HAYDEN CAPITAL

QUARTERLY LETTER

2024 | Vol.2

HAYDEN CAPITAL

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August 27, 2024

Dear Partners and Friends,

Our portfolio appreciated further in the past few months, mostly driven by our core positions.

As mentioned in our last few letters, we're seeing evidence that the competitive environment is stabilizing, after the erratic macroeconomic environment of the past few years. This quarter was a continuation of that, and our businesses are once again showing evidence of this reacceleration in their earnings.

Time Period	Hayden (Net)[1]	S&P 500 (SPXTR)	MSCI World (ACWI)
2014[2]	(4.9%)	1.3%	(0.9%)
2015	17.2%	1.4%	(2.2%)
2016	3.9%	12.0%	8.4%
2017	28.2%	21.8%	24.4%
2018	(15.4%)	(4.4%)	(9.2%)
2019	41.0%	31.5%	26.6%
2020	222.4%	18.4%	16.3%
2021	(15.8%)	28.7%	18.7%
2022	(69.2%)	(18.1%)	(18.4%)
2023	56.6%	26.3%	22.3%
1st Quarter	12.9%	10.6%	8.2%
2nd Quarter	7.0%	4.3%	2.9%
2024	20.8%	15.3%	11.4%
Annualized Return	11.3%	12.8%	9.1%
Total Return			
1 Year	63.6%	24.6%	19.3%
5 Years	73.8%	101.6%	67.0%
Since Inception	180.4%	219.8%	130.5%

1 Hayden Capital returns are calculated net of actual fees directly deducted from client accounts, for the period from inception (November 13, 2014) to December 31, 2020. Starting on January 1, 2021, reported performance is reflective of a representative account, managed in accordance with Hayden's strategy with no client specific investment guidelines or limitations, made no subsequent investments or redemptions, and remains invested. The representative account paid a management fee of 1.5% and incentive fees of 0%. Clients who elect the performance fee option for their accounts may pay higher fees and therefore realize lower net returns, during years of strong investment performance. Individual returns may vary based on timing of investment and your specific fee schedule. Performance results are net of expenses, management fee and incentive fees. Past performance is not indicative of future results.

2 Hayden Capital launched on November 13, 2014. Performance for both Hayden Capital and the indexes reflects performance beginning on this date.

Since the quarter ended though, we've seen volatility return to the markets these past few weeks. It seems that the market is becoming more aware of the stretched valuations in the most popular AI-related stocks, which have propelled the majority of this year's index gains[3]. There are also renewed fears that the US economy is starting soften, with some arguing that interest rates have remained too high, for too long.

It's all but certain that the Fed is going to cut interest rates soon. It's no longer a debate of *if* or *when*, but of *how much*. Historically, periods of declining interest rates have been good for international, small cap, and long-duration assets, as lower government yields push investors to seek returns elsewhere and lower the cost of funding for businesses.

Having said that, while it's useful to be aware of the macro environment we're in, it's extremely hard to make money off of. Not only is it tough to predict macroeconomic policy, but even harder to predict their subsequent effect on individual stock prices[4].

As such, our investment process has always been bottoms-up driven, simply using periods of such volatility as time to go shopping. We've already begun buying a new position – one we've followed for several years – and may continue adding if the market volatility continues. We'll provide more updates in time, if or when the investment becomes a more substantial part of the portfolio.

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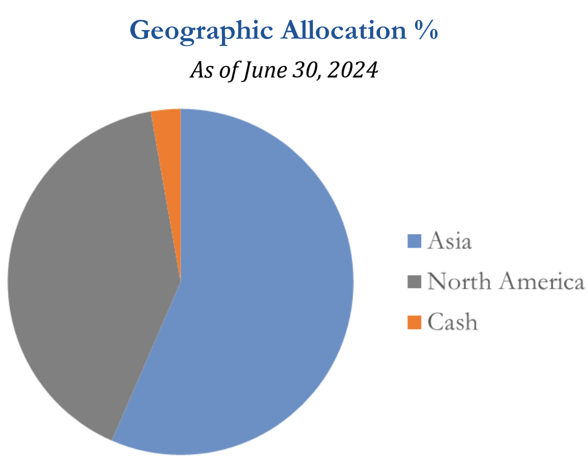

Our portfolio rose +7.0% in the second quarter, versus gains of +4.3% for the S&P 500 and +2.9% for the MSCI World indices. This brought our annualized return since inception to +11.3%.

Approximately ~57% of our assets are invested in Asia, ~41% in North America, and the remainder in cash.

[3] Coatue claims 90% of Nasdaq's, and 66% of S&P 500's returns year-to-date are from AI-related stocks (see slide 10; LINK).

[4] Who predicted that lower expected US interest rates would lead to the strengthening of the Japanese Yen, which would unravel the popular "yen-carry trade", which in turn would set in motion a chain of selling and liquidations that causes the world's largest tech companies to shed hundreds of billions in market value?

Re-acceleration

Our portfolio is still recovering from the 2022 downturn, although we've made meaningful progress in the last two years. While that experience has taught us many lessons, that dislocation also provided a rich vein of opportunities that we continue to mine today.

Some of our biggest winners in the last two years, have been "re-acceleration" stories. These are cases where once rapidly growing companies suddenly put the brakes on during a weak economy. There could be several reasons for this – customers pulling back during a recession, the company proactively curtailing growth spend as a precaution, needing to cut costs & right-size the business to become profitable quickly, or many other reasons.

But the commonality seems to be that as soon as growth stops, the market narrative turns suddenly from positive, to "this company is finished". They go from being valued for many years of rapid growth, to being priced like a mature company that will never realize significant growth again. But often neither scenario is true, with the ultimate future path somewhere in between.

A rational, long-term investor would recognize that this slowdown is temporary / cyclical, and often self-inflicted. The rational investor would concentrate on the long-term market opportunity, past the near-term weakness. But we know the market is not rational.

Instead, the market tends to drastically de-rate multiples to one appropriate of a mature company that is destined to be stagnant forever. In our experience, this is somewhere in the ballpark of ~8 - 12x P/E or 8 - 13% yields (i.e. like a bond with a similar risk profile). Worse yet, these multiples are assigned at cyclically low earnings.

In such cases, investors may have the rare opportunity to buy "growth" companies at a "value" price.

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I find the fact this type of opportunity even exists, fascinating. Especially since it seems to happen every bear-market – perhaps indicating it's embedded in human nature (and thus persistent & likely minable throughout one's investing career).

For example, I gave the examples of Amazon's stock performance in our Q1 2022 letter (please re-read this piece for more context; LINK).

Amazon's stock had peaked at the end of 1999. Revenues were growing +169% y/y, and the market richly rewarded this growth at ~18x Price / Sales.

But as growth decelerated over the next few years during the "tech crash", the market re-rated the company to just ~0.7x P/S (or ~14x structural operating profits)[5]. Growth had decelerated

[5] Amazon was telling investors to expect ~5% operating margins.

from triple-digits to just ~13% y/y by 2001. The company cut costs quickly, and worked to get profitable.

They achieved this by Q4 2001, and started *re-accelerating* top-line growth again in 2002 – proving to investors that they could both grow *and* be profitable. Growth rose to +26% y/y in 2002, and a further +34% y/y in 2003. This new level of growth was structurally lower than the prior period, but it satisfied the market.

The market started valuing Amazon as a growth company once again, giving the stock a ~4x P/S (or ~49x operating profit) multiple by the end of 2003. The stock rose ~8.5x in a little over two years.

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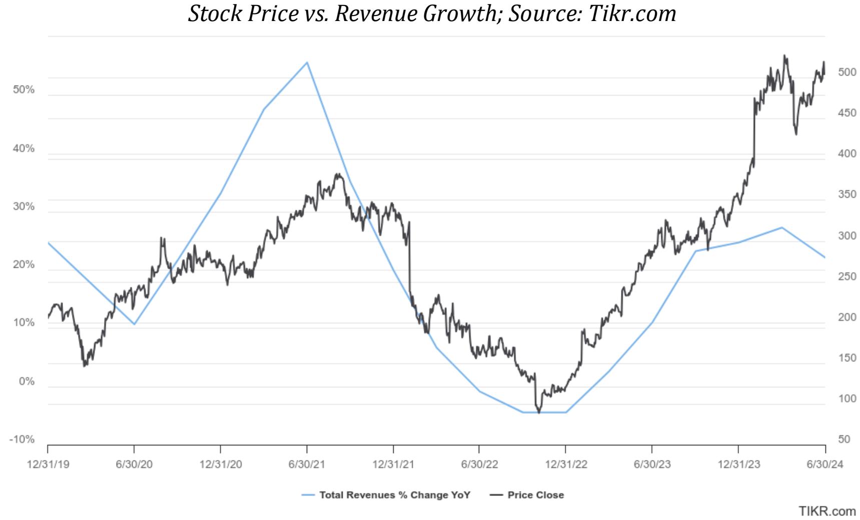
As a student of markets, I try to learn from such case studies. And we watched this exact same dynamic unfold again the last two years. As the saying goes, "History doesn't repeat, but it does rhyme".

For example, we saw this in the online advertising market, which exhibited slower growth throughout 2022, as companies feared an economic recession and cut their marketing budgets. Meta's revenue slowed from +22% y/y in 2020 and +37% in 2021, reversing to *negative* -1% y/y in 2022. The stock price declined -64% that year.

Or Applovin, which was impacted by the mobile gaming industry's slowdown. Revenues went from +46% y/y growth in 2020 and +93% y/y in 2021, to a measly +1% y/y in 2022. The stock reacted very negatively, dropping an astonishing -89% that year.

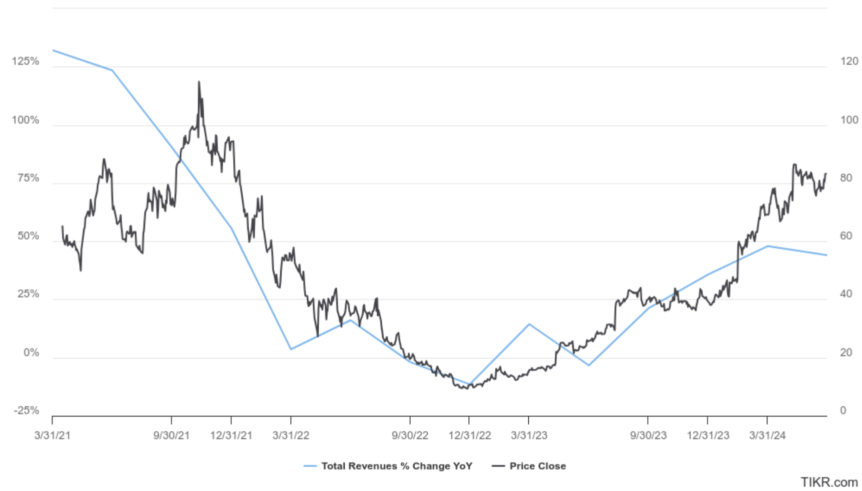
Meta Platforms

Stock Price vs. Revenue Growth; Source: Tikr.com



Applovin

Stock Price vs. Revenue Growth; Source: Tikr.com



In both cases, the market questioned both future industry growth rates (when these industries recover, will the companies grow at prior ~+30 - 90% rates? Or will it be closer to +5%?). On top of that, there were questions if the last cycle's winners would be the same winners on the other side.

Would Tiktok take over as the dominant social media platform (and thus dominant advertising platform)? Was Facebook just an antiquated "boomer" platform now, and Instagram on the same path?

Or did Apple's privacy changes permanently impair Applovin's business model (see below)? Would Apple enter the mobile ads industry and take Applovin's share? Or would Unity, Ironsource, or another player obtain the spoils?

The market's concerns were valid, and I'd be lying to say I had all the answers at the time. But at the same time, the market had punished these stocks to such low levels that priced with certainty a negative answer. Meta traded down to ~11x P/E, and Applovin to ~10x P/E by the end of 2022 – prices suitable for a permanently impaired business, not one facing temporary headwinds.

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I write these detailed letters partially for our partners, since they deserve a transparent view into how we make decisions at Hayden. But more honestly, I write these letters for myself – as a quasi - "investing journal", to record my thoughts in real-time.

It came in handy during this time, as I was watching all this unfold in the Fall of 2022. During such a tumultuous and uncertain time, I kept referring back to the case studies I had written on Amazon and Mercado Libre earlier in the year (Q1 2022) and thinking "we've seen this movie before…".

Now in hindsight, it's always easy to see what the right decision should have been. And we certainly didn't get everything correct. But I think we got some crucial decisions right.

We missed Meta, but had the confidence to add significantly to our Applovin investment toward the bottom, recognizing the same dynamic was playing out once again. At the lows, we were buying shares for ~3x what they'll produce in Free Cash Flow this year. Shares have rebounded ~9x from those lows since.

Writing gave me the perspective to remember that while scary in the moment, these periods wouldn't last. As long as we believed that people would continue to play mobile games, or that ecommerce in SE Asia was just getting started, or that the world would continue to digitize and include the emerging middle class, this deceleration we were seeing was just temporary.

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These reacceleration stories happen in waves, as some industries rebound quicker than others. For example, while we've already seen the recovery in digital advertising, sectors like commercial real estate are still anemic, weighed down by high financing rates. We'll see if this changes soon as interest rate cuts are on the horizon.

Other sectors like ecommerce are in the early phases of reacceleration. For example, Sea Ltd's ecommerce division grew GMV +101% y/y in 2020 and +77% y/y in 2021, which then like Amazon's early days, decelerated to +7% by 2023.

But also like Amazon, Sea Ltd decelerated quickly with the goal to get profitable, and just achieved its first profitable year in 2023. We're now beginning to see reacceleration again, with 1H 2024 GMV growing +33% y/y.

The market has been slowly rebuilding confidence as a result, with earnings estimates rising steadily. For example, Goldman's 2025 EBIT estimates have been revised from $569M to $2BN since the beginning of this year, a +259% rise. So far, the stock price is up +105% year-to-date[6].

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Finding these types of reacceleration situations isn't easy. I'm currently trying to find a systematic way to identify such opportunities. But after speaking with other investors who've tried, it seems like maybe the only tried & true method is good old hard-work, following many industries closely, and recognizing when things are changing before they show up in the financial results[7].

Easier though, is identifying such situations that are already in your portfolio. At least by studying historical cases, you can recognize the market's psychological flaws and have the confidence to hold, and perhaps even double-down through such periods.

I'm working to identify more opportunities in this vein, and continue to hone our process around it. I'm excited to watch as these companies reemerge on their next phase of growth and continue to execute against the long runways of opportunity in front of them.

[6] As of August 23, 2024.

[7] Please reach out if you'd like to discuss methods to identify these types of situations. I would love to compare notes with other investors.

Applovin (APP): I have mentioned our Applovin investment a few times in prior letters, but realize I've never discussed it in full depth. Recently there have been quite a few developments, so I thought now is a good time to dedicate some time and lay out our thoughts going forward.

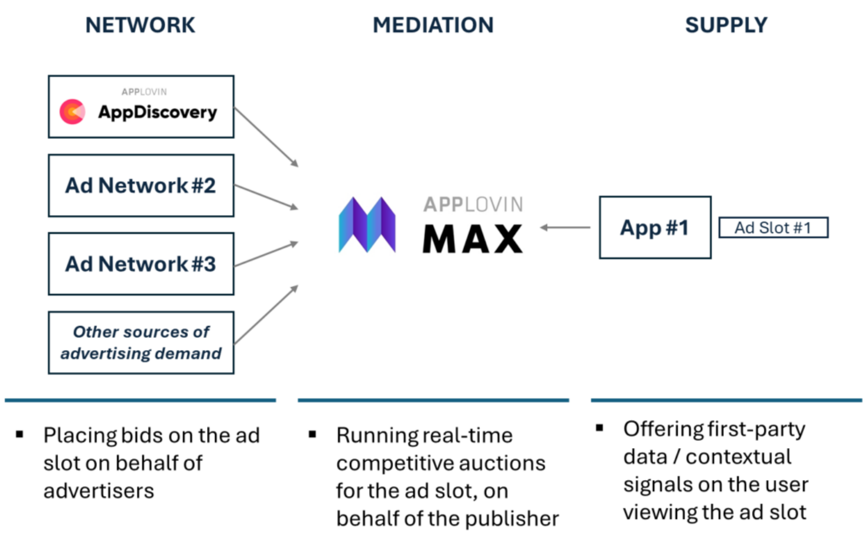
Applovin is an advertising network for mobile apps (in particular, casual mobile games). Essentially, they are a market-maker for those looking to buy and sell ads – helping apps acquire users and monetize themselves, in an extremely competitive industry.

One might think this is a niche business, but the company facilitates over $10 billion dollars of volume annually for its mobile gaming clients[8], and is expected to make $4.4BN in revenue, $2.5BN in EBITDA, and $1.8BN in Free Cash Flow this year. They are the third largest mobile ad network after Google and Meta, are the largest mediation platform, and has over 1 billion daily active users.

When you play a game on your phone, you'll probably notice a banner ad at the bottom of the screen. Or after beating a level of Sudoku or Solitaire, you may have to watch a 30 second ad before you can progress to the next round. Applovin facilitates these ad placements, matching ad buyers ("advertisers") and ad sellers with inventory ("publishers").

Applovin's Solutions

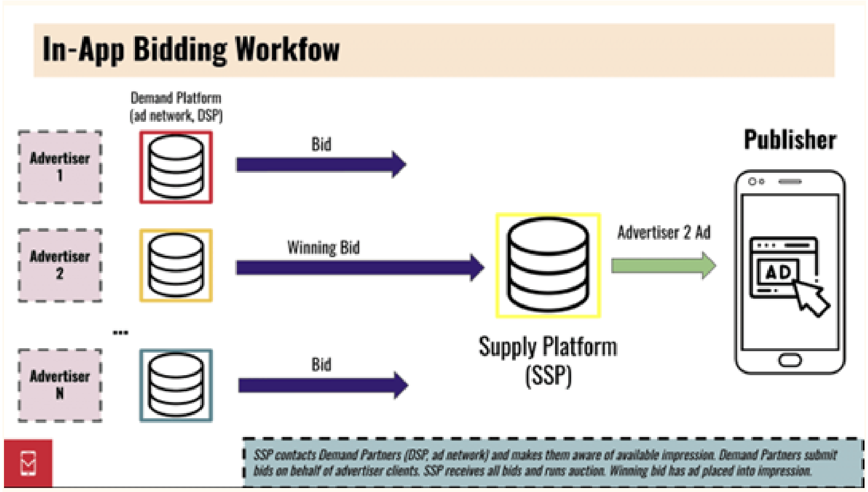
Source: Naavik.co (LINK)



[8] From Q2 2024 Earnings Call

Mobile Advertising Workflow

Source: Mobiledevmemo.com (LINK)



It starts with advertisers, who work with multiple ad networks (such as Applovin's "AppDiscovery"), who represent these ad buyers to acquire users. These networks then seek out ad inventory through a mediation platform (Applovin's "Max" product), who represent the publishers to run real-time auctions to get the highest price for that slot.

This all happens in seconds, with prices constantly changing and dynamically priced by Applovin's AI algorithm.

This is a two-sided market, and might be easiest thought of like a real estate transaction. AppDiscovery is the "buyer's broker" and the Max mediation platform is the "seller's broker". They are one of the largest players on both the "buyer's" side (3rd largest ad network, behind Google and Meta) and the "seller's" side (~60 - 70% market share)[9]. Applovin takes a cut in the process, typically 20 - 30% of the total ad spend with the rest going to the publisher.

Scale is especially important in this opaque industry, since the "clearing price" isn't shared among parties. By seeing the entire transaction (and more transactions), Applovin has far greater insight into where real-time prices are.

Underlying all of this is Applovin's Axon machine learning algorithm, which uses this data advantage to bid and sell ad slots more efficiently than competitors with less data. This means higher returns for both buyers and sellers, and higher profits for Applovin.

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Applovin historically (and continues to) serve mostly mobile gaming customers. Games are a huge business, with the category accounting for ~60% of *all* app spend (LINK). The mobile app ecosystem is *really* a gaming ecosystem.

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[9] https://mobileuseracquisitionshow.com/episode/applovin-q-and-a/

For advertisers looking to get users to try their new game, the highest conversion audience is those already playing another game. And for publishers with inventory, the highest monetization rates are ads from other games.

Free / hyper-casual games are also a high-churn business, with only ~7% of gamers returning to the same game after a week, and just ~2% after a month (LINK). As such, the business model for hyper-casual games is to monetize the gamer as much as possible in the first couple days, before they get bored and move onto the next game. Gamers are always on the lookout for the next game to play, and so are "primed" / more receptive to ads from other games too, versus other ad verticals.

This is why an effective ad network is extremely important to the mobile gaming ecosystem. Monetizing quickly & then pushing users to the next game is vital to the casual game business model. It's possible that without effective ad networks like Applovin, the entire genre of free-to-play games might not exist[10].

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There have been a few developments in the past few years though, that make this company especially exciting. Apple rolling out ATT, Unity's missteps, and Applovin's improved AI engine have all been enormous tailwinds.

First, Apple rolled out its user privacy framework / anti-tracking feature called App Tracking Transparency ("ATT") in April 2021. Identifiers for Advertisers ("IDFA") is a unique device identifier that Apple assigns to a user's device.

ATT was released with iOS 14, and it required apps to ask Apple users permission to access the IDFA. This meant users could opt-out of sharing data with third party applications. Among iPhone users shown the prompt, ~51% are choosing to not allow other companies to track how they use their phones (LINK). While this might be great for user-privacy, it makes it much harder for companies to understand their users and monetize their apps.

For companies that make money off advertising, typically the more user data you have, the more valuable your ad space. For example, if you know a user is "high income, living in Arizona, female, aged 25-35, plays games for 1.21 hours per day, and has an affinity for puzzle games", that is far more valuable than simply knowing the user "lives in Arizona, and has an iPhone 15".

Advertisers would pay multiple times more for the former, and thus ATT's rollout greatly affected mobile app companies dependent upon this revenue, especially for hyper-casual gaming companies. This increased gaming publishers' reliance on advertising networks even further – particularly those with exclusive data and better targeting, who could use sources other than IDFA, to identify the highest ROI players.

So how do you get user data, to offer your customers better ad targeting, if Apple won't share the information? By owning the apps yourself, and vertically controlling enough of the ad auction to see both sides of the marketplace.

[10] This is a simplistic version of Applovin's business model. For those interested in the technical details, I'd suggest these resources for a more comprehensive overview (LINK 1, LINK 2, LINK 3).

Applovin shrewdly recognized the need to "own" first-party data early on, and spent ~$1 billion to acquire or partner with gaming studios, starting in 2018[11]. These studios have a combined ~200 games, which provide data on over 200 million users to Applovin's advertising engine, that is outside the confines of ATT (LINK).

In 2021, they also bought MoPub from Twitter for another ~$1 billion. MoPub was the second-largest mediation platform, and by integrating with Applovin's leading Max platform, it cemented the company's dominance in the mediation space. Now the majority of ad sales went through Applovin's own systems too.

Combining mediation data + user data from their games + AppDiscovery bidding data, and using their Axon machine learning algorithm to efficiently price these bids / sales, gave them a vast competitive advantage. Applovin no longer needed Apple's data to understand the user's value. Instead, they circumvented ATT by using advertiser bids and their internal data sources to assign the user's value, thus insulating them from ATT more than peers.

Apple's rollout of ATT actually proved to give Applovin a *larger* advantage in their ecosystem, rather than less as originally feared.

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Another tailwind was Unity's botched rollout of their "Run Time Fees". Essentially Unity (Applovin's main competitor) tried to change their business model, and their customers said "no, thank you".

Unity is one of two main gaming engines (alongside Epic's Unreal Engine), upon which all games are built. Unreal Engine is traditionally used for AAA games that require demanding graphics and physics calculations, while Unity is for "light-weight" games and simple to use – perfect for mobile.

Unity was originally launched in 2005 as a way to "democratize game development", and to serve smaller developers. As such, the cost has always been low (or free), with Unity only launching its seat-based subscription model in 2016. This meant that gaming studios paid Unity based on how many employees were using the product, rather than how many people downloaded / played the games developed on Unity (as Unreal Engine does).

But this meant low revenues for Unity, so one of the ways they've also monetized is by offering an ad network for games developed on Unity. If you're building your game on Unity's engine anyways, why not also monetize your game with a few extra clicks through Unity's ad network?

By 2021, Unity's ads business (called "Operate Solutions") brought in *twice as much* as their gaming engine subscriptions ("Create Solutions")[12]. Unity bought Iron Source, another sizable ad network, in 2022 – thus making the ads business an even bigger part of the business.

And then the company announced their new "Runtime Fee" in September 2023. The idea was to move from a fixed per-seat subscription, to now charging a percentage of each game's revenue.

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[11] The company launched its internal Lion Studios in 2018 (LINK).

[12] Unity 2021 Annual Report (LINK).

Obviously, this meant that the most popular games would be paying Unity much more, and these developers made their complaints known.

Developers hated the change, and there was much bad press around it as well. A lot of gaming studios then started leaving Unity's ad network (remember, this is the majority of their revenues), and going towards Applovin. And after realizing higher ROIs from Applovin's data advantage, they've stuck around since.

The result was the ouster of Unity's then CEO, a public apology to developers, a back-tracking of the proposed fees, and Unity's stock hitting all-time lows. What was a self-inflected wound for Unity, turned out to be a massive gain for Applovin.

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Lastly, technological improvements in Applovin's Axon machine learning algorithm can have a dramatic impact on revenues.

For example, Applovin admitted that before launching Axon, both them and Unity had very similar ad tech businesses. But after launching Axon in late 2020, the company's algorithm accuracy improved +500% by 2022. And going forward, they believed they only needed a 20% increase in accuracy to generate $500M more revenue, at zero incremental cost[13].

On the Q2 2022 earnings call, Adam Fouroghi (Applovin's Founder & CEO) described the Axon technology, stating:

"I think the important piece that we want our investors to understand about our business is we do control our own growth, and that's really truly improvements to the AXON technology. And you've seen that in the last 4 quarters where we had these sequential step-ups. Each one of those were enhancements to the technology to make it more accurate.

This is a predictive technology, and the goal is to predict which apps users are going to download and engage with. Every predictive technology that's built on top of a lot of data is going to have an error rate, and we have an error rate. Every time we can reduce that error rate, the accuracy of those predictions go up and the business will see a step function gain in revenue. So what we get excited about and why our teams work so hard is to look for those lifts.

When we find one, it'll increase the business, and it won't be a slow increase. It will be a step function. So given time, we're going to find more of those lifts, more of these accuracy enhancements. And that will give us a lot of confidence in bigger numbers in this business given the scale that we're operating at today."

- *Applovin's Q2 2022 Earnings Call (LINK)*

A new version, Axon 2, launched in early 2022. True to their prediction, the business witnessed a step-function change afterwards. Applovin's ads business grew +330% in just three years, from $674M in 2021 to an expected ~$3BN in 2024.

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[13] Applovin's Q2 2022 earnings call (LINK)

An additional benefit of Axon 2 is that it will allow them to enter more verticals beyond mobile gaming.

On the Q2 2023 earnings call (LINK), Adam stated:

"*But even more exciting for us is the implications that we're going to be able to make a wider breadth of advertisers work with this new technology [Axon 2]. It's much more predictive, much more powerful. And if we're able to execute on that, we can really broaden out the advertiser base, service new verticals, and that should really fuel our growth for quarters and years.*"

This is beginning to happen, with the launch of Applovin's Web Advertising Program in the last few months. The first, and most logical, vertical to tackle is ecommerce performance advertising.

It's one of the largest advertising categories, but also quick response and measurable – Applovin can easily track whether one of their ecommerce ads led the user to ultimately purchase online. This quick feedback loop allows Applovin to hone its algorithm in real-time, and make it more accurate for future ad impressions.

The goal is for ecommerce websites to use Applovin's platform, to advertise on its existing supply of in-game inventory, and market to the company's 1 billion-plus daily active users. This can be a more effective channel for ecommerce advertisers, with some finding in-app ads yielding +150% higher conversion rates than traditional mobile web ads (LINK).

We haven't seen the impact of this new initiative yet (will likely take several more quarters), but it's possible that this could be another "step-function" in Applovin's growth.

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All of these tailwinds have led to some impressive numbers over the last few years. Revenues have grown from just $1.5BN in 2020 to an estimated $4.4BN in 2024. More importantly, it's the high-margin advertising platform that's driven this growth – going from just $207M in 2020 to an estimated ~$2.9BN in 2024 (a ~14x increase).

Meanwhile the gaming studios segment has done its job of providing Applovin first-party data to train its algorithms. The $1BN spent acquiring / partnering with these gaming studios jump-started Applovin's "data flywheel". But now with the model's effectiveness proven and more third-party advertisers joining the platform, Applovin can obtain enough data from these other sources.

As such, first-party games will be less important to Applovin's future. They no longer need to own this relatively lower-margin, lower ROI business themselves, and plan to run them for cash flow and / or sell them at some point in the future[14].

Management believes the ads platform can organically grow 20 - 30% y/y for many years. And this is just from the algorithm naturally getting more efficient with more data. It doesn't even

[14] The games business has ~15% EBITDA margins when run at steady state. Compared to the software business, which has ~73% EBITDA margins and still growing +88% y/y, as of Q2 2024.

include any step-function improvements, such as from Axon 3, or from new categories like ecommerce.

The share price has more than doubled since we first started buying in Q2 2022 (albeit with a -75% draw-down in between)[15]. Despite this, I believe shares remain attractive at just ~12x EV / EBITDA (2024E).

Management has already publicly indicated their desire to sell the gaming division eventually – and I think the ads platform is the better business as well. As such, it's prudent to strip out gaming when looking at the valuation.

Doing so, I believe investors are buying the ads platform at ~$30BN, in return for ~$2.1BN 2024E EBITDA, or ~15x EV / EBITDA[16]. This is in return for a business that should grow at least 20 - 30% y/y in the medium term, and possibly over +40 - 50% y/y if factoring in future Axon improvements and a successful ecommerce expansion.

I remain very excited about Applovin. It's arguably one of the finer examples of how Artificial Intelligence / Machine Learning technology can significantly expand not just the company's revenues, and but also create value for an entire industry. While the world fawns over semiconductors at high valuations, I would prefer to own one of the first practical applications of AI technology with ~20 - 50% y/y growth, at a mid-teens multiple.

Pinduoduo (PDD): A few weeks ago, Latepost (a leading Chinese technology news outlet) confirmed Pinduoduo's online grocery initiative is solidly profitable (LINK). According to the article, Duoduo Grocery is able to achieve ~5% net profit margins in competitive markets (where they go up against Meituan Select). In non-competitive markets, they can achieve ~10 - 15% net margins.

The company doesn't disclose the exact scale of Duoduo Grocery, but our calculations indicate it's likely around ~RMB 300BN this year, and still growing in the double-digits. At that level, the division is likely contributing ~US $2.5BN in annual profits[17].

It's an impressive result, but admittedly, not a huge needle-mover in light of the total $17.6BN net profits the company is expected to make this year (~14% of overall profits)[18].

[15] Our original purchases in Q2 2022 were ~$38 per share.

[16] The gaming business is likely worth ~$1.5BN in a sale (assuming ~6x EV/EBITDA, in-line with peers).

[17] At a 7.15 RMB-USD exchange rate, and 6% profit margin.

[18] 2024 sell-side estimates; as of August 7, 2024.

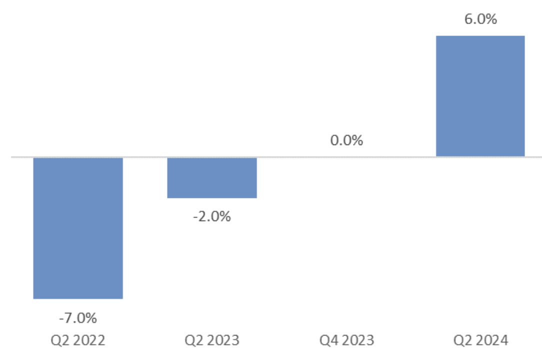
Duoduo Grocery Unit Economics (Our Prior Estimates From 2022)

From Hayden's Pinduoduo investment memo (LINK)

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 sh	43.5%	53.0%	59.0%	65.0%	
Absolute EBIT (mn)	**(2,495)**	**(1,190)**	**7,328**	**14,358**	**37,830**

Duoduo Grocery Margins[19]

Source: Hayden estimates; Latepost



More importantly though, I see it as an indicator of this management team's superior executional ability. They took this business from launch to selling >4x more groceries than the largest supermarket chain (Walmart China), in just four years[20]. Compared to our initial internal estimates, they have exceeded this by ~2x on both absolute profits and margins.

Additionally, I see it as further evidence that Pinduoduo's "late-mover" strategy is indeed working (as discussed in our Q4 2023 letter; LINK). By waiting for competitors to spend their resources educating consumers and then learning from their mistakes, Pinduoduo was able to enter later and build a superior product more efficiently. This meant a de-risked business venture, and a faster pay-back on investment for shareholders.

The company seems to be winning over investors during the past two years (even though it might not *feel* like it, given the headlines on US-China tensions and the recent Financial Times article). Over that time frame, street estimates for 2025 free cash flow have increased 3.4x - from ~$7BN to now ~$24BN, reflecting greater confidence in the business's ability to monetize at higher rates[21].

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[19] Figure and dates are approximate, as the company doesn't officially disclose this data. The estimates are based on publicly available data, media articles, and our own calculations.

[20] The two largest grocery chains, Walmart China and Yonghui Superstores, had total revenues of RMB 120BN and RMB 79BN in 2023, respectively. Grocery is ~60% and ~45% of their total respective revenues, equating to ~RMB 72BN in grocery sales for Walmart China, and ~RMB 36BN for Yonghui.

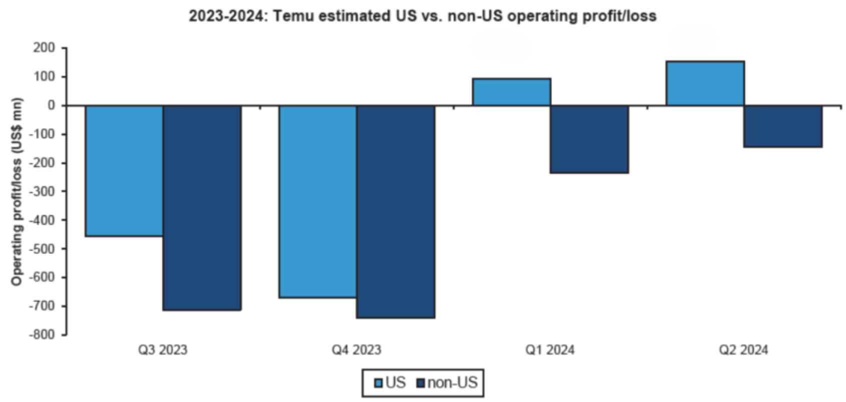
[21] This is after the revised estimates, post Q2 2024 results. As of August 27, 2024.

Operating and Free Cash Flow margins have been in the mid-30%'s, despite the heavier investment spend in Duoduo Grocery and Temu the last few years (offset by higher monetization of the Chinese marketplace). The company has easily surpassed both our own and street expectations.

As Pinduoduo re-focuses its efforts on taking its platform international via Temu, I'll be watching closely if they can pull it off their "late-mover" strategy a third time. So far, it seems on track. The street is already estimating that Temu is profitable in the US, and with losses in other markets narrowing.

Temu's Operating Profit

Source: Bernstein Research



Assuming these numbers are approximately correct, Temu's "start-up cost" isn't as high as investors originally feared. With the US business now run-rating at almost ~$500M annual profits vs. a several billion dollar original investment, the returns on the division seem attractive, even without underwriting additional growth[22].

There's still external risk here though – largely from regions implementing higher tariffs and increased competition. But it does feel like the debate has moved from "can selling items this cheap, be a profitable business" to "how durable and reliable are these profits, given the potential political & merchant-side risks"?

It's for the above reasons, that Temu is still a "call-option" in our view. We've been shareholders since before Temu was announced, and it's still not a material part of our thesis / necessary for our investment to be a success. But given this team's track-record, I suspect the odds of them pulling it off a *third* time is higher than the market thinks.

Note: The company reported Q2 2024 results yesterday, with the stock down -28% afterwards. The financial results themselves were fine (revenues missed street estimates by -3%, but net income beat by +14%), with revenues growing +86% y/y and net income up +125% y/y. They've also accumulated $39BN in net cash, or equal to ~30% of their market cap.

Instead, investors were perplexed by management's outlook commentary, which sounded much more negative than the results (and competitors' own outlooks) would suggest. The company is telling investors that its current margin

[22] Granted, this assumes Temu is able to maintain these levels steady-state, that the competitive environment remains rationale, etc. These are unlikely assumptions, but it does illustrate that management's decision to launch Temu might not be as illogical as the market fears…

levels are unsustainable and anticipates growth to slow over time. Additionally, the company expects to invest more into its platform to transition to higher-quality merchants.

Such comments surprised investors, since after provoking PDD in a price-war earlier this year, Alibaba, JD, and Bytedance have all signaled defeat in the low-price segment (PDD's core market). So theoretically, competition should be easing ([LINK]). But instead of accepting a truce, PDD is choosing war.

I'm still working through the information, but my initial hypothesis is that PDD is purposefully lowering investor expectations, as it successfully defended its low-price segment and now plans to go on the offensive to chase Alibaba into the higher-priced / branded goods segment. Especially as Alibaba is in the middle of a re-organization, with new management in place. The renewed focus is on GMV growth instead of profit maximization, in the near-term ([LINK]). So a portion of take-rates will be used to subsidize high-quality merchants, thus lowering revenues, top-line growth, and margins.

Concurrently, PDD might become more aggressive on Temu, especially as the business is reaching self-sustainability. If PDD's revenue mix shifts towards Temu, this will naturally lower margins, given the business model. But absolute profits should still rise.

At its core, the recent merchant protests were factories complaining about the low-profits on Temu's platform – especially as the US segment slowed down. Perhaps Temu squeezed them too hard. But at the same time, if they re-accelerate the Temu platform, it will also alleviate pressure on these factories, as their absolute profits will continue to grow, even if margins remain thin. Thus, naturally alleviating merchant concerns.

Secondarily, the question is "why now"? Well with the recent merchant protests and political environment, my guess is they don't want to be seen as over-earning – hence choosing to start an investment period now. Also with most competitors being pressured to return capital to shareholders, this leaves them weakened without the shareholder appetite and fewer cash reserves to defend against this attack.

In any case, these battles could pressure margins / create volatility in the near-term, as low-end merchants are pushed off the platform and incentives are given to branded merchants.

It's not the first time the company has made such comments. They warned investors that profit levels were unsustainable in both Q2 2021 and Q2 2022 . And that future profits would be allocated towards subsidizing their Agriculture initiatives, with an impact on short-term earnings. Yet, these impacts didn't last long, and the company continued to grow over the years.

In effect, I suspect this is more an offensive move, than weakness in the business. I'll provide updated thoughts in the future, if we uncover anything that affects our thinking in the next few weeks. In the meantime, shares are now trading at ~5x 2024 EV/EBIT (-45% discount to Alibaba), despite still one of the quickest growing companies in China[23].

"All warfare is based on deception. Hence, when we are able to attack, we must seem unable; when using our forces, we must appear inactive; when we are near, we must make the enemy believe we are far away; when far away, we must make him believe we are near." – Sun Tzu, The Art of War

(Perhaps PDD's team took too much inspiration from Sun Tzu, on this quarter's earnings call…)

[23] Alibaba is expected to earn ~$19BN EBIT this year (3/31/25 fiscal year end), while PDD should earn ~$18BN. Alibaba is expected to grow at ~4% cagrs over the next few years, while I expect PDD to decelerate from 86% y/y to the mid-20%'s.

CONCLUSION

We recently welcomed Hayfah Bayabao to the Hayden team. Hayfah is joining as an executive assistant, and will be helping us with operational projects as well. She comes to us from the real estate industry, with previous experiences including at JLL, Cushman & Wakefield, and Thomson Reuters.

As she ramps up, our partners may hear from her more in the coming months. Her email is hayfah.bayabao@haydencapital.com, if you ever a need to reach her directly.

**

I also want to say thank you to everyone who reached out with heart-felt messages in the last few months, after reading about my daughter Alina's story and her passing. I feel truly blessed to have such wonderful partners and friends, and to have so many well-connected readers of our letters.

In particular, thank you to Blas Moros and Paul Buser, who connected us with the team at the Children's Hospital of Philadelphia. My family plans to be more involved in their Mitochondrial Research program and are planning to visit their research facilities soon. Additionally, we will be setting up a research fund in Alina's honor at the end of this year.

Hopefully working together, one day we'll find a cure for mitochondrial diseases.

**

Travel is also picking up, and I'll be on the road more this Fall. I just returned from NYC and Florida, and plan to make trips back to the East Coast every few months.

I'm also heading back to Southeast Asia in late October (Philippines, Singapore, Indonesia, and possibly Australia). And then will be in China towards the end of the year. Let me know if you live in one of these locations, and would like to grab a coffee.

I wish you and your family all the best, and an enjoyable rest of summer. If you find yourself in Los Angeles sometime, please don't hesitate to pay us a visit too.

Sincerely,

Fred Liu

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