Tao Value Q1 2019 Letter

April 23rd, 2019

For the quarter ended March 31st, 2019, Tao Value recorded a return of +14.03%, compared to +12.45% of MSCI All Country World Index (ACWI). It was the best first quarter for multiple broad market indices since the recovery from the Great Financial Crisis. Financial media has found a theory to attribute the reason to the "panic buying" after over selling in Q4 2018. This shows yet again how hard it would be to time the market.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year /YTD	MSCI ACWI
2017	+1.94%	+2.34%	+0.33%	+2.80%	+4.14%	+0.07%	+2.65%	+1.76%	+1.31%	+4.69%	+1.34%	+1.60%	**+27.91%**	**+23.97%**
2018	+2.07%	-3.85%	-3.74%	-0.80%	+4.81%	+2.99%	+2.20%	+4.16%	-0.87%	-7.26%	+3.79%	-5.53%	**-2.93%**	**-9.42%**
2019	+7.68%	+2.62%	+3.19%										**+14.03%**	**+12.45%**
Since Inception (*January 1st, 2017)													**+41.57%**	**+26.27%**
Annualized													**+16.71%**	**+10.92%**

Contributors & Detractors

Contributors		Detractors	
Position	*Performance (bps)*	*Position*	*Performance (bps)*
Long CACC	222	Long BRK.B	-8
Long YY	171		
Long GOOG	147		

Our top contributors this quarters are Credit Acceptance (ticker: CACC), YY (ticker: YY) and Alphabet (ticker: GOOG), adding 222 bps, 171 bps and 147 bps respectively. They happened to be top 3 detractors last quarter. It suggests that our portfolio's performance for both quarters are largely driven by broad market movements.

CACC and GOOG are among our top 3 positions for which I will provide comments in the next section.

YY returned +37.8% over Q1 2019, a sharp reversal from its dreadful 2018 performance. One major update from 2018 Q4 earning release is the acquisition of the rest 68.3% of BIGO, an international equivalent of YY Live has seen "continuous rapid growth" quoting management, especially in Southeast Asia, for a valuation around $2 billion.

As a shareholder, I was excited about the rumors of this deal as YY could leverage its operating expertise to the same but fast-growing business model overseas. While the notional valuation may seem reasonable given Bigo's business' high growth and high margin (we are yet to see it in formal filings, however I expect it could be similar to early years of YY Live), the payment method however makes no sense for external shareholders. For the price tag of $1.543 billion, YY decided to use $343 million cash + 38.3 million class B shares (issued to YY CEO David Xueling Li) + 331.9 million class A shares (issued to Li and other owners of Bigo). Backing it out, YY shareholders sacrificed 21% of the existing ownership for only $1.1 billion in this deal, which is translated to only $63 per ADR, almost the lowest of the year. When the management is on the receiving end of the shares (as a currency for the deal), they surely like the currency to be as undervalued as possible (so they could get as big a piece of YY as possible). If the company sells its shares (in this case in exchange of Bigo ownership) when they are so undervalued, part of the existing shareholders' (read ours) value is unfairly transferred to the receivers of the shares (read the management). While management did indicate that "majority [of its well over $1 billion cash] are sitting onshore"[1] which is hard to tap into for overseas deal given Chinese government's ever more restricted asset outflow policies, using the cheapest price of year of YY (which could be even determined retrospectively) in the transaction clearly reveals management's self-serving incentive. This is the exact corporate governance (System factor) risk that I worried when I evaluated this company initially.

Nevertheless, such "cheating" is not unexpected as we've known better when dealing with any Chinese businesses (and governments, for that matter). My mantra has been "Always assume management will steal because they mostly will. But go with opportunities which would have enough leftover on the table even assuming management steals". Dell Technology Class V (ticker DVMT) was one recent worked-out example of such opportunity. I believe YY still qualifies as such one.

Amid the strong market, there was only one position ended in red this quarter. Berkshire Hathaway (ticker BRK.B) lost about 8 bps for the portfolio. BRK.B was mostly affected by its position in Kraft Heinz (ticker KHC) who delivered both poor operational performance and a huge $15 billion write-off of its brand intangible assets.

Top 3 Positions

As of the end of Q1 2019, our top 3 positions are Credit Acceptance (ticker: CACC), Cash, and Alphabet (ticker: GOOG). Collectively, they are 36% of the portfolio.

CACC reported Q4 results of 5.9% unit volume growth and 12.4% dollar volume growth, which are softer than Q3 yet still impressive. There was similar issue in average unit volume per dealer, which decreased by 6.1%. The main reason appears to be the new signed dealers had much lower average volume, which was 5.7 in Q4 2018 compared to that of existing dealers at 11.7. It is yet to be seen whether it is just a ramping up issue or difference in dealers' quality.

GOOG is well covered by sell sides and financial media. There appears to be more recognitions of its yet to be monetized assets (YouTube, Waymo, etc.). I think one particular thing on cost side may worth more elaboration. On March 20, 2019, Europe Union fined Google €1.5 billion for antitrust reason. It is

[1] YY Inc. 2018 Q3 earning conference call

the third antitrust ticket Google got from EU in past three years (€4.3 billion on 2018 & €2.4 billion on 2017). Is regulatory fine now more of a cost of business for Google? I think Oakmark's Bill Nygren offered a view which I agree with. That is even it does become a cost of running business, Google would still appear cheap after swallowing it. This is again a good reminder that in long term, no moat (the ability to generate higher return on capital) stands forever. Even the business conquers all competitions, antitrust/regulatory cost is next in line to drive its margin down.

Portfolio Updates

Huya (HUYA)

We purchased a small position of HUYA amid its price weakness at the beginning of the quarter. It is not really a new position, as we have owned it through YY for years. I was positive about its business prospect from early on and will summarize my latest thoughts as follows:

Tao: As we are entering an informational age, e-sports is more real than "real" sports ever before. I think the industry could mature just as how traditional sports value chain evolved. Streaming platform in this chain is very similar to content distributor (think of ESPN) in traditional chain and is poised to take a relatively big piece of the pie. I also think the virtual item tipping monetization, inherited from entertainment streaming, would be a great add to traditional ads-based monetization strategy.

Meteorology: The game streaming industry in China is perceived to a have a large addressable market and a long runway. Additionally, in early March, the once 3rd player, Panda TV declared bankruptcy. I believe this event increased the probability of the rest leading pack (including Huya) to win out.

Additionally, thanks to Twitch, global investors are well familiar with the gaming industry value chain, thus the value of game streaming platforms. It produces a smaller probability that Mr. Market (consists mostly of non-Chinese investors) would underappreciate, thus undervalue it, like in YY's case.

Topography: One unique feature of game streaming in China is that top 2 platforms Huya and Douyu are both owned by Tencent, which means the cut-throat competition era is basically over. I believe the industry is more rational than many other TMT verticals, as Tencent has been "disciplining" both platforms to not bid away, with hefty bonuses, top streamers from each other. In other words, it is Tencent's instruction to both platforms to not waste its own money (in form of big bonus and contracts to streamers) on moving streamers from its left hand to right hand. This means the platforms would more likely get a larger slice of the pie, as content producers are accustomed to rational contract sizes from early on. It thus leads to a higher probability and a shorter path to profitability for platforms.

Huya also demonstrated strong operating leverage. One thing different than general entertainment streaming is that game streaming absolutely requires high definition picture quality, thus high bandwidth. For this key cost component, we see the expense in percent of revenue has significantly decreased over years (from 42% of 2016, to 19% of 2017, then to 14% of 2018).

Commander: The CEO Rongjie Dong, a long-time lieutenant to YY CEO David Xueling Li, joined YY in 2006, and has been leading game streaming group since 2008. There has been very little media coverage for Dong until Huya's IPO. Based on what I could find, Dong seems rational and not promotional. For example, as the top game streaming platform broadcasting the League of Legends World Championship S8 in November 2018, Huya gained significant new traffic (MAU grew 34.5% YoY, compared to high teens in past quarters) during the final where one Chinese team Invictus Gaming contended for and eventually won the title. When asked by an analyst about the spending pattern and value of such new traffics (whom the analyst attributed to PC end), Dong immediately discounted the PC end users spike as "one-time event", and reiterated his long-time view on PC end users as "lower value" users due to its lack of interaction, compared to mobile users.

System: One key thing to evaluate System factor is to understand major owner Tencent's incentive. Given Tencent's history of letting multiple internal teams to compete in product development (dubbed as "horse racing mechanism"), one likely outcome could be that Tencent allows both Huya and Douyu to run by their courses and let evolution theory to play its role (i.e. the fittest survives). That means HUYA shareholders <u>may not get any value accrued to them if it loses</u>, in the worst-case scenario (call it scenario 1). There are also other more favorable possibilities (e.g. 2. the market ends with duopoly of Huya & Douyu or any others & 3. Huya wins out as the monopoly). In both scenarios, Tencent may buy out Huya from public at some stage with market premium. The risk is of course, the premium is to be applied to its <u>future market price</u>, which itself is unpredictable. History is not short of US listed Chinese companies got bought out by management when priced at significant discount to their intrinsic value. There is however a simple hedge to mitigate risks involved in all 3 scenarios, which is to <u>buy Tencent</u>. If Huya loses, we would own the winner through Tencent in scenario 1. We would also be on the same side with Tencent management if they decide to squeeze out Huya's shareholders in buyout scenarios. Since we already own and like other businesses of Tencent, I do not intend to get too mathematical on determining a hedge ratio (i.e. how much Tencent exposure I need exactly). I believe that owning both companies would yield a high probability of getting the value when game streaming industry matures in China.

Valuation: What is a reasonable valuation multiple for a <u>fast growing</u>, <u>profitable</u>, <u>strong network effect</u> business in <u>a large but rational competition market</u>? It should worth above market average in my opinion. We think the price we paid for Huya (at about 5x TTM revenue) is not demanding compared to its similarly priced but money losing peers in other cut-throat battlefields[2]. I could not argue that we got it cheap, but I think with certain degree of higher estimated probabilities of below two outcomes (1. Gaming streaming industry meet and exceed the addressable market expectation; & 2. Huya being one of the winners of this market), it was a reasonable price to start owning this business directly.

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[2] Avg. P/S ratio for global Software (Entertainment) sector was 5.92x as of Jan 2019, according to data compiled by NYU finance professor Aswath Damodaran. url: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/psdata.html

Others

Amid COTY tender offer from its major owner, we tendered all our shares, however still are waiting for the final proration. Our original thesis was that I believed in management's commitment of their 2020 target of $1.53 per share earnings, based on a greatly aligned incentive system. That thesis has been proved broken thus far. As this is a position contributing to permanent capital impairment, there are hard lessons to be learned.

General and Market Commentary

Coty appeared to have overestimated the value of the P&G beauty brands and overpaid for them. This may not sound foreign recently. Buffett in a recent CNBC interview admitted that he (and his partner 3G Capital) overpaid for Kraft in the deal of merging with Heinz in 2015. He also commented on its eroding brand moat: "[when up against Walmart, Costco & Amazon], you [the brands] 've got the weaker bargaining hand than you had ten years ago". From both cases, we learned that when brand moat is deteriorating, it doesn't help how good the system or commander factors are anymore. To avoid such mistake in the future, we need to understand how we can evaluate the strength, thus the value of a brand?

One key question needs to be answered first - What is a brand, exactly? If you endeavor to explain it, you might find it is quite hard to precisely describe a "brand". Asking Google, I found below explanation plausible:

> *Unique design, sign, symbol, words, or a combination of these, employed in creating an image that identifies a product and differentiates it from its competitors. Over time, this image becomes associated with a level of credibility, quality, and satisfaction in the consumer's mind.*[3]

However, I don't think the image can be associated with such perception by "over time" alone, there are heavy "training" required to build such association. I think we can use a psychology model - conditioned reflex – to approximately model it.

In the most famous classical conditioning experiment, Pavlov introduced a conditioned stimulus (CS, or cue) - the sound of a metronome along with an unconditioned stimulus (US) – food to his subject dog in training. The dog after training demonstrates unconditioned (i.e. instinctive) responses – salivation, when only conditioned stimulus (the sound) is present.[4]

This is not too different than modern brand building (or should we call it "training"?):

[3] Definition of "brand" url: http://www.businessdictionary.com/definition/brand.html
[4] https://en.wikipedia.org/wiki/Classical_conditioning

- The unconditioned stimulus (US) is the experiences (e.g. ads, promotions, word of mouth references, free samples, online reviews, etc.). They are designed to exploit human natural instincts. For example, free gift exploits human's reciprocity tendency[5]; whereas luxury strategies are targeted for human's desire for scarcity; and repetition is aimed for human's cognitive ease tendency (i.e. the more you are exposed to certain thing, the more positively you think of it)[6].
- The conditioned stimulus (CS) is the brand (e.g. logo, name, image, etc.) Note it would be neutral without the experience. However, when US (experiences) got fed to consumers together with the CS (the brands) via certain medium, consumers learned to associate certain feelings from such experiences to the brands, thus would become more irrational when making transactional decisions regarding such brands.

If we further assume there is no significant quality difference between the branded and generic or between brands (not always true, but for simple modeling purpose), we can conclude the "strength" of such conditioned reflex connection is the main determent of the profit sustainability.

To measure the strength of conditioned learning, academia has been using a metric called suppression ratio, which is defined as responding during CS (think of purchases after seeing ads) divided by sum of responding during CS and responding before CS (think of purchases without seeing ads). A high ratio approaching 1 indicates strong connection associating positive perception with CS(brands). Such measurements would be very hard, if not impossible, to conduct via traditional medium in the past as training cannot be well controlled and responses could not be directly measured. For example, advertisers don't know whether each subject consumer saw their ads in TV or magazine. Therefore, brands tend to overspend, thus the famous quote of John Wanamaker: "Half the money I spend on advertising is wasted; the trouble is I don't know which half."

Now with new medium (e.g. internet) & new techniques (e.g. data science), the dissemination and the measurement of information are undergoing a secular and significant shift. I believe this shift starts to allow easier and more accurate modeling of intangible part of the reality, including brands. Not only the training can be controlled better, but the responses can be measured more accurately. For example, one can design and track an A/B test of two versions of an ads online (i.e. better training control) and measure click rates or even directly transaction data (i.e. better responses compared to surveys in the past). I believe this secular trend will have huge implication not only on value of brands but also on the whole brand building value chain. Think of this: "what if we now can know which half of the advertising spending is wasted"? To my knowledge, this topic is yet to be well studied.

If we look back at financial history, before a valuation method is established for certain assets (think of convertible bonds market prior Black Scholes model), the market was inefficient. With the same logic, if I believe the old way of valuing brand is broken, yet no new way is established, I expect the market for brand would become inefficient. This leads to two implications for future researches:

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[5] Cialdini, Robert (2009). Influence: Science and Practice. Boston, MA: Pearson Education. ISBN 0-205-60999-6.
[6] Zajonc, R. B. (1968). Attitudinal effects of mere exposure. Journal of Personality and Social Psychology

- When involved with legacy brand value, there may be more value traps out there these days, so be more skeptical on the brand moats,
- The flip side is that some new constituents in the new information dissemination & measurement value chain are probably underappreciated thus undervalued.

Final Note

Successful investing is not necessarily about completely avoiding making mistake, as every investor is destined to make some. It is not necessarily about making fewer wrong predictions than right predictions either. It is about making more money when you are right than losing when you are wrong. This is where “sizing the bets” comes in as an important factor in our process. Coming from a quantitative background, I hope I could use my probabilistic world view to optimize our position sizing so that the value weighted odds of winning is tilted toward us. Nonetheless, all lessons learned from mistakes are extremely valuable regardless of bet size. With that been said, I look forward to reporting to you next quarter.