and society will eventually reward you."

Duan had never been driven by money, and we can see this through his life. After turning around Subor and personally making millions of RMB per year (remember, this was the early 1990's with China's GDP per capita at just ~$380 USD), he abruptly resigned from the company – stating that money wasn't the most important thing to him. Rather disagreements with top management left him feeling unfulfilled, and that he'd be unhappy no matter how much he earned. He then went on to start BBK afterwards.

Later on, after building BBK into a billion-dollar company, he again abruptly stepped down from the firm – choosing to fulfill his promise to his wife to move to the US, and leave the company he built from scratch behind. He similarly retired at just 40 years old, and left BBK in the hands of his lieutenants, retaining just a 10% equity stake. These original lieutenant-led divisions would become Vivo and Oppo, among the largest cell-phone manufacturers in the world today.

We believe Colin was strongly influenced by Duan, and chose to follow a similar path. From early retirement at 40 years old and leaving the reins to loyal lieutenants (while still retaining influence in the company), to the secretive culture of their firms, to their mutual disdain of inefficiency and bureaucracy, there are many similarities between mentor & mentee. Even the way Pinduoduo Partnership is structured, is similar to how Duan entrusted BBK's divisions to those who grew up under him.

Savvy Capital Allocation Decisions

We can also see evidence of PDD's culture through their historical capital allocation decisions. Through these actions, we believe the management team has a clear understanding of the company's growth stages, and how the key drivers differ for each stage.

Stage 1: Building Pinduoduo's Two-Sided Marketplace (2015 – 2021)

When PDD was first getting off the ground between 2015 - 17, China's ecommerce landscape was dominated by Alibaba and JD. These two companies had been building trust with their customer bases for over a decade, so PDD was fighting an uphill battle, and the most important driver was to aggregate a demand pool to match these rivals. If they could do so, their merchant suppliers would inevitably follow.

To accomplish this, they did a form of growth hacking by tapping into a consumer pool even larger than BABA or JD… Wechat. By leveraging Wechat & friend group chats as mentioned earlier in the memo, PDD was able to build trust quickly and create a viral marketing. So how much shareholder capital did they spend on this strategy to jump-start the platform? Not much at all…

Beginning in 2016, PDD signed a business cooperation agreement with Tencent (the owner of Wechat). PDD agreed to purchase payment processing, advertising, and cloud services from Tencent, in return for leveraging their platform. PDD paid a total RMB 54M in 2016, and RMB 516M in 2017 for these services (or just 0.4% of GMV)[22].

PDD then further cemented the Tencent relationship, by allowing Tencent to invest in PDD in February 2018. This coincided with a signed "Strategic Cooperation Framework Agreement", by which Tencent gave PDD access points on Wechat, which allowed PDD to utilize traffic from Wechat Pay (which all of China essentially used by that point). Tencent also agreed to support PDD with technical and administrative resources.

This was an extremely savvy move on Pinduoduo's part. Arguably without that initial tapping of Wechat's user pool, Pinduoduo wouldn't have been able to reach the tipping point in consumer adoption so quickly, if at all[23]. And the fact that it gained these advantages by having Tencent *pay them* to invest at a USD $15BN valuation for ~18% equity is even more impressive[24].

Active customers grew from 245M in 2017 to 788M by 2020 as a result of these efforts. During this initial "building the platform" phase, PDD spent every single dollar they could afford, to expand the customer base. If we define reinvestable cash flow as revenue minus variable costs and change in working capital, along with semi-fixed costs like G&A and R&D, we can see that PDD allocated >100% of its reinvestable cash into Sales & Marketing, up until Q1 2021.

Pinduoduo Sales & Marketing Spend

Source: Hayden estimates; Sales & Marketing, as % of Reinvestable Cash

	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22
Revenue	1,385	2,709	3,372	5,654	4,545	7,290	7,514	10,793	6,541	12,193	14,210	26,548	22,167	23,046	21,506	27,231	23,794
(-) COGS	319	388	775	1,424	873	1,595	1,833	2,037	1,830	2,662	3,260	11,526	10,746	7,898	6,559	6,516	7,160
(+) Change in net working capital	14	5,820	479	528	499	592	668	799	809	915	956	933	973	1,188	1,121	1,493	1,523
(-) G&A	29	5,801	306	322	236	278	437	346	338	395	369	406	352	434	335	420	592
(-) R&D	73	186	332	525	667	804	1,127	1,272	1,473	1,662	1,805	1,951	2,219	2,329	2,422	2,023	2,669
Reinvestable cash	**978**	**2,155**	**2,440**	**3,911**	**3,267**	**5,205**	**4,785**	**7,936**	**3,709**	**8,389**	**9,732**	**13,598**	**9,823**	**13,573**	**13,311**	**19,766**	**14,896**
S&M	1,217	2,971	3,230	6,024	4,889	6,104	6,909	9,273	7,297	9,114	10,072	14,713	12,997	10,388	10,051	11,366	11,219
S&M/Reinvestable cash	**124%**	**138%**	**132%**	**154%**	**150%**	**117%**	**144%**	**117%**	**197%**	**109%**	**103%**	**108%**	**132%**	**77%**	**76%**	**58%**	**75%**
Active buyer	**295**	**344**	**386**	**419**	**443**	**483**	**536**	**585**	**628**	**683**	**731**	**788**	**824**	**850**	**867**	**869**	**882**

Once active buyers reached >800M users (or ~73% of China's total mobile internet population), Pinduoduo's management team recognized that spending more on marketing would likely have diminishing returns given the saturation, and preemptively dialed back the spend. Like flipping a

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[22] See pg. 159 of PDD's F-1. PDD had RMB 141.2BN of GMV in 2017.

[23] By tapping into WeChat friend groups, this built trust must quicker than traditional marketing. New users will trust their friends and family for recommendations, much more than a traditional advertisement. As such, adoption and conversion rates were higher than otherwise.

[24] This valuation eventually came out to ~7.5x 2018 revenues.

switch, marketing spend immediately declined to ~77% of reinvestable cash the next quarter and onwards.

As such, PDD's core ecommerce business entered its "stable growth" phase, and the company began to harvest the fruits of their efforts. Free Cash Flow grew 3.3x in three years, from ~RMB 7.7BN in 2018 to ~RMB 25.5BN by 2021.

Stage 2: Reinvesting Core Ecommerce Profits into Duoduo Grocery (2021 – 2023E)

So now that you have a stable and successful core ecommerce business, what do you do with all that cash flow? In Pinduoduo's case, it was fortuitous timing. It was at this point with Covid coincidentally accelerating online grocery adoption, that management saw an opportunity in front of them, right within an area of expertise (a substantial portion of GMV was already for fresh products, and Colin had been talking about reshaping China's agricultural supply chain since PDD's IPO)[25]. Thus Duoduo Grocery was born.

We talked extensively about the Duoduo Grocery business above, so we won't repeat it here. However as mentioned before, PDD took a different approach to competitors. Their asset-light approach required much less capital than competing platforms, while allowing them to be nimbler and expand rapidly. In fact, even on an employee-level, PDD has a *total* of ~10,000 employees across core ecommerce & Duoduo Grocery, while Meituan Select (the online grocery business) has ~15,000 for that division alone.

We estimate they've spent a cumulative ~RMB 20BN in losses on Duoduo Grocery – and this is reflected in the company's 2020 and 2021 cash flow profile. Even though revenues grew 43% y/y in 2021 and core ecommerce take-rates & margins increased, free cash flow actually decreased slightly – from RMB 28.1BN in 2020 to RMB 25.5BN in 2021. We believe this difference is due to reinvestment into Duoduo Grocery.

As mentioned before, PDD effectively won this battle over the last two years, we estimate that Duoduo Grocery cash consumption has already peaked, and the company will soon reap the profits starting in the second half of 2023, onwards.

So once again, PDD is asking itself "what do we do with all that cash flow"?

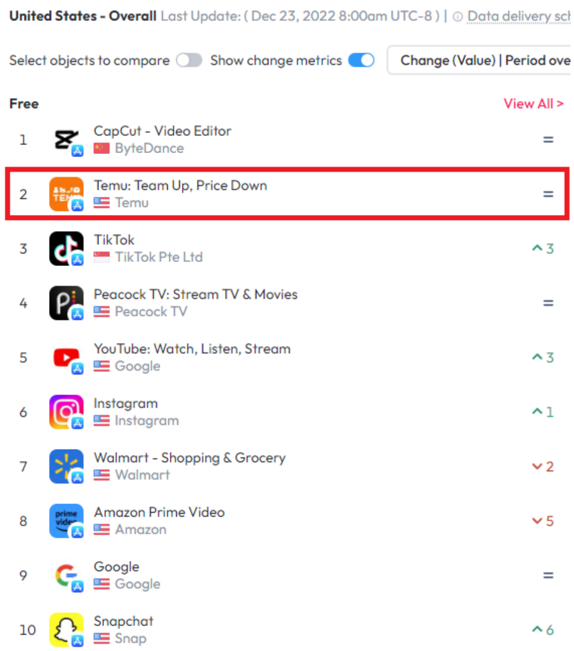
Stage 3: Reinvesting in International Ecommerce (2022 – To Be Determined)

PDD launched its overseas ecommerce app and website, called Temu, starting in the US in September 2022. The business is still at an early stage, but is already showing strong traction – ranking consistently in the Top 3 US apps overall, since November.

[25] See PDD's Q2 2018 earnings call for example, where the company talks about leveraging the team purchase model to allow farmers in poverty-stricken counties to directly access consumers.

Temu Rising in the US App Stores

Source: Data.ai; as of December 23, 2022



The company is very serious about this effort, with rumors that Colin is back from "retirement" to set the direction for the initiative, and Gu Pingping (PDD's Chief Operating Officer) is in charge of Temu now (LINK). Gu was with Colin from even before Pinduoduo, at his prior businesses over a decade ago. Before Temu, she had been the person spearheading Duoduo Grocery and won the market for PDD. Rumor is that she was even the one who convinced Colin to launch Pinduoduo in the first place (LINK).

In another sign of Pinduoduo's secretive culture, Gu Pingping isn't mentioned a single time in PDD's public reports. Not in its IPO prospectus, annual reports, or even on the company's website. And yet, she's considered by many employees to be the "shadow CEO" – in charge of internal operations, while Lei Chen (the CEO) handles external communications.

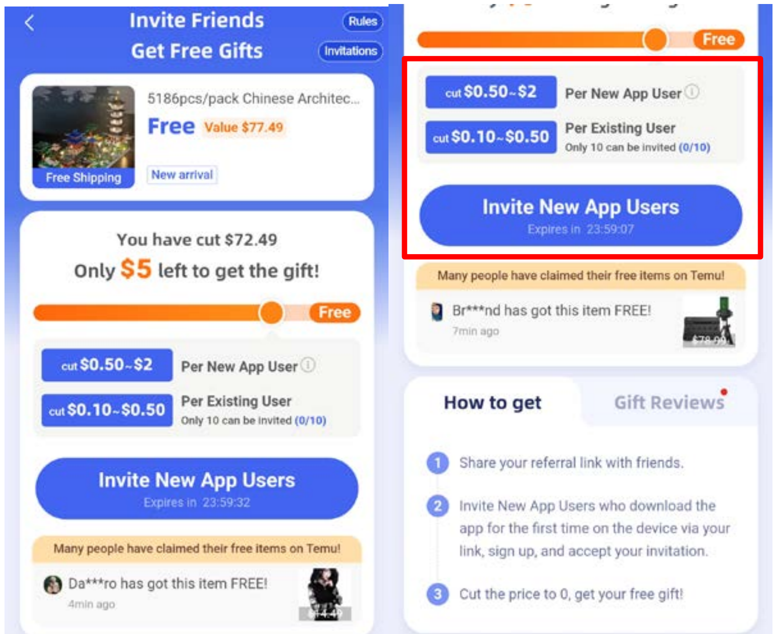
We've heard from a Shein source, that PDD's Temu is hiring extensively from Shein, attracting employees with 2 - 5x higher compensation. Unlike Shein though, Temu is planning to sell across all categories (similar to PDD's Chinese platform), and utilizes the same factory merchants as PDD China.

We think the strategy has potential, and the timing was well planned. In today's environment, with China's economic output slowing due to Covid policies and many factories running below capacity, these merchants are looking for another channel to sell their goods. And the US is facing record high inflation, with American consumers looking for a cheaper way to buy the household items they need (Temu is reportedly 30 - 50% cheaper than Amazon).

We have been ordering from Temu since it's launch, and it's impressive how quickly the company has grown. The app's UI has already undergone several overhauls in just three months, and has recently introduced its viral "price-slashing" / team-buying gamification mechanism to US consumers.

Temu's "Price Slashing" Gamification[26]

Source: As of December 29, 2022



The Temu team is responsible for vetting of products, warehousing, and dispatching items to the US via airmail. The business is actually very similar to PDD's Chinese ecommerce platform, utilizing the same factory merchants and SKUs – therefore many merchants & product qualities have already been vetted, saving PDD additional effort. The key difference, is that instead of items being shipped directly to households in China, they are instead aggregated at PDD's Guangzhou warehouse. Once there's enough orders to fill an allotted cargo space, these items are then sent via Air to the US, and then handed off to the USPS for final delivery.

Except for slightly higher prices on Temu and the additional layer of logistics costs, the rest of the unit costs are the same as PDD China. Latepost reports that Temu's AOVs are $20-25 USD (vs. PDD China's $6 USD), and merchants are already responsible for shipping costs to the Guangzhou warehouse (LINK)[27].

In order to counter the higher logistics costs, Temu is pooling multiple items into a single package (unlike PDD China), as well as realizing higher AOVs due to US consumers' higher disposable income. Added together, we believe logistics is currently ~15% of AOV, which is comparable to PDD's logistics costs in China.

All this said, it's still too early to estimate how material Temu will be to PDD's overall results. But this is going to be the primary use of PDD's reinvestment spend over the next few years, with the company ear-marking a ~RMB 7BN (~$1BN USD) budget for Temu in 2023, to achieve a $3BN USD GMV target (LINK).

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[26] Notice the 24-hour count down, the different rates for new vs. existing users, and limiting existing user invites (which means the need to invite new users to get the item for free).

[27] Temu's higher AOV is partly due to it having a shopping cart & multiple items per order, unlike Pinduoduo China.

Without traffic support from WeChat in this international expansion, PDD may face above-expected CAC's, which would make the CAC / LTV economics difficult. TikTok is also launching its own US ecommerce channel, which would intensity the competitive environment and block off a popular user acquisition channel for Temu.

This is an aspect that we're still watching closely, and consider it a "call option" inside the company. We don't factor any upside from Temu in our current financial projections, only modeling what's currently "knowable" – the several billion dollars PDD is likely to spend on the project over the next few years.

However, the fact that PDD launched Temu at this point in time, is actually a positive read-through on Duoduo Grocery. Knowing how this company operates, the fact that they moved Gu Pingping from Duoduo Grocery to Temu, and the fact that they feel comfortable spending RMB 7 Billion next year are both indications that management feels that Duoduo Grocery is on solid footing, and will likely be self-sufficient very soon.

Financial Projections

All combined, we are anticipating Pinduoduo will almost double its revenue over the next three years, to ~RMB 254BN by 2025 (~24% CAGR).

We expect Online Marketing Services (Core Ecommerce) to grow slower at a ~22% CAGR, a reflection of a maturing user base and overall industry growth. This is offset by take-rates rising to ~4.4% by 2025 – a 100bps increase, but still below current short-form video monetization rates. We're estimating Transaction Services (driven by Duoduo Grocery) will grow at a quicker a ~30% CAGR over the next few years, as Duoduo Grocery takes market share from retreating competitors and the segment's competitive advantages expand with increased user density.

Gross margins will also return to +80% levels (last achieved in 2019, prior to Duoduo Grocery), due to these rising take-rates and Duoduo Grocery reaching profitability by the end of 2023. Duoduo Grocery's category expansion into packaged goods (snacks, beverages, condiments, etc), which have longer-shelf life and higher margins, will also aid these results.

Inherent operational leverage would then allow EBIT margins to expand from ~25% in 2022E to ~40% by 2025E (a ~45% CAGR). We expect Sales & Marketing as a portion of GMV to increase slightly, due to more competition from short-form video ecommerce competitors[28]. Fulfillment and Storage should be lower as a percentage of Grocery GMV though, as order count and order density grow. We anticipate all other expenses to be relatively stable.

If we're right about these key drivers, this should result in ~$9.30 USD in FCF per share by 2025, or ~$8.50 earnings per share. Cumulatively Pinduoduo would accumulate ~$56BN USD in net

[28] But will decline in relation to overall revenues, as Duoduo Grocery becomes a largely share of the business.

cash by 2025, or ~$39 cash per share. Combined with a 20x P/E multiple or 15x EV / EBIT multiple for the operating business, this would indicate a ~$200 blended price target in two years[29]. At the current ~$82 price, this would imply +140% upside or a +52% two-year IRR.

Note, we acquired our position for Hayden partners at ~$49 per share over the past few months. As such, our realized IRR will differ materially from what's suggested above.

					Base			
RMB in millions	**2018A**	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**	**2025E**
P/E Build								
Online marketing services	11,516	26,814	47,954	72,563	106,731	143,162	173,105	196,094
Transaction services	1,604	3,328	5,787	14,140	26,633	36,207	46,575	58,063
Merchandise sales	-	-	5,751	7,246	192	96	48	24
Total Revenue	**13,120**	**30,142**	**59,492**	**93,950**	**133,556**	**179,465**	**219,728**	**254,181**
% Growth		*129.7%*	*97.4%*	*57.9%*	*42.2%*	*34.4%*	*22.4%*	*15.7%*
Gross Profit	**10,215**	**23,803**	**40,213**	**62,232**	**101,923**	**143,471**	**179,034**	**209,561**
% Growth		*133.0%*	*68.9%*	*54.8%*	*63.8%*	*40.8%*	*24.8%*	*17.1%*
% Margin		*79.0%*	*67.6%*	*66.2%*	*76.3%*	*79.9%*	*81.5%*	*82.4%*
EBIT	**(10,800)**	**(8,538)**	**(9,380)**	**6,897**	**32,946**	**55,656**	**79,519**	**101,916**
% Growth		*(20.9%)*	*9.9%*	*(173.5%)*	*377.7%*	*68.9%*	*42.9%*	*28.2%*
% Margin		*(28.3%)*	*(15.8%)*	*7.3%*	*24.7%*	*31.0%*	*36.2%*	*40.1%*
Implied Incremental Margin		*13.3%*	*(2.9%)*	*47.2%*	*65.8%*	*49.5%*	*59.3%*	*65.0%*
Net Income	**(10,217)**	**(6,968)**	**(7,180)**	**7,769**	**30,088**	**48,328**	**67,760**	**85,966**
% Growth		*(31.8%)*	*3.0%*	*(208.2%)*	*287.3%*	*60.6%*	*40.2%*	*26.9%*
% Margin		*(23.1%)*	*(12.1%)*	*8.3%*	*22.5%*	*26.9%*	*30.8%*	*33.8%*
EPS per ADR	**$ (1.97)**	**$ (0.86)**	**$ (0.86)**	**$ 0.78**	**$ 3.18**	**$ 4.78**	**$ 6.70**	**$ 8.50**
% Growth		*(56.3%)*	*(0.0%)*	*(190.3%)*	*309.0%*	*50.5%*	*40.2%*	*26.9%*
FCF per ADR	**$ 0.17**	**$ 1.51**	**$ 2.94**	**$ 2.07**	**$ 3.40**	**$ 5.74**	**$ 7.75**	**$ 9.30**
% Growth		*773.1%*	*94.6%*	*(29.5%)*	*64.1%*	*68.8%*	*34.9%*	*20.1%*

Risk / Reward		**2023 YE PT (1YR)**	**2024 YE PT (2YR)**
Current Price	**$82.0**	$82.0	$82.0
P/E Valuation			
EPS		$6.70	$8.50
x Multiple		20.0x	20.0x
+ Net cash per ADS		$28.6	$39.1
= Price Target		**$163**	**$209**
Risk / Reward		**98%**	**155%**
Discount rate		12.0%	12.0%
Present Value per Share		**$145**	**$167**
IRR		**98%**	**60%**
EV/EBIT Valuation			
EBIT ($USD)		$11,360	$14,559
x Multiple		15.0x	15.0x
= EV		$170,398	$218,391
+ Net Cash		(41,323)	(56,467)
= Equity Value		$211,721	$274,858
/ SHOUT		5,776,165	5,776,165
x ADR-to-Ordinary Share Ratio		4	4
= Price Target		**$147**	**$190**
Risk / Reward of Pos.		**79%**	**132%**
Discount rate		12.0%	12.0%
Present Value per Share		**$131**	**$170**
IRR		**79%**	**52%**

[29] i.e., End of 2024, as 2025 earnings and FCF metrics are discounted back by one year.

Risks

Chinese ADR Delisting Risk: PDD doesn't have a secondary Hong Kong listing, which puts it at risk of delisting on US exchanges. Over the last few years, US regulators have been cracking-down on US-listed Chinese companies, stating that the US' PBAOC must have full access to audit work papers for three consecutive years, or else face threat of delisting from US exchanges (LINK).

However just this Fall, mainland regulators allowed US inspectors to view the audit papers for the first time in history, in Hong Kong. Just a few weeks ago, the US' PBAOC confirmed that after spending nine weeks in Hong Kong, inspectors were granted "complete access" (LINK). This signals that the risk of mass ADR delistings is off the table for now (as long as Mainland regulators continue to allow US inspectors access for at least two more years).

Either way, we don't see this as a major risk. Hong Kong listings are relatively easy & quick to complete, costing ~$10 – 20M USD in total cost, and can be complete within just a few months. By doing so, this grants these companies a wider audience of potential investors in Asia (who are more familiar with the products / services).

If it's completed as a Hong Kong primary listing, it also allows mainland investors the ability to invest – important, since valuations are often ~20-40% higher in Mainland (which is ~95% domestic investors) than in Hong Kong (which are largely international investors). As an example of this potential mainland demand, during the late-October sell-off where foreign investors indiscriminately sold Chinese shares, mainland investors were rapidly buying through the Southbound Shanghai – Hong Kong stock connect. Over just two months, mainland investors went from ~3% ownership of the Hang Seng Tech Index to ~25% ownership. If the threat of delisting in the US becomes more real, we believe PDD can very quickly dual-list in Hong Kong, subsequently delist from the US, and even possibly obtain a higher valuation by doing so.

We believe PDD hasn't done so yet, as they feel that focusing manpower on a dual-listing would be a waste of resources & a loss of focus at the current time (remember, PDD has just 1/25th the number of employees of Alibaba, for example). The company has no intention of completing a dual-listing just to appease foreign investors, when the act doesn't create any lasting economic value, and management thinks such concerns are likely misplaced to begin with. We believe if / when the time comes for it, PDD will complete a Hong Kong listing – but not before the writing's on the wall, that doing so is necessary for the business' longevity.

Livestreaming Ecommerce Competition: Similar to other Chinese ecommerce companies, Pinduoduo faces increased competition from short-form video competitors, such as Bytedance (Douyin / Tiktok), and Kuaishou. These two companies have dominated China's short-form video industry to date. Users and time spent are reaching maturity, which is starting to impact advertising revenue growth rates (short-form video's primary monetization mechanism to date).

As these companies seek to grow profits, they are starting to monetize user's time via ecommerce next. So far they're making impressive progress, with Douyin (Tiktok's Chinese version) selling

RMB 800BN in GMV in 2021, and on track for over RMB 1 Trillion in 2022. If achieved, this will make Douyin approximately ~1/3rd the size of PDD.

In addition due to Douyin and Kuaishou's livestreaming model, their sales are largely impulse-based items. Consumers purchase these items due to a perception of getting a "limited time deal" (similar to QVC in the US), and spurred on by the personalities of their favorite live-streamers. This arguably competes more head-on with Pinduoduo's C2M and deal-oriented, unbranded items business model, than other more "search-oriented" ecommerce platforms.

At the same time, we have also witnessed the live-streaming companies become more aggressive with monetization. This results in more rational industry competition and upwards pressure on industry commissions – giving Pinduoduo more headroom to expand their own take-rates. For example, Douyin has a 1-10% commission schedule, Kuaishou charges 5%, and even WeChat Channels just announced a new 1-5% commission on sales (LINK).

Still, we'll need to keep an eye on these competitors and their development over the coming years. In our view, these two competitors are a larger threat to Pinduoduo than the existing ecommerce incumbents.

Reinvestment Spend: We think Pinduoduo has the potential to generate over ~$40BN in cumulative free cash flow over the next three years. Combined with its current ~$17BN cash balance, this equates to ~$56BN in net cash on its balance sheet by 2025.

The logical question is, what will Pinduoduo do with all that cash, if our estimates are correct? The company has historically always found another avenue for reinvesting its excess capital – capital allocation that so far has proven correct. However, we were talking about just a few billion dollars of investments in Duoduo Grocery. By 2025, the company will be producing over ~$13BN USD in annual cash. Given China's relatively mature market, there just aren't enough reinvestment opportunities to utilize that much cash within its existing business lines.

Will Pinduoduo be able to come up with a new business segment in China? Will they spend more aggressively on Temu than originally indicated? Will they start launching warehouses in the US, aggressively spend on acquiring new customers, and / or expand into other Western markets? Will they squander the cash on vanity projects or return the capital to shareholders?

This is the biggest threat to our thesis, since it's a "unknowable" variable and the company has a history of being tight-lipped in communicating future strategies. All of the free cash flow generated isn't worth much, if they're reinvested in low / negative ROI projects. Given management's history of shrewd & efficient capital allocation, we don't think this will be the case. But we won't know for sure – so it's something for shareholders to keep a close eye on, especially as the cash balance grows exponentially over the next few years.

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