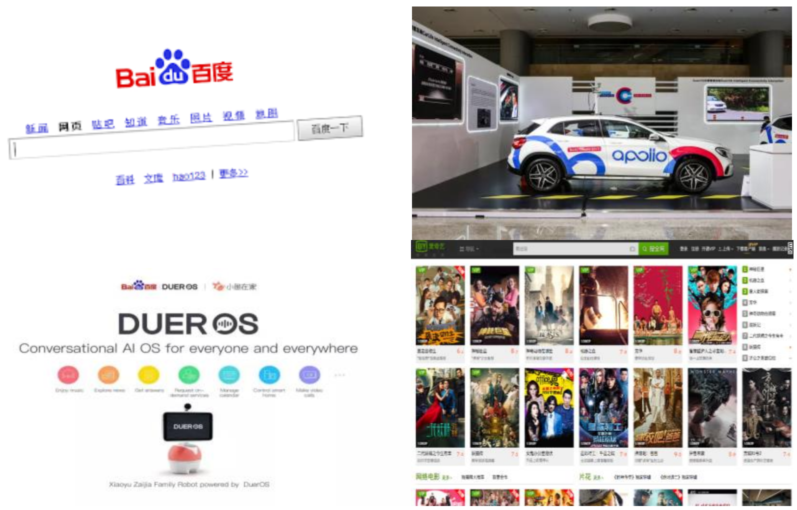

Author: Mike Gorlon
Date: 7/6/19
Company: Baidu (NASDAQ: BIDU)
Market Capitalization: $40.7B
Enterprise Value: $32B
Current Price: $116.29 (July 5, 2019)
Target Price: $239.44
Expected Return: 106%
Disclosure: I have an ownership position in shares of Baidu at the time of writing.

Company Background:

Baidu is the largest internet search company in China with 73% market share as of June 2019[1]. China's strict censorship from their government has allowed Baidu to gain a strong lead in market share and prevent viable competitors like Google from developing a solid market position. Google has attempted to enter China by developing a search engine called Dragonfly but hasn't been successful in capturing a meaningful market share. As of June 2019, Google only has a 2.64% market share. Even the number two and three search engines in China, Sogou and Shenma, only have a combined 20% market share in search which are far behind Baidu's 73%.

Source: Statcounter.com

Baidu's largest generator of revenue has been from advertising[2]. Their revenue model is pretty similar to the model that Google utilizes in the United States for online search. Certain keywords and placements are bid on by companies looking to advertise on Baidu's mobile and desktop search engine. Companies looking to advertise on Baidu will bid on keyword(s) that they think will trigger their ad(s) when users search. In addition to just bidding on keywords, companies can bid on placement or in other words, how high in the search results their search result will show. An internet user is much more likely to click on website results on the first page of a query then on the second or third page. This is known as a Pay-for-Placement (P4P) platform.

Baidu also provides a Pay-per-Click service where advertisers pay Baidu to display their ads next to the search of certain keywords. Baidu only earns revenue in the Pay-per-Click service when the advertisement is clicked.

In addition to search, Baidu has other divisions in the technology sector such as artificial intelligence where they are developing a self-driving car (Apollo), DuerOS voice assistant which is similar to Amazon's Alexa, cloud-based services, iQIYI which is a video streaming service that has been described as a mix of Netflix and Youtube, and strategic investments in companies such as Ctrip.

[1] http://gs.statcounter.com/search-engine-market-share/all/china/

[2] https://www.investopedia.com/articles/investing/121014/baidu-versus-google.asp

Business Segments:

Search and Feed – This is the largest generator of revenues for Baidu. It enables internet users to search the web for information using a complex algorithm. Baidu has been shifting a lot more to mobile recently as more and more Chinese consumers buy smartphones. In addition to search, Baidu also offers maps, news, video, social media (Baidu Post Bar), community (Baidu Tieba), content publishing platform (Baijiahao) and encyclopedia (Baidu Baike) services as well.

Shown on the left above is a picture of Baidu's search engine on a mobile phone and on the right above is Baidu's search engine on a desktop computer. Sources: Quertime.com and searchengineland.com

Apollo – Baidu is currently the leader in AI in China. They are developing software for self-driving cars through its autonomous driving platform called Apollo. They most recently teamed with Geely and Toyota to cooperate on the development of autonomous vehicles. Baidu will provide its software for autonomous buses to Toyota's e-Palette vehicles and it will cooperate with Geely in AI applications like intelligent connectivity and smart mobility. In January of 2019, Baidu announced that it has over 130 partners. Some of these partners include Ford, Bosch, BMW, BYD, Hyundai, China Mobile, Daimler and Honda. In July 2019 at Baidu's annual Create AI developer conference, Baidu announced that its fleet of 300 level vehicles have driven 1.2 million miles autonomously in urban environments.

Shown on the left is a picture of one of Baidu's self-driving cars. Source: Futurecar.com

DuerOS – an AI voice assistant similar to Amazon's Alexa which Baidu has been investing a lot in lately. DuerOS voice assistant installed base reached 275 million resulting in a 279% increase from last year[3]. They have a 16% market share worldwide in smart speakers after Google's 17% and Amazon's 27% according to Canalys.

Shown on the left is a picture of Baidu's DuerOS. Source: Chinatechnews.com

[3] http://media.corporate-ir.net/media_files/IROL/18/188488/2019/BIDU%20%20Q1%202019%20Earnings%20Release%202.pdf

Cloud –Baidu's cloud service offers storage, file management, sharing and integration. Baidu announced on their Q1 conference call that they will be introducing a library of AI toolkits for Cloud this year.

Other Investments:

Ctrip – Travel service provider in China which provides tickets for transportation, tours, management for corporate travel and accommodation reservations that Baidu owns 19% of. Similar to Priceline and Expedia in the U.S. Ctrip is traded on the NASDAQ under the ticker symbol CTRP and had a market cap of $21.35 billion as of July 5, 2019.

iQIYI - Online video platform for video streaming which Baidu owns over 50% of. As of June 2018, iQIYI had 527 million monthly active users and as of March 2019 it had 98.6 million subscribers. IQIYI is a leader in video streaming platforms but doesn't have a moat yet due to intense competition from Tencent Video and Youku-Tudou (Alibaba). IQIYI used to have an advertising generating revenue model but has been shifting more to a mix of both advertising and subscription now after most likely realizing the success that Netflix had in the U.S. with their subscription business model. IQIYI has recently been investing a lot in premium and self-produced content resulting in large loses to IQIYI's bottom line.

CEO Background:

Source: Fortune

Robin Li is the co-founder of Baidu and is also the current CEO. He has been the CEO of Baidu since 2004. He is also the current chairman of the board which he has been since he founded the company. He has over 50% of the company's voting power and is only 51 which is pretty young for a CEO so he should still have a decent amount of time ahead of him to run business operations.

As of January 2019, Robin owned 16.1% of the company which aligns his interests pretty well with shareholders. Robin has done a good job running Baidu in the past in terms of financial metrics such as returns on capital and return on equity although returns have fallen a lot over the past two and a half years due to large investments in the development of AI, Cloud, content costs related to video streaming, marketing costs and a more competitive online advertising market coupled with less demand.

	TTM	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Return on Invested Capital	8.99%	13.09%	11.25%	78.30%	33.42%	17.95%	20.74%	35.12%	50.16%	52.01%	25.64%
Return on Equity	14.17%	19.73%	17.65%	12.84%	50.59%	29.20%	32.53%	50.58%	56.03%	53.58%	26.73%

Source: Morningstar

I view the investments in AI, Cloud, video streaming as really beneficiary to the company if they are successful so I believe it is better to pursue these ideas as opposed to maintaining higher profit margins in the present since these investments could have a huge impact on Baidu in setting them up for the future. Whether AI, IQIYI, DuerOS, and Cloud prove to be great allocations of capital or misallocations of capital can only be determined many years later but I view Robin as a good candidate for the job. So far, he has had some really good achievements and recognitions with Baidu in artificial intelligence.

Robin has had some unsuccessful developments including Nuomi and Raven Tech as well though. He also had a setback in running Baidu when a 21-year old student named Wei Zexi had a rare form of cancer and died after purchasing treatment through Baidu's search engine. Baidu has cooperated with the government who set up stronger censorship on medical advertising and Baidu adjusted their algorithms. Another medical controversy happened in 2008 but Baidu has been able to recover from both setbacks.

Another setback was the controversy in April 2019 when several applications for Android devices developed by a Baidu subsidiary company, DO Global, were running revenue enhancing background programs on user devices without them knowing by clicking on internet ads even when the devices were idle. This resulted in Google banning DO Global from the Google Play store.

Robin has been pretty consistent in regards to being upfront to investors about Baidu increasing spending for growth initiatives which will weigh on profits. The last time this happened was in 2015 and the stock price recovered. This is exactly what Baidu has been doing again. Investing for the future while decreasing current net earnings which Robin and management have explained on conference calls. This could be another opportunity where Mr. Market gets overly pessimistic by placing too much emphasis on the short-term instead of looking out further into the future.

Ownership Structure for Investors Outside of China:

Baidu uses a variable interest entity (VIE) set up in the Cayman Islands which allows foreign investors outside of China to invest in the company through the NASDAQ exchange. As defined by Investopedia, a variable interest entity is a legal business structure in which an investor has a controlling interest despite not having a majority of voting rights.

The Chinese government has jurisdiction over its corporations that are setup in China so in order for Chinese companies to bypass these restrictions, such as limiting foreign ownership of companies, companies like Baidu and Alibaba have set up intermediate companies registered outside of China. Both Baidu and Alibaba have set up their variable interest entities in the Cayman Islands.

The Chinese company then forms a contractual relationship with the VIE that results in the Chinese company remitting all of its profits to the VIE. The VIE has a contractual right to the profits of the Chinese company, but not the company or assets. When investors are buying shares in a Chinese company like Baidu or Alibaba on the NASAQ exchange for example, they are not buying shares in the actual Chinese company itself, but are instead buying shares in the VIE. This limits their voting and legal rights especially since the Chinse Ministry of Commerce can regulate the variable interest entity.

<u>Why the Share Price Dropped So Much:</u>

Source: Morningstar

As shown from the chart above, Baidu's share price has fallen by 50% a year ago when it was trading at around $270 per share. More recently, Baidu saw its share price drop 25% following its Q1 results with a miss on earnings and revenue meeting expectations. During the first quarter of 2019, Baidu reported its first quarterly loss as a publicly traded company. The last time Baidu reported a loss was in 2005. This quarterly loss concerned investors which led them to flee.

Q1 Non-GAAP EPS of $0.41 misses by $0.16
Q1 GAAP EPS of -$0.15 misses by $0.02
Revenue of $3.59B in-line

The main drivers relating to the quarterly loss in May of 2019 were a surge in increased expenses including marketing spend mostly from the advertising campaign for the CCTV New Years Gala in China and also increased content costs for iQIYI which Baidu owns over 50% of.

"Baidu Q1 results were solid, with revenues reaching RMB 24.1 billion, up 15% year over year, or 21% year over year, excluding revenue from divested business, and ***margins were dampened by our successful CCTV New Year Eve Gala marketing campaign, which accelerated the traffic of Baidu family of apps and highlighted better in-app search user experience." said Herman Yu, CFO of Baidu. "Despite government policies to improve the market condition for SMEs, we anticipate online marketing in the near term to face a challenging environment.*** *We will take this opportunity to improve our monetization capabilities and review our businesses for operational efficiency, while recognizing the importance to invest for sustainable long-term growth."*

- Herman Yu, CFO of Baidu on Q1 conference call

A shown above, Herman Yu addressed the affect that the CCTV New Year Eve Gala marketing campaign had on margins but didn't disclose the amount that was spent. Ads for the CCTV New Year Gala are a little different than ads for a program on TV in the US since viewers of the CCTV New Year Gala can interact more with the ads by being influenced to download an application for example. Baidu was the biggest sponsor of the CCTV New Year Gala which led the company to see a huge surge in engagements and downloads with its family of applications.

Despite Herman Yu's comments, since the marketing campaign required multiple steps to complete there is a possibility that it wasn't as effective compared to the amount of money that was spent[4,5]. The complexity of Baidu's marketing campaign is related to Baidu not having a social media platform to share content to friends and not having a payment platform to make payments more seamless. Sharing content with friends and making payments were a necessary part of the steps to fully engage and interact with Baidu's New Year Gala marketing campaign.

Content costs increased 47% year over year due to increased investments in content for iQIYI. Content costs in Q1 19 were $923 million. Shown below is a chart of the year-to-year increase in expenses broken down by line item. Total operating costs and expenses increased 53% year over year during the first quarter.

	31-Mar-18	31-Mar-19	
	RMB	RMB	
Operating costs and expenses:			% y/y Increase
Content Costs	4,194.00	6,157.00	47%
Traffic acquisition costs	2,256.00	3,183.00	41%
Bandwidth costs	1,472.00	2,040.00	39%
Others	1,981.00	3,459.00	75%
Cost of revenues	9,903.00	14,839.00	50%
Selling, general, and administrative	3,142.00	6,054.00	93%
Research and development	3,294.00	4,166.00	26%
Total operating costs and expenses	16,339.00	25,059.00	53%

	31-Mar-18	31-Mar-19	
	USD	USD	
Operating costs and expenses:			% y/y Increase
Content Costs	629.10	923.55	47%
Traffic acquisition costs	338.40	477.45	41%
Bandwidth costs	220.80	306.00	39%
Others	297.15	518.85	75%
Cost of revenues	1,485.45	2,225.85	50%
Selling, general, and administrative	471.30	908.10	93%
Research and development	494.10	624.90	26%
Total operating costs and expenses	2,450.85	3,758.85	53%

Source: Q1 First Quarter 2019 Results; CNY/USD exchange rate of .15

Following Baidu's Q1 results, several Wall St. firms cut their price targets and warned on weakness ahead resulting in more downward momentum in the share price.

5/17/19 – CCB International downgrades Baidu from Outperform to Neutral. Price target is revised to $155 from $187.

5/20/19 – Macquarie downgrades the shares to neutral and cut its price target from $205 to $140.

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4 https://mp.weixin.qq.com/s/8HWXVadPyKJe4Tu9v_OggQ

5 https://walkthechat.com/a-super-bowl-for-chinese-tech-companies-the-spring-festival-gala/

6/17/19 – Bernstein lowers its target price to $130 from $180 citing "heavy investment in feed is value destructive" and "Baidu should stick with the core business in search going forward."

7/5/19 – UBS warns of ad-market downside in the near term. Their price target is $145.

In addition to increasing expenses, advertising revenues have been slow as well due to a competitive advertising market and less spending from companies. Baidu said they don't expect much revenue growth if any at all in the second quarter.

"Despite government policies to improve the market condition for [small and medium-sized enterprises], we anticipate online marketing in the near term to face a challenging environment."

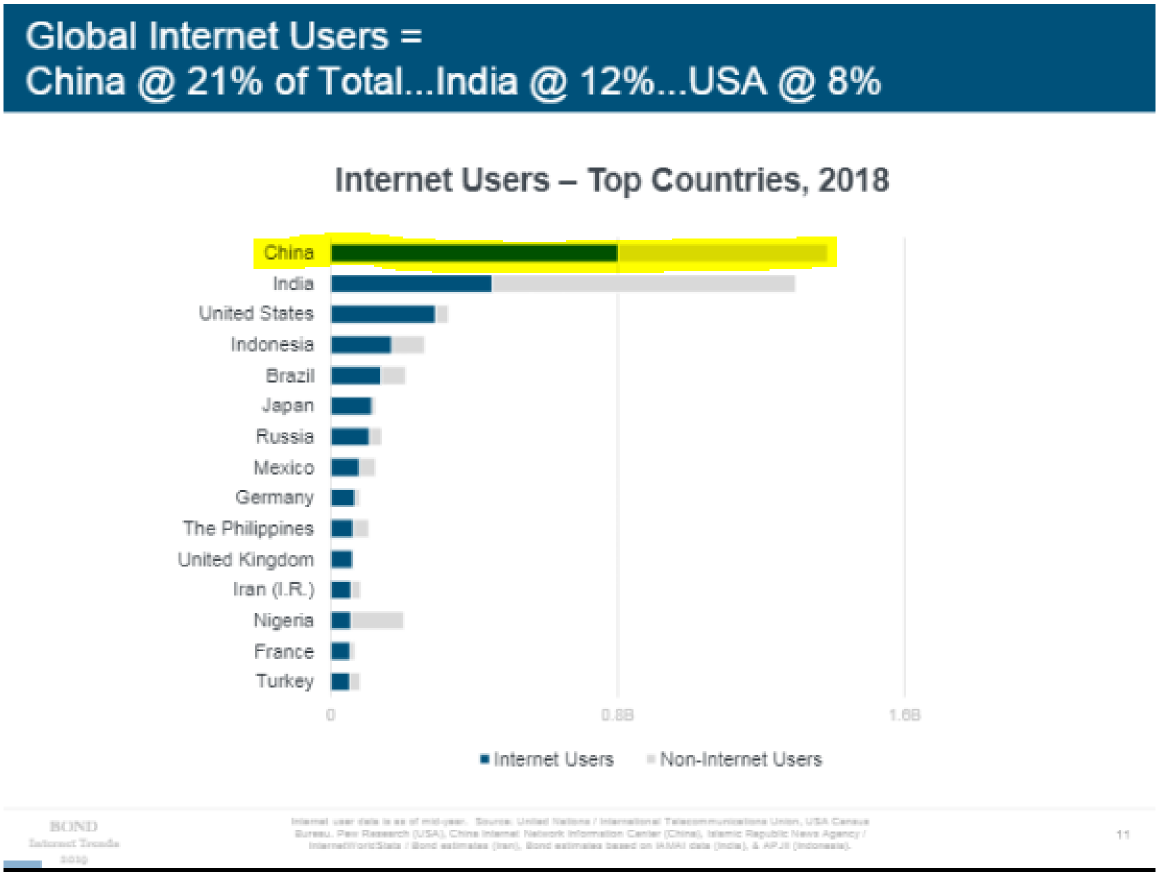
- Herman Yu, CFO of Baidu

Investment Thesis:

I don't view the increased expenses and investments that have weighed down operating and profit margins in the 1st quarter as permanent. I view them as only temporary in order to better position Baidu for the future. Baidu still has a strong moat through its intangible assets and network effect. Baidu has built a brand name that is synonymous with search in China and its market share of 73% of the search market reflects that.

And with Baidu being an early entry into the search business in China, it has helped them develop their moat even further. Every time a user searches on Baidu's search engine, Baidu gets data and learns how that user interacts and is then able to improve their algorithms even more to deliver better search results to its users. Baidu is currently incorporating AI into their algorithm as well which they are a leader in and this is improving their search engine even more. The better Baidu's search engine is, the more users it will attract and this in turn will attract more advertisers looking to monetize on this resulting in more of a durable moat through a network effect. It is a positive feedback loop for Baidu and I don't see this moat going away anytime soon since it would take a long time to duplicate the capabilities that Baidu has achieved in search and also because search has been a fundamental need for society with so many people using the internet today.

In addition, as shown from the chart below, there is still a lot of runway for growth since only 800 million users out of 1.4 billion people currently use the internet in China. That's only 57% of the population and even if that only grows to 75% that would add 250 million more people onto the internet. For comparison purposes, the U.S., United Kingdom, France, and Japan all have internet penetration ratios over 80%.



Source: Bond Capital; Mary Meekers' Annual Internet Trends Report

Baidu's strong position in search should allow it to continue to grow over time while giving it leeway to invest in other areas such as AI. Despite most of the analysts revising their price targets following Q1, they still see this as short-term in nature and not a permanent issue for the business. Revenue growth is decelerating but is still growing in double digits and costs will adjust lower next year and the ensuing years as Baidu cuts down on its investments in its non-core businesses. For example, the New Year Gala marketing campaign was a one-time expense to grow active users of Baidu's family of applications.

The trade war and a slowing down of China's economy are certainly weighing down advertising revenues and will continue to do so if the economy continues to slow but this is a setback if investors are only looking at a 1-2-year time frame. If investors are looking longer term such as 5 or more years then this shouldn't be an issue. Baidu has a solid balance sheet and is well positioned financially to navigate through a bigger slowdown if there is further weakness in advertising spend which is a possibility since recessions and slowdowns always occur at some point in economies as part of the natural boom-and-bust cycle.

Good Financial Position:

Despite the headwinds from a slowdown in advertising, the ongoing trade war and increased investments in IQIYI, Baidu's balance sheet is in a good financial position to weather these risks. At the end of March 2019, Baidu has 141,452 CNY in cash & cash equivalents and short-term investments or

21.5 billion USD using an exchange rate as of of July 5, 2019 of .15 CNY/USD along with $10.6 billion in short and long-term debt.

Short-term investments on Baidu's balance are comprised of highly liquid investments with original maturities greater than 3 months but less than 12 months such as short-term bonds. Baidu's net cash position of $10.4 billion should provide support for the possibility of more future losses resulting from more advertising spend or investments in content costs for IQIYI, cloud, or AI.

Numbers below are in millions of USD at an exchange rate of .15 CNY/USD

Cash - $4,859
Restricted cash - $327
Short-term investments - $16,359
Total Cash & Cash Equivalents and Short-term investments – $21,545

Short-term debt - $1,556
Long-term debt – $9,085
Total Debt - $10,641

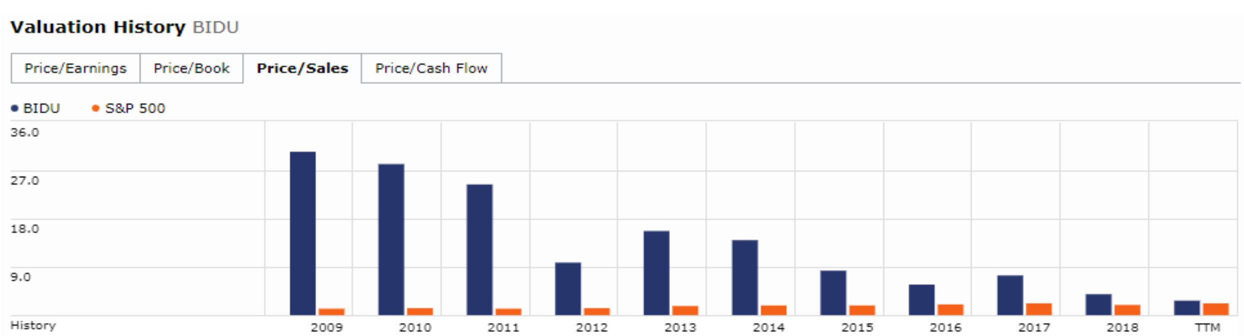
Net Cash Position: $10,904

Operating loss in Q1: $140.4
Net loss in Q1: $49

As you can see from above, the net cash position is more than enough to offset the losses that resulted from the increased costs in marketing, AI, and content for IQIYI.

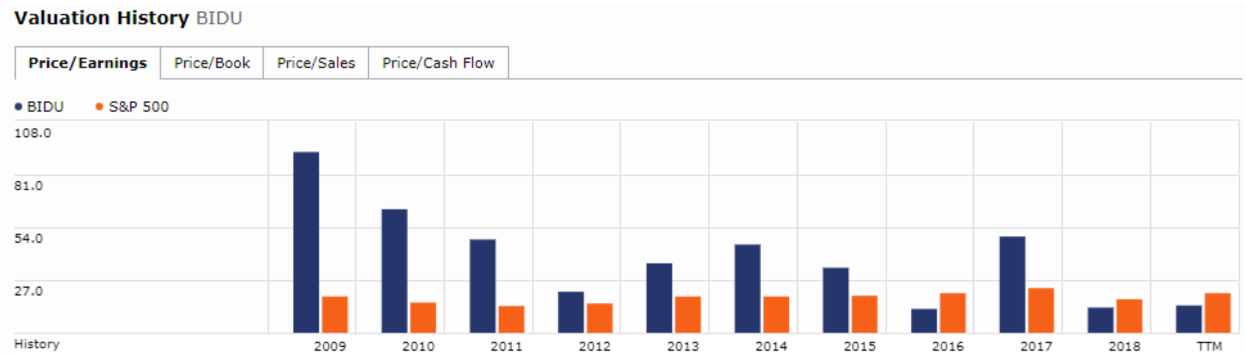
Valuation Ratios:

After trading at very high multiples based on earnings, cash flow, and sales due to Baidu's high growth prospects, those multiples have come down a lot and Baidu now trades more in line with the S&P 500 index and companies with much less expected growth. This gives investors the opportunity to invest in a company with a wide moat and a growth tailwind at its back as more and more Chinese people access the internet and also with growth opportunities in AI, Cloud, and video streaming (iQIYI). Baidu's Price-to-Sales 5-year average multiple is 8.1 which is much higher than the 2.7 multiple that it trades at today.



Source: Morningstar

Badu's P/E multiple is currently at much lower levels due to lower expected guidance for the 2nd quarter and because of all of the excess expenses to invest in future growth from the 1st quarter. As of the close of the market on 7/5/19, Baidu now trades at a TTM P/E multiple of 13. Consensus estimates for 2019 earnings are 32.18 RMB with 24.06 RMB being the low estimate and 47.17 RMB being the high estimate. At the CNY/USD conversation rate of .15 this translates to EPS in USD of $4.83 which results in a forward multiple of 24. This better reflects Baidu's core search and growth initiatives. Looking even further out to 2020, consensus estimates of 49.61 RMB or $7.44 would be a P/E multiple of 15.6. These estimates are of course far from certain but are helpful in gauging how much optimism or pessimism the market is pricing into the shares.



Source: Morningstar

I/B/E/S Estimates vs Adjusted Actual (Fiscal Year)

	I/B/E/S Estimates vs Adjusted Actual		
	Consensus Est. EPS ($)	Adjusted Actual EPS ($)	Est. Low / High Range ($)
Previous Year (Ends 12/31/18)	64.47 (28 Analysts)	66.31	37.91 / 73.00
Current Year (Ends 12/31/19)	32.18 (23 Analysts)	--	24.06 / 47.17
Next Year (Ends 12/31/20)	49.61 (24 Analysts)	--	35.81 / 79.42

Source: Fidelity

Overall, we can see from the ratios below that there is a lot of pessimism priced into Baidu's current price tilting the risk/reward into value investors favor at Baidu's current price of $116.29 per share if these do prove to be short-term setbacks and not long-term which I believe they are since I don't view Baidu's business model as deteriorating. As Baidu invests less in marketing going forward and their investments in AI, iQIYI, Cloud, and others level out, Baidu's profits should adjust higher. If things don't go as planned then there should still be value from patents. Google's self-driving car unit, Waymo, was reported by UBS to be worth between $25B and $135B with a base valuation of $75B[6]. Most likely Baidu's Apollo unit isn't worth as much as Waymo but I believe there is a possibility that it could be

[6] https://www.cnbc.com/2018/12/06/ubs-analyst-estimate-on-alphabet-self-driving-car-waymo-revenue.html

worth more in the future than the $3B that Baidu's long-term assets are currently recorded at on its balance sheet.

Market Cap: $40.7B
Cash: $21.22B
Debt: $10.64B
Minority Interest: 1.89B
Enterprise Value: $31.6B

EV/TTM EBIT: 21
EV/5 Yr Avg EBIT: 16

Price/TTM Sales: 2.7
Price/TTM Earnings: 13
Price/TTM FCF: 20

Price/Forward Earnings: 24

Discounted Cash Flow:

Calculating intrinsic value based on a discounted cash flow model is difficult because it requires one to predict variables that are unknown such as what discount rate and growth rates should be used. Also, the more unpredictability there is based on which industry a company is in and how much uncertainty there is related to its economy, geopolitics, and products or services makes it even more difficult.

I believe the core search is more of a predictable business and I believe the online advertising market in China will recover but knowing the exact timing is hard to estimate. It is also hard to predict how Baidu's other business segments will turn out such as AI, DuerOS, Cloud, and iQIYI since they haven't been established yet and are still in the early stages. I tried to compensate for this risk by applying a 15% required rate of return which I believe is a little higher than normal. Especially since companies have much lower rates of borrowing these days which would be reflected in a lower cost of capital.

Baidu still has lots of room to grow with one of my mains reasons being because the number of people on the internet today in China is only estimated to be about 58% meanwhile more developed countries have an internet penetration rate of above 80%. When dealing with small populations this percentage gap may not be too meaningful but with China we aren't dealing with a small population so there are a lot of people left that don't have access to the internet yet.

As I stated in previous areas of this report, I believe Baidu's high expenses and investment will adjust over the upcoming years to lower levels which should bring operating margins and net margins back to where they were in 2015-2018. A growth rate of 12% assumes net profits will reach around $5.5B in 5 years. I then estimate a terminal growth rate of 3% which is approximately equal to what the 10-year China bond rate is today. I don't necessarily think that Baidu will only see growth of 3% in 5 years but want to be more conservative in my estimates if their investments in iQIYI, Cloud, and AI don't work out.

I tried to reflect the optionality of these business segments in the multiple of 25 that I assigned which I believe is consistent to what some of the other high-tech companies with good growth prospects trade at in a normal market. In a more exuberant market, some of the high-tech names have traded even higher with multiples above 30 so I think 25 isn't too optimistic. This results in a target price over a 5-year period of $239.44 per share.

Growth Rate: 12%
Required Rate of Return: 15%

Terminal Growth Rate: 3%
Multiple: 25

Growth	12.0%
Required return	15.0%
Terminal Growth	3%

	0	1	2	3	4	5	Terminal Value
	TTM	2019 (Exp.)	2020 (Exp.)	2021 (Exp.)	2022 (Exp.)	2023 (Exp.)	2024 (Exp.)
Net Income	$ 3,082.80	$3,452.74	$3,867.06	$4,331.11	$4,850.85	$5,432.95	$ 5,595.94
Discount Rates		0.87	0.76	0.66	0.57	0.50	
Discounted FCF		$3,002.38	$2,924.06	$2,847.78	$2,773.49	$2,701.13	

Sum of Discounted FCF	$ 14,248.83
FCF in 2024	$ 5,595.94
Multiple	25
Terminal Value	$ 139,898.38
Discount Rate	0.50
Discounted Terminal Value	$ 69,554.22
Terminal Value Plus Total Disc cash flows	$ 83,803.05
Shares Outstanding	350.00
Value Per Share	$ 239.44

*All data except per share and percentages are in millions

Sum-of-the-Parts Valuation:

Baidu is very cheap based on a sum-of-the parts valuation. The market cap is currently $40.7B but Baidu has a net cash position of $10.9B. Baidu also has a minority interest of $1.88B so if that is added back then that leaves an enterprise value of $31.6B. Baidu owns a 19% stake in Ctrip.com which as of the close of the market on 7/5/19 its market cap is $21.4B. This values Baidu's 19% interest in Ctrip.com at $4B. Baidu also has an ownership interest in iQIYI which was recently spun off.

We enjoy significant synergies with our parent company Baidu, Inc., or Baidu. Baidu has provided us with technology, infrastructure and financial support. Our close cooperation in AI technology, user traffic and infrastructure sharing allows us to strengthen our respective leading market positions. We have no experience operating as a stand-alone public company. After this offering, we will face enhanced administrative and compliance requirements, which may result in substantial costs. Furthermore, upon the completion of this offering, Baidu will beneficially own all of our outstanding high voting Class B ordinary shares and continue to be our controlling shareholder. Baidu's voting control may cause transactions to occur that might not be beneficial to you as a holder of ADSs and may prevent transactions that could have been beneficial to you. See "Risk Factors—Risks Related to Our Carve-out from Baidu and Our Relationship with Baidu—Baidu will

	Ordinary Shares Beneficially Owned Prior to This Offering		Class A Ordinary Shares Beneficially Owned After This Offering		Class B Ordinary Shares Beneficially Owned After This Offering		Voting Power After This Offering
	Number	%	Number	%	Number	%	%
Directors and Executive Officers:**							
Robin Yanhong Li(1)	2,839,530,705	69.6	58,333,331	2.8	2,839,530,705	100.0	93.3
Qi Lu	—	—	—	—	—	—	—
Yu Gong(2)	77,185,293	1.9	77,185,293	3.5	—	—	*
Herman Yu	—	—	—	—	—	—	—
Xuyang Ren	—	—	—	—	—	—	—
Victor Zhixiang Liang	—	—	—	—	—	—	—
Lu Wang***	—	—	—	—	—	—	—
Chuan Wang(3)	—	—	—	—	—	—	—
Sam Hanhui Sun***	—	—	—	—	—	—	—
Xiaodong Wang	*	*	*	*	*	*	*
Xiaohui Wang	*	*	*	*	*	*	*
Xing Tang	*	*	*	*	*	*	*
Xiangjun Wang	*	*	*	*	*	*	*
Xianghua Yang	*	*	*	*	*	*	*
Youqiao Duan	*	*	*	*	*	*	*
All Directors and Executive Officers as a Group	2,947,390,998	70.6	166,193,624	7.5	2,839,530,705	100.0	93.6
Principal Shareholders:							
Baidu Holdings	2,839,530,705(4)	69.6	58,333,331(5)	2.8	2,839,530,705	100.0	93.3
Xiaomi Ventures Limited(6)	341,874,885	8.4	341,874,885	16.2	—	—	1.1
HH RSV-V Holdings Limited	232,060,527(7)	5.7	298,560,527(8)	14.1	—	—	*

Sources: iQIYI Prospectus

The two images above show that on March 2018 Baidu owned 69.6% of iQIYI. I haven't been able to find any news that Baidu has decreased this ownership stake but did see someone write that the ownership stake was 58%. I will use a more conservative ownership stake of 50%. At the close of the market on 7/5/19 iQIYI's market cap was $15B which means Baidu's ownership interest would be $7.5B.

With an enterprise value of $31.6B and their interest in Ctrip of $4B and $7.5B in iQIYI that leaves $20B for all of Baidu's other businesses including DuerOS, Apollo, Cloud, and its core search. It's hard to estimate exactly how much Baidu earns from core search but in their 2018 annual report they reported $12B in revenue from online marketing services. I'm not sure how much comes from their search engine and how much comes from other areas but I believe a lot of this revenue is related to core search and this is a very capital light part of their business. If a 20% margin is applied to this then that equals $2.4B in profit and if a 10% margin is applied then it results in $1.2B in net income. After deducting Baidu's net cash position, interest in iQIYI, and in Ctrip that leaves $20B and with a 20% margin you are buying Baidu's core search at a little less than 10 times earnings and getting all of its AI and cloud divisions for free. If you assume a 10% profit margin and have $1.2B then that is a 16.6 P/E multiple and you still get AI and cloud for free.

Business Segment	Value	Notes
iQiyi	7.5B	Market cap of $15B and assumed 50% ownership
Ctrip	4B	Market cap of $21.4B and ownership stake of 19%
Net Cash	10.9B	Cash exceeds total debt by $10.9B
Core Search	20B	Baidu's revenue over the last 12 months was $15.8B. If I assume $10B is attributable to search and applied a 20% margin with a P/E multiple of 10
Others	0	DuerOS, Apollo self-driving car, Cloud Services
Total Value	42.40	Exceeds current market cap of 40.7 without applying any value to AI and Cloud

Risks:

Government Regulation – China's economy is heavily regulated which means Baidu faces risk on how they will regulate in the future. So far, China's government has heavily favored Baidu by allowing them to develop a huge market share in search particularly by making it very difficult for Google to enter China and compete effectively. Also, as stated in the ownership structure section, investors outside of China are not buying a direct ownership stake in Baidu itself. They are buying shares in a variable interest entity that has been set up by Baidu to access the capital markets outside of China such as the U.S. The Chinese government has jurisdiction to regulate this corporate set up which could put investors outside of China at risk. I don't see this as a risk now, but with the current trade war going on and increased tensions between both countries it is something to keep in mind.

Competition– Baidu, Alibaba, and Tencent have been competing heavily for a share of the online advertising market. There has been a race going on between these 3 companies (BAT) for which app users are going to spend the most time on. In addition, Qihoo 360 and Sogou have become notable players recently in the desktop space for search. Tencent has around 38% ownership in Sogou. Baidu spent a large amount of money on their marketing campaign for the New Year Gala event this year which followed Alibaba spending a large amount of money last year and Tencent the year before Alibaba. This rivalry is something to keep in mind as well but since there are so many online users in China, should be big enough for the three of them. Especially since they each have carved out their own moat within their niche of the online market.

Misallocation of Capital - Investments in AI and IQIYI don't work out resulting in lots of money spent with no return. This will not only have been misallocated capital that could have been invested better in other areas but it is likely to decrease the strength of Baidu's position in the future. I think there certainly could be some amount of misallocated capital in Baidu's growth investments (like Online to offline) but Baidu should be able to still have value in patents which should mitigate some of this risk. Also, Baidu spun off iQIYI which has been losing a lot of money to manage the risk of the very high content costs for videos.

Trade War – although Baidu hasn't been directly affected by the ongoing trade war as much as companies like Huawei, the trade war has been slowing China's economy down resulting in less budgets for companies to advertise. Baidu acknowledged in their Q1 earnings call that there was a slowdown in advertising spending along with more competition than usual which drove down pricing power. The trade war will likely continue to slow down China's economy if it continues but I am still optimistic it will get resolved. In addition, 800 million people in China use the internet now and with a population of 1.4 billion there is more room to grow as this is only 57% of their population. Over the long-term I think Baidu has a huge tailwind to grow revenue from advertisements as more people in China gain access to the internet.

Currency Risk – Since Baidu operates in China and the security I am recommending is the VIE set up in the Cayman Islands and trades on the U.S. markets, fluctuations between the renminbi and the dollar are certainly a risk. Ever more so with the current trade war going on and President Trump in the White House who has publicly called China a currency manipulator. Although a risk, I don't see this as a major risk since I view the prospects for the underlying company as much greater than the risk of a depreciating RMB.

Conclusion:

Baidu invested heavily in AI, video streaming, and marketing during Q1 which resulted in a 53% increase in operating expenses year-over-year. Baidu then said there won't be much revenue growth if any at all for the 2nd quarter due to a more competitive advertisement market resulting in less revenue and also companies spending less on advertisements due to a slowing economy and trade war. I view these issues as short term as opposed to long term. Baidu still has a strong moat due to its brand name in the search business and a network effect. Robin Li, their founder CEO, owns 16% of Baidu making him an owner-operator whose interests are in line with shareholders. He has navigated some setbacks before and should continue to do so.

The slow advertising market and the high costs in the 1st quarter should level out over the next couple of years since Baidu is investing a lot now to attract more users to its family of apps including iQIYI. Judging from the success that Netflix has had in the U.S., if iQIYI becomes the dominant player in China in this market than the gains could be huge, but there is fierce competition from Alibaba and Tencent as well. Even if iQIYI doesn't win, it should still have some value and Baidu has been able to mitigate some of the risk by spinning off iQIYI to the public in an IPO in the U.S. which is traded on the NASDAQ. This was a good decision in my opinion since it will allow iQIYI to raise capital to invest in content instead of using profits from their core search business. They recently signed an agreement with Netflix to show some of their content in China since China's regulatory policies makes it difficult for companies outside of China to enter.

Following the Q1 disaster for Baidu, Wall St. analysts cut price targets and acknowledged high spending over the short term which created further downward momentum for Baidu's stock price. Despite this, most analysts still remain bullish over the long-term and view the issues currently plaguing Baidu as only temporary. Baidu now currently trades at one of the lowest valuations it has traded at in a long time. Baidu's share price closed at $116.29 at the close of the market on 7/5/19. The last time it traded this low was in the summer of 2013. In 2013, Baidu had revenue of 31.5B RMB or $4.7B at today's exchange rate. Now Baidu has TTM revenue of 105.5B RMB or $15B. That's revenue of more than 3 times as big plus it now has huge optionality with AI, Cloud, and its investments in iQIYI and Ctrip which they didn’t have in 2013.

The valuation is very compelling today with a sum-of-the-parts valuation that doesn’t give much value to Baidu’s most profitable business unit, core search, after its ownership positions in Ctip.com and iQIYI and its net cash position are deducted. This means at today’s price you are getting core search at a good price and are getting a free call option on Baidu’s high growth business units such as AI which has huge opportunities going forward.