

Flywheel Models + iQiyi (NASDAQ: IQ)

An Investment Case Study By Hayden Capital

ValueX Vail | June 27-29, 2018

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Who Is Hayden Capital?

Investment Strategy: We invest primarily via a long-biased, low-turnover, global equity strategy. Investments are under-written with a 10+ year view. The goal is to compound our capital in-line with these businesses' growth in earnings power.

- We focus on underlying business unit economics, as opposed to market factors like sentiment or multiple expansion, as the source of our returns.
- Our typical portfolio comprises of 6 – 15 high-quality companies, that we have studied for an extensive period.
- We don't aim to "beta-hedge" our positions, as this typically results in sacrificing long-term gains for reducing short-term volatility. As long-term investors, we would rather have a superior (although lumpy) annual return, than a steady (but mediocre) return.
- In fact, we embrace volatility in most cases as it allows us to purchase companies we like for cheaper.

Investment Objective: Achieve returns exceeding the broader Global Equity Markets (measured by the S&P 500 and MSCI World), over a full market cycle. Hayden Capital seeks to achieve these returns primarily through publicly traded, marketable securities of U.S. and non-U.S. companies.

- No complex derivatives, "pair-trades", or significant use of leverage.
- All accounts are Separately Managed Accounts ("SMAs"), as opposed to a pooled structure. We think this is in the best interests of our clients, as it provides clients full ownership of their investments, daily liquidity, and transparency.

About Me

Fred Liu, CFA

Managing Partner

Fred Liu is Hayden Capital's founder and portfolio manager. He holds a B.S. in finance and international business from the Leonard N. Stern School of Business at New York University. He also holds the Chartered Financial Analyst (CFA) designation.

Prior to founding Hayden Capital, Fred was a research analyst at New Street Research responsible for covering the cable and satellite industries. Before this, he was the industrials analyst on J.P. Morgan's Small Cap Equity fund, a five-star Morningstar ranked strategy that invested in securities under \$2 Billion in market cap.

Fred purchased his first stock at the age of 11, and has been an avid value investor ever since. He currently resides in New York City.



Here's How We've Done So Far...

- It's still extremely early, especially given our decade-long horizon.
- Our thesis isn't proven yet, and if we were a VC/PE fund, we'd still be in the "investment period" of the strategy. But I'm glad to be adding value to my partners thus far...

Performance Table

Return percentage during period

Time Period	Hayden (Net) ¹	S&P 500	MSCI World (ACWI)	Avg. Cash Exposure ²
2014 ³	(4.92%)	1.29%	(0.91%)	55.22%
2015	17.23%	1.37%	(2.22%)	26.31%
1 st Quarter	(0.23%)	1.35%	0.43%	22.53%
2 nd Quarter	1.23%	2.46%	1.63%	27.64%
3 rd Quarter	5.04%	3.85%	5.10%	32.60%
4 th Quarter	(2.06%)	3.82%	1.05%	21.07%
2016	3.90%	11.95%	8.40%	26.03%
1 st Quarter	0.96%	6.07%	6.91%	18.75%
2 nd Quarter	12.62%	3.09%	4.68%	13.16%
3 rd Quarter	1.01%	4.48%	5.08%	13.66%
4 th Quarter	11.64%	6.64%	5.73%	14.35%
2017	28.22%	21.82%	24.35%	14.98%
1 st Quarter	6.61%	(0.76%)	(0.54%)	12.58%
2 nd Quarter ⁴	9.29%	5.53%	3.12%	8.69%
2018	16.51%	4.73%	2.57%	10.82%
Total Return	73.01%	46.65%	33.96%	21.38%
Annualized	16.53%	11.28%	8.50%	-

Cumulative Return Since Inception

Compared to S&P 500 Total Return Index & MSCI All-Country World Index



¹ Hayden Capital returns are net of actual fees. Individual client performance may differ based on fee schedule and date of funding.

² Includes Cash and previously an Inverse S&P 500 ETF, which allowed us to decrease our long exposure without paying taxes on profitable positions.

³ Hayden Capital launched on November 13, 2014. Performance for both Hayden Capital and indexes reflects performance beginning on this date.

⁴ Quarter-to-date performance as of June 13, 2018

Flywheel Business Models

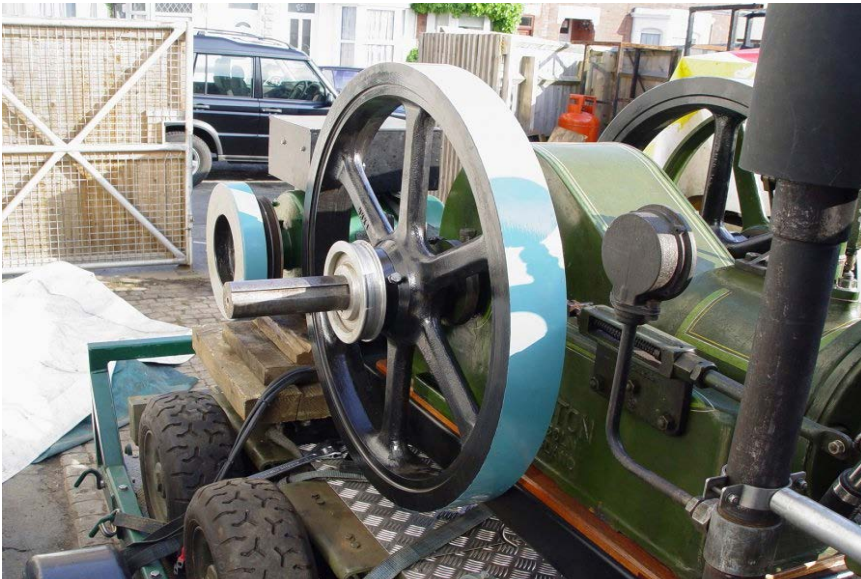
It's our specialty...

What is a Flywheel?

- Traditionally, a flywheel is a spinning rotor used for storing kinetic energy. It takes a relatively large amount of energy to get started, but very little to keep it moving once it gets going.
- In business, the “flywheel effect” concept is used to explain the notion of positive-feedback loops.
 - The idea is once the business model gets momentum, output of the business (ex. such as increased volume) directly leads to positive inputs (ex. lower costs per unit), which leads to better outputs (lower costs = lower prices = more volume).
 - This creates a “virtuous cycle”, with very little energy wasted and is very hard to stop once it gets going.
- Most of Hayden’s investments feature this concept in some capacity.

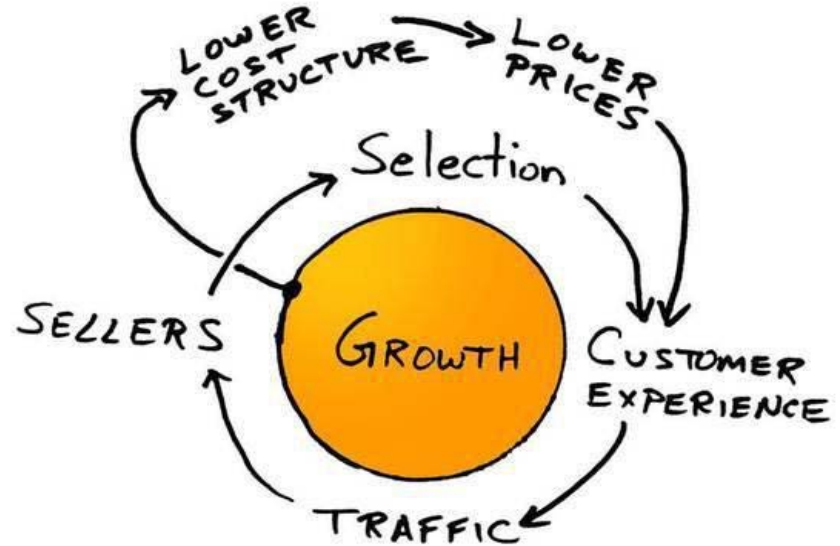
Old-School Flywheel

A flywheel used for smoothing energy output



New-School “Flywheel”

Amazon’s Famous Flywheel Sketch

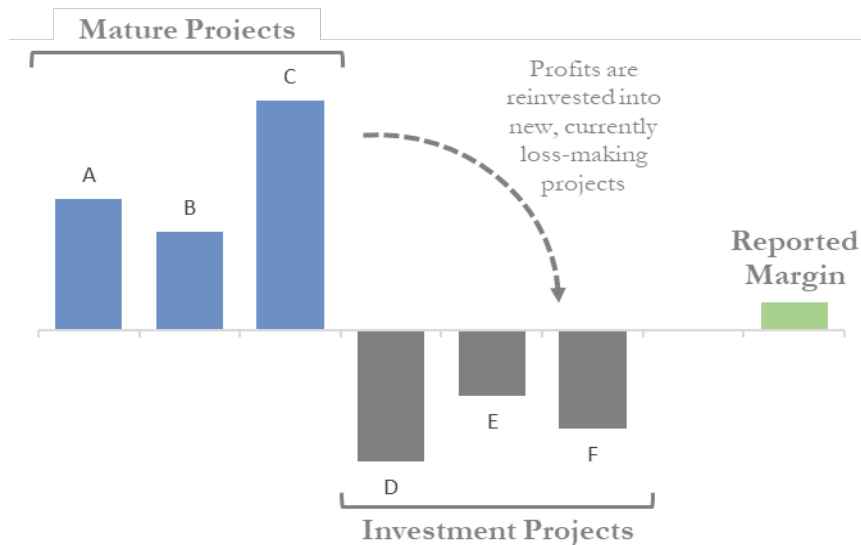


Margin Reinvestment Profiles

- **Reinvestment Scenario:** A company is taking profits from highly profitable lines of business, and investing them into newer lines of business. This makes the overall margins seem very low, or even negative.
- **Pricing Power Scenario:** A company prices its product far below the value-add to the customer. But as customers start to depend upon a company's products or services, the company has the ability to ask for more over time.
- We believe the best companies are those that have both elements.
 - What if by raising the price, you can actually widen / increase the value for the customer (i.e. the Customer Value to Price ratio)? Such a price increase would actually accelerate the company's growth.
 - You can get "double benefits", as price increases give the company more cash flow to reinvest into increasing the customer value, which attracts more customers / speeds up the growth rate, and thus generates even more cash.
- Our thesis is: growth through volume (because you provide the best product) is more sustainable than growth through pricing. And consistently reinvesting pricing increases into generating more customer value is the most sustainable "moat" of them all.

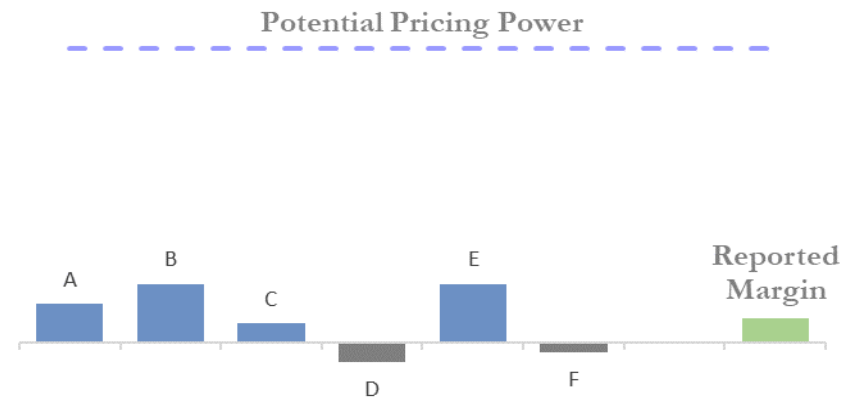
Margin Profile #1 – Reinvestment

Excess profits from mature projects are invested into new projects



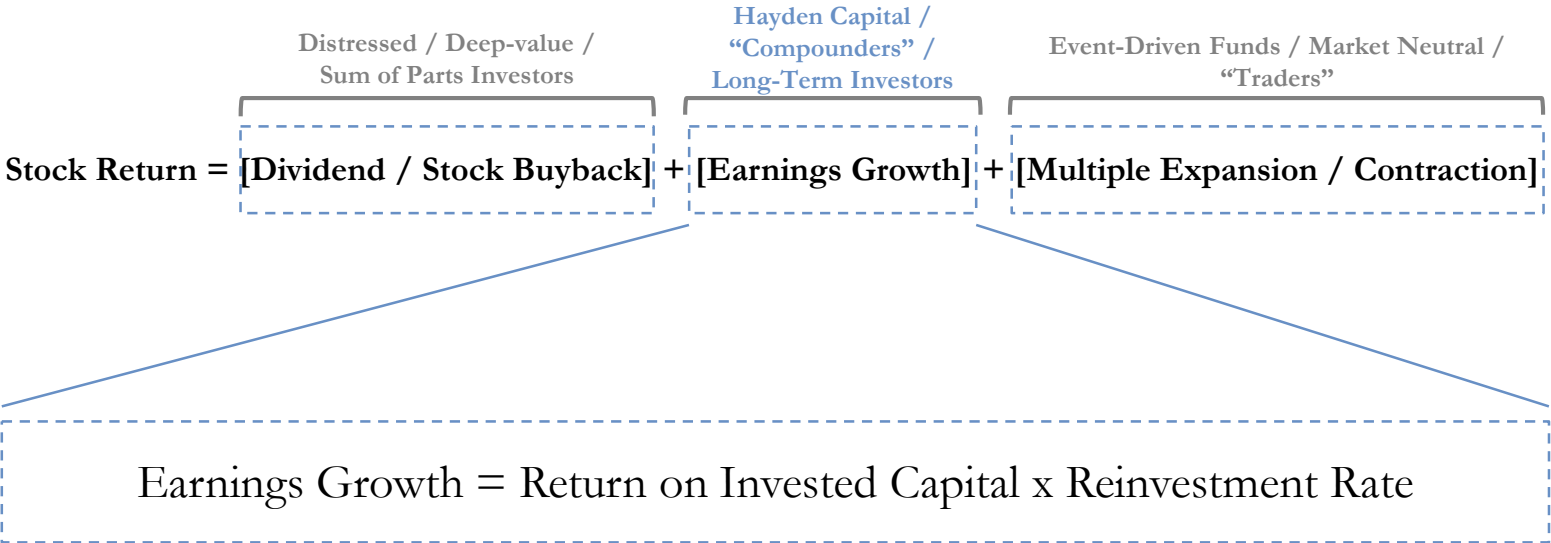
Margin Profile #2 – Pricing Power

Company is pricing its product far below the value offered



Why Does This Matter?

- In investing, there are broadly three types of investors.
 - Each strategy has its own factors to focus on to be successful (i.e. catalysts for multiple re-rating for event-driven/traders, asset values & path to monetization for deep-value / distressed investors, and earnings power growth for “quality-value” / “compounder” type investors.
- Hayden’s strategy specializes on the earnings growth category.
 - Earnings growth is a function of ROICs x Reinvestment Rate.
 - If we can find the [incremental return on those investment projects] x [how much is being reinvested], we can tell how quickly a company will grow its earnings power.



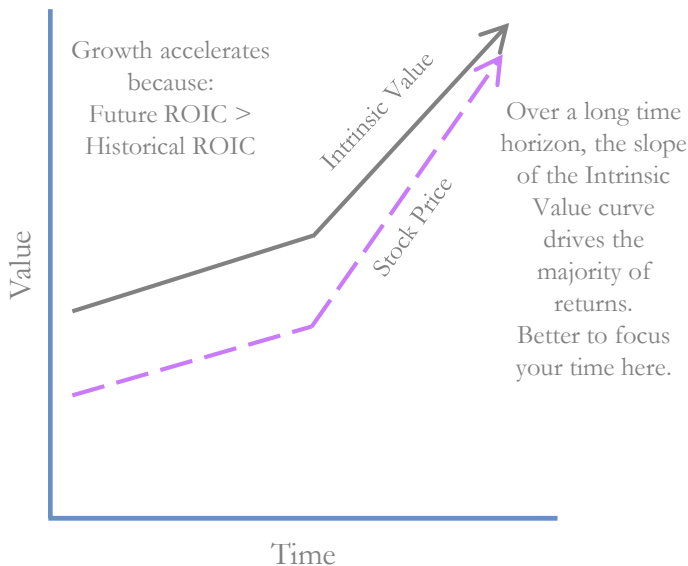
Sales and Earnings Growth Drive Long-Term Performance

- At Hayden, we aim to invest with a decade-long investment view.
 - Over this time period, sales and earnings power growth drive ~90% of equity returns (i.e. fundamental business performance).
 - It's not worth our time looking for "catalysts" to get multiple expansion, or understand why other investors will pay a higher multiple for the company in the future.
- We get a higher return on time by understanding the underlying returns / unit economics of projects the companies are investing in, and buying these businesses at a good-to-fair price.
 - If we can understand the drivers of the high incremental ROICs, this is what will drive higher earnings power, and therefore intrinsic value growth in the future.

Incremental ROICs Approximate Intrinsic Value Growth

Focus on fundamentals, and the stock price will follow

Hayden Capital / "Compounders" /
Long-Term Investors



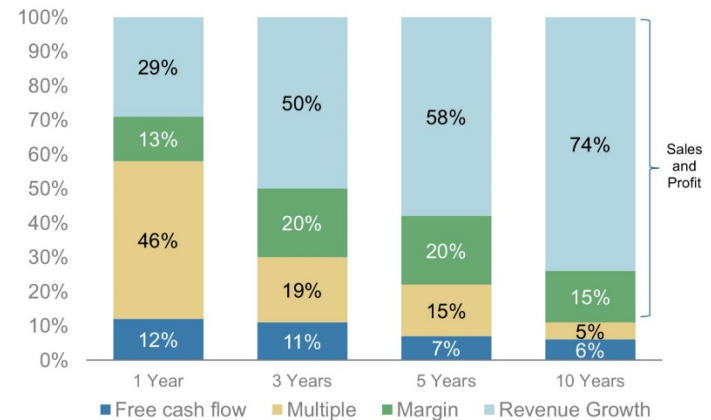
Sales & Earnings Power Drive Returns Over the Long-term

From Morgan Stanley Research

Topline Growth the Long-Run Driver of Stock Performance

Sales Growth Is the Key Driver of Long-Term Stock Performance
Sources of Total Shareholder Return for Top-Quartile Performers

S&P 500 (1990 – 2009)



Source: BCG Analysis, Morgan Stanley Research

iQiyi

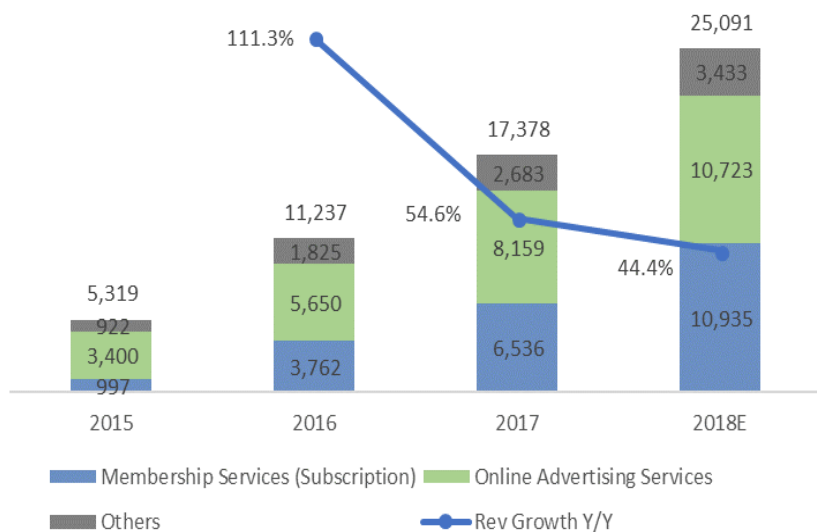
How does iQiyi fit this model?

iQiyi Overview

- iQiyi is China's leading online video streaming platform, with ~440M monthly users today. The company generates revenues from a combination of subscription fees (started gaining traction in 2015, with the increased simplicity of online payment via WeChat Pay / Alipay), and advertising revenues.
 - Paid Subscribers total ~65M today (~15% of total users), and pay ~20RMB (\$3 USD) per month. This gets them early access to shows, exclusive content produced by iQiyi, additional votes for talent competition shows, reduced ads, etc.
 - Free Users number ~375M users, who are monetized primarily through advertisements and product sponsorships.
- The company spun off of Baidu, and IPO'd on NASDAQ at \$18/share on March 29, 2018.
 - Shares are currently trading ~\$36/share, or a \$25BN market cap.
 - The business is still unprofitable, and we estimate will generate RMB 25 Billion of sales (~\$4BN USD) in 2018.
 - We predict the business will grow revenues at a 34% CAGR from 2018-22, and reach break-even by 2021.

Revenue Breakdown

In RMB millions



iQiyi.com Homepage

As of June 22, 2018



Industry Tailwind

It's all about the Millennials...

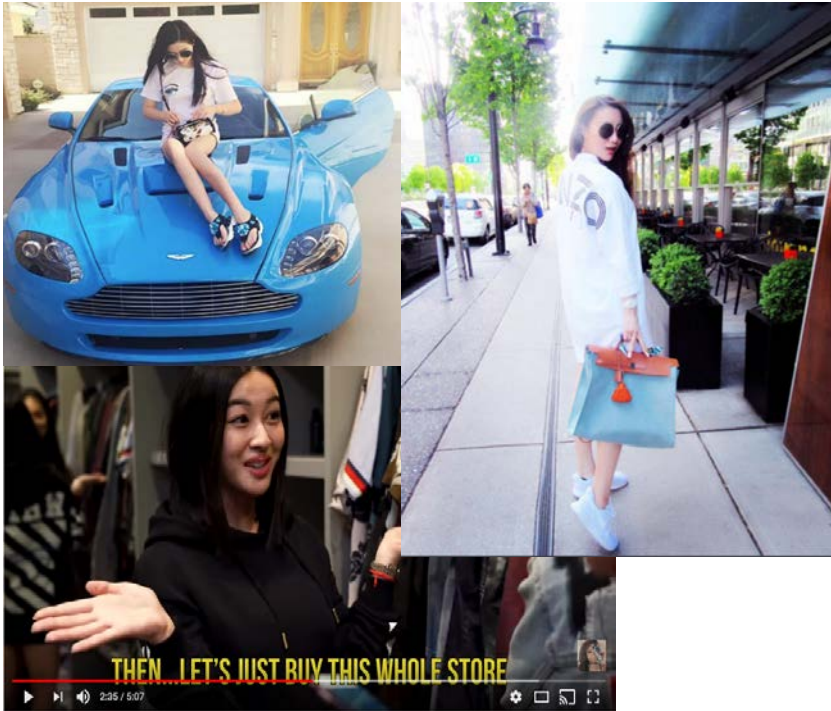
Chinese Millennials

- Chinese millennials now make up 25% of the population. In total, they number 351M, or 20M more than the *entire population* of the United States.
- A core thesis of Hayden's portfolio, is that consumers (esp. millennials) are becoming more homogenous world-wide.
 - Many are familiar with & want the same brands as their Western counter-parts, have traveled more extensively than previous generations, have transparency to what's "cool / trending" via the internet, and are better educated.
 - Paying for content or purchasing goods online comes much more naturally vs. previous generations.

This Is China's New Generation: "Fu Er Dai" (富二代)

"Fu Er Dai" translates to "Rich Second Generation"

(Here's a sarcastic, albeit some-what true, video about Mainland Millennials vs ABCs, [LINK](#))



Number of Chinese Millennials > Entire Population of US

From FT.com, "The Millennial Moment – In Charts"



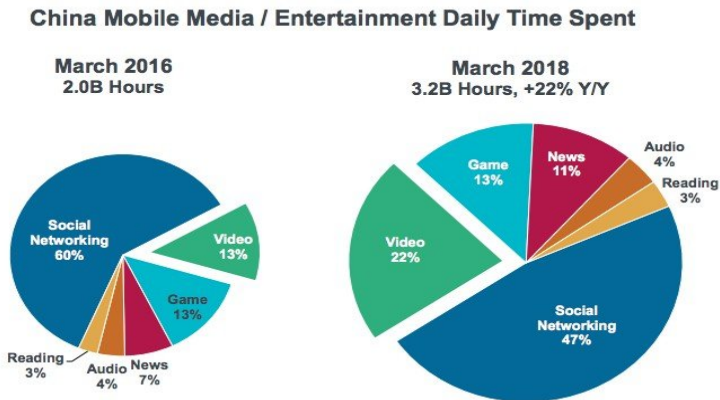
Where Millennials Are Spending Their Time

- China's Video Consumption has grown ~65% y/y, in the last two years.
 - The number of hours spent on entertainment ("The Pie") has grown 22% y/y.
 - Meanwhile, video consumption has also increased as a % of time spent ("The Slice is Getting Bigger").
 - There were ~260M video hours consumed in 2016 vs. ~704M hours in 2018.
 - It's now 22% of the daily time spent on entertainment, with share taken from Social Media.
- Time on mobile internet video is rapidly catching up to time spent on traditional TV.
 - Online video advertising spend is expected to grow 25-30% y/y as a result.

China Daily Time Spent on Entertainment

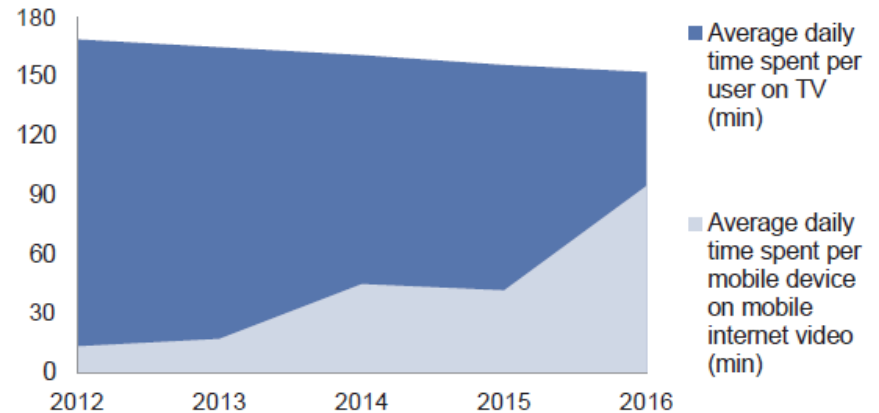
Breakdown of daily time spent across media categories

China Mobile Media / Entertainment Time Spent = +22% Y/Y...Mobile Video Growing Fastest



Mobile Video Consumption Gaining vs. Linear TV

Market share, as a % of daily time spent consuming video; in minutes per day per user

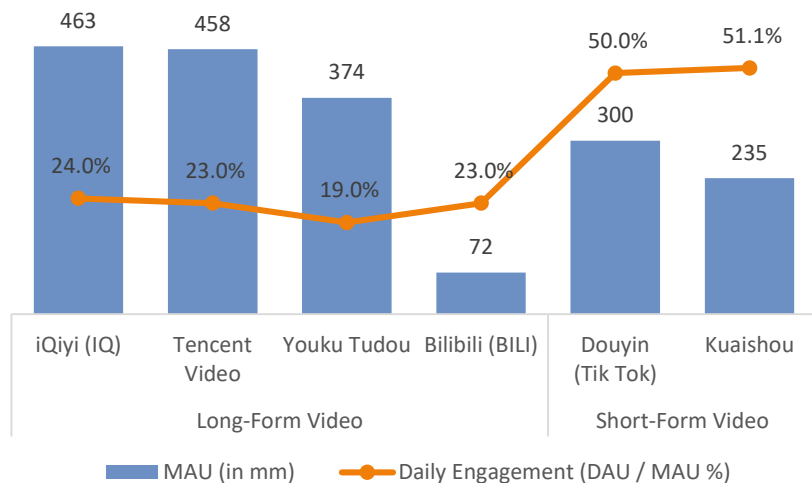


iQiyi Is Best Positioned To Capture This Trend

- So consumers are spending more time on videos... but what about long-form vs. short-form content?
 - There's no doubt short-form videos (Douyin, Kuaishou, etc) have grown very quickly in the last few years.
 - But we believe there's a distinction between the two. Surveys indicate short-form video is primarily consumed during previous "idle" time: on the bus, subway, bored at work, etc. Long-form is "dedicated" time, after you come home from work or on the weekends. Although there's some competition for attention time, the overlap isn't significant.
- As you may expect, short-form videos have higher engagement (these are 15sec videos), but less time spent per day.
 - Long-form requires a time commitment, and not everyone has an hour each day to watch an episode. So time spent per day is greater, but engagement is lower. iQiyi has the highest users + time spent out of the long-form video platforms.
- Given the longer time spent and higher number of users, we believe long-form content is the more valuable platform.
 - Exclusive content drives subscription pricing, vs. short-form where very similar videos are free on multiple platforms.
 - More time spent, leads to better user data / targeting, which also increases the ability for pricing power of advertisements.

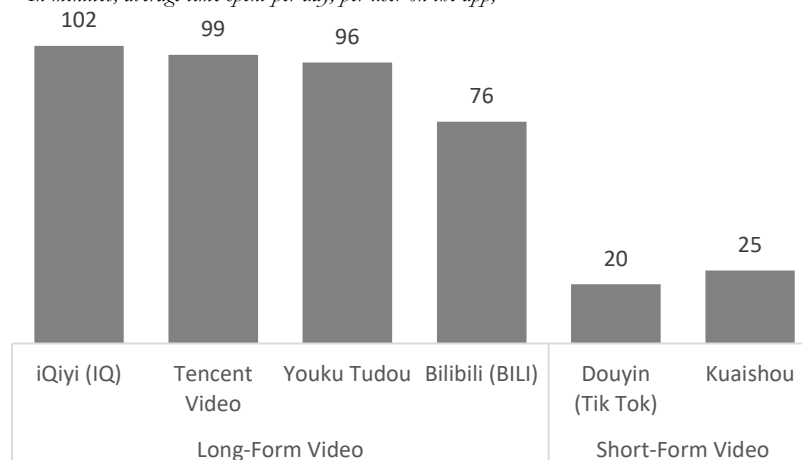
Not Only More Users...

Monthly active users; engagement measured as daily active users / monthly active users (daily logon rate)



...But Users are More Engaged (Time Spent per Day)

In minutes; average time spent per day, per user on the app;



Source: Goldman Sachs, iResearch, TechnAsia, QuestMobile, Company Data, Hayden Capital Estimates

iQiyi Today

How did iQiyi get to where it is today?

Why is iQiyi So Popular?

- China's Traditional TV networks generally produce lower-quality content. Most are state-owned, highly fragmented / regional, politically-driven (acting as political advocates for the government) and derive majority of revenue from prime-time advertising.
 - Because of this, the content tends to be more generic, geared to appealing to a wide-audience. Instead of producing high-quality, niche content.
 - Evidence of this is the top 20 shows in China got a Douban rating (like IMDB in US) of only 5.7 stars. The top 20 US shows got a 8.3 rating on Douban.
- iQiyi and its competitors are not limited by these factors, leading to the freedom to produce differentiated content tailored to various niches. iQiyi was the #3 app in China (where cellphone addiction is real, and the primary device is mobile).
 - Paid penetration is still low, at only ~14% household penetration, vs. NFLX at ~45% in the US.

Top Apps in China by Unique Devices

April 2018 Rankings

Ranking	App Name	App Class	App Category	Monthly UD(000)	% Mo v Growth
1	tencent mm	IM	Communication	1,029,289	+1.1%
2	qq	IM	Communication	602,008	0%
3	qiyivideo	Online video	Video	601,805	+0.1%
4	taobao	Shopping	Ecommerce	601,110	+0.4%
5	qqlive	Online video	Video	596,999	+1.5%
6	alipay	Payment	Finance	545,340	-2.7%
7	sogouinputmethod	Input	Utility	533,717	-1.3%
8	sina weibo	Microblog	Social networking	516,380	+3.3%
9	youku	Online video	Video	454,406	-1.6%
10	autonavi minimap	Map	Lifestyle	452,892	+2.9%
11	baidusearch	Search	Utility	445,191	+4.1%
12	qq browser	Browser	Utility	394,095	-2.8%
13	baidumap	Map	Lifestyle	361,515	-4.3%
14	360safe	Security	Utility	360,336	-1.8%
15	baiduinput	Input	Utility	359,567	+2.6%
16	qqmusic	Music	Music & Audio	327,928	+0.5%
17	qq secure	Security	Utility	324,584	+0.7%
18	kugou	Music	Music & Audio	315,177	+3.3%
19	snda wifilocaling	WiFi	Utility	302,225	-0.9%
20	uc browser	Browser	Utility	295,495	-0.6%

Source: Goldman Sachs, iResearch, China Renaissance, Company Data

Top iQiyi Show KPIs

Views in millions, cost in millions of RMB

English Name	Release Date	Total Views	Total Cost	Cost / Episode	% from mobile	% of female viewers	Avg. Monthly Views
Drama Series							
The Mystic Nine	June, 2016	12,300	240	5.0	78.0%	51.0%	616
The Lost Tomb	June, 2015	4,410	60	5.0	73.0%	49.0%	133
Variety Shows							
Rap of China	June, 2017	2,900	250	20.8			
Idol Producer	January, 2018	3,000	N/A	N/A			

China shopping mall sets up lane for pedestrians glued to their mobile phones

Walkway several hundred metres long built outside retail outlet in Xian

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COMMENTS: 4

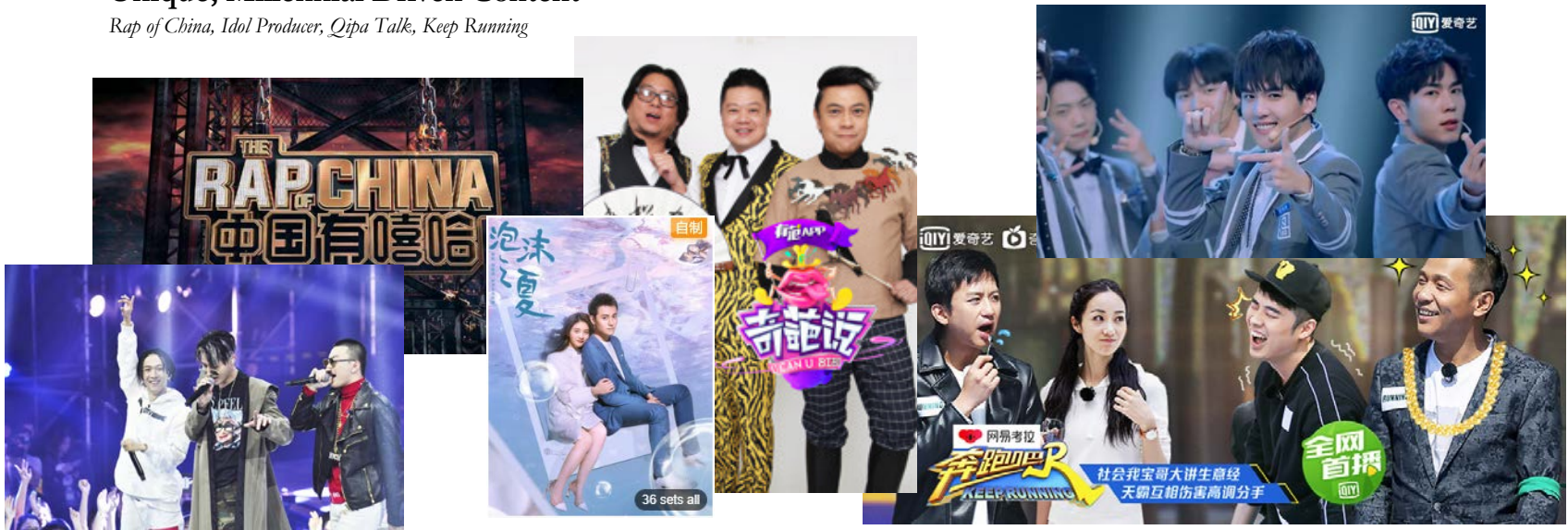


Focus on Original Content

- iQiyi started creating original content in 2015. Since then, it has produced several Multi-Billion view shows:
 - Many of the top 100 shows (head content) are available across multiple platforms (iQiyi, Tencent, Youku). Counter-intuitively, the key differentiator is in the long-tail, niche content.
 - iQiyi has the most exclusive shows out of the three platforms. ~10% of programming is original today... and expected to increase to 15% over the next 3 years. Management's ideal level over time is 30 – 40%.
 - This tracks content cost spend, with ~15% spent on original content today, increasing to ~25% over the next 3 years.
 - Examples: Rap of China (3BN views | 12 episodes | aired 2017), Mystic Nine (12.3BN views | 48 episodes | aired 2016), Idol Producer (3BN views | 12 episodes | aired 2018), Hot-Blood Dance Crew (1.8BN views | 12 episodes | aired 2018).
- The IPO in March 2018 raised \$2.5BN for the company.
 - Of this, it plans to spend 50% on content (\$1.25BN). And half of this (25%) on original content (\$625M) over the next 3-5 years. This is in addition to organic cash generated from subs & ads. Original content spend is up +100% this year.

Unique, Millennial Driven Content

Rap of China, Idol Producer, Qipa Talk, Keep Running

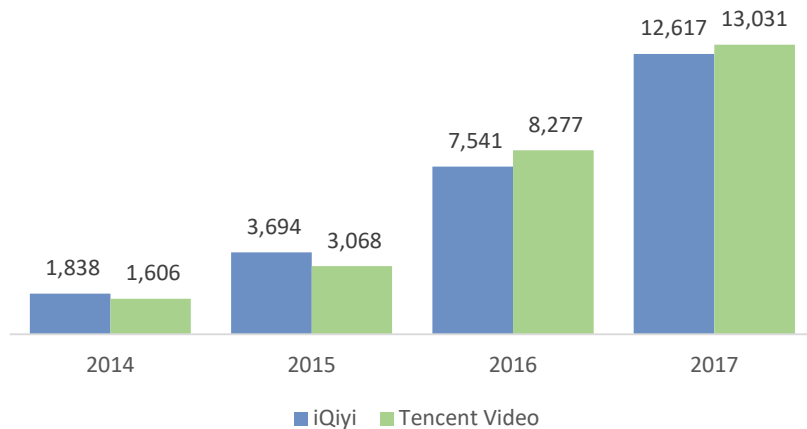


Pulling Away From The Pack

- Tencent & Youku are shifting to head content, which as explained before, isn't differentiated and not monetizable (you can't charge a subscription fee, if you can watch it for free elsewhere).
 - iQiyi is the only one growing the long-tail / exclusive content (see exhibit below), which is what drives customer value.
 - Original content is also cheaper (~7M RMB per episode) vs. licensed content (~15M RMB), while having higher retention.
- Notice iQiyi is spending slightly less in recent years vs. Tencent, but is producing far more shows. This is due to Tencent aggressively paying up for non-exclusive head content, while iQiyi focuses on long-tail exclusive shows (higher retention & ROI).
 - iQiyi is more efficient at content production, which is aided by its agreements for revenue share deals on exclusive mid-tail content (166 titles, as of June 2018). This saves on production costs, while generating more paid subscribers.
 - We estimate iQiyi has the highest gross margin of the 3 players (+5% gross margin vs. Tencent), corroborating a higher ROI on content spend.
- Also for comparison, Netflix spent \$6.3BN on content in 2017, while iQiyi and Tencent both spent ~\$2BN each.
 - This is significant, considering Hollywood shows are more costly to produce vs. in China (~\$5M per episode vs \$1M).
 - As illustration, the majority of content costs are in labor, and Chinese Tier 1-2 GDP per Capita is 1/4th that of the US.

Content Wars – iQiyi vs. Tencent Video

Content spend per year; in RMB millions



Source: Company Data, China Renaissance

iQiyi Is Producing More Shows, For Less Money

Data from China Renaissance, Company Data

Total Drama Shows Available

	2015	2016	2017	CAGR '15-'17
iQiyi	238	221	286	9.6%
Tencent Video	237	216	168	(15.8)%
Youku	252	174	133	(27.4)%

Total New Shows Planned In 2018

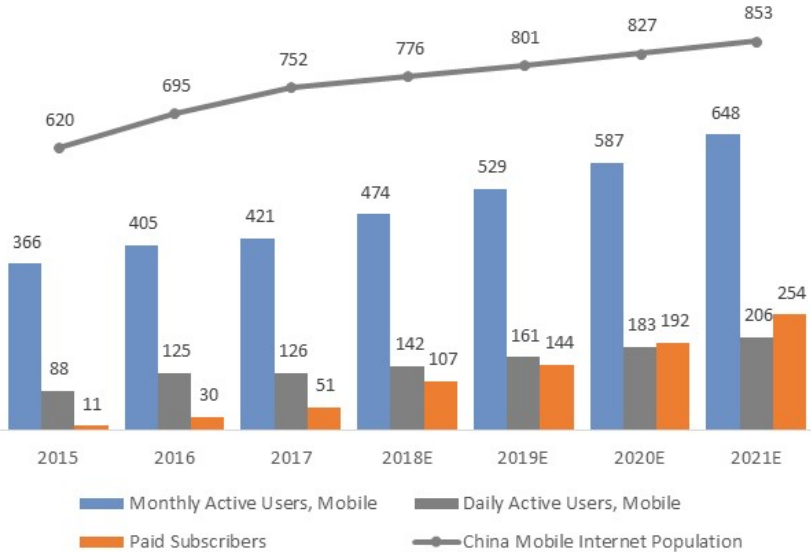
	Dramas	Variety	Total
iQiyi	79	54	133
Tencent Video	67	30	97
Youku	58	37	95

KPI's Are Trending Up

- In the last three years, iQiyi has grown their monthly users by over 100M users. We expect them to end 2018 with ~470M MAUs.
 - Paid subscribers as a % of total users continues to grow, from 3% in 2015 to 23% by the end of 2018E. This indicates a strong change in consumer's willingness to pay for content.
- Not only are there more people using iQiyi, but the time spent on the platform (engagement) is increasing as well.
 - 0.46hrs per MAU in 2015 to 0.79hrs per MAU in 2018E, for a 19.7% CAGR.

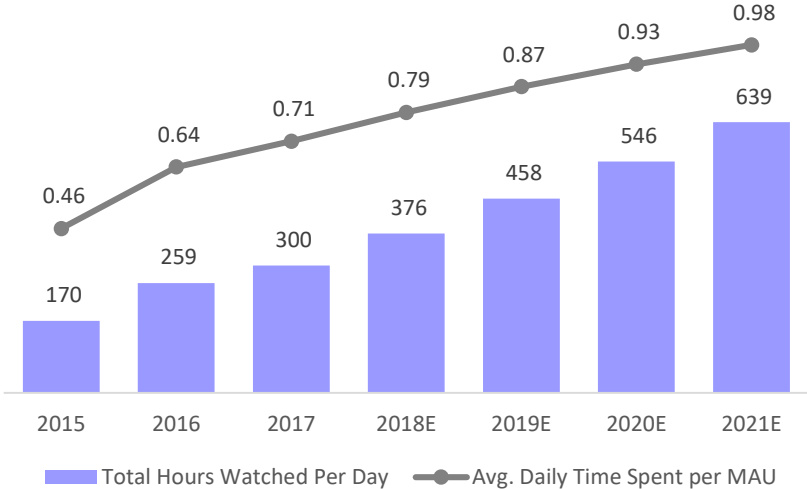
iQiyi User Metrics

Users in millions



Time Spent Per User

Time in hours; Avg Daily Time is per MAU



Source: iResearch, Company Data, Hayden Capital Estimates

iQiyi's Future

Why iQiyi will keep growing more valuable...

Proven Ability to Produce Popular Shows

- As shown in previous slides, iQiyi is exhibiting strong KPIs. We expect this to continue, due to the company’s proven ability to produce / underwrite popular content.
- If done correctly, these shows can be very profitable...
 - For example, we estimate Rap of China (a hit show with 3BN views in 2017) made a +245% return (490M RMB profit).
- Ad revenues are a large part of this. For example, a single 60sec ad in The Rap of China season finale sold for RMB 45M.
 - A 30-second ad in the 2018 Super Bowl cost \$5M, or just a 40% premium (\$10M for 60s vs. ~\$7.1M USD).
- The largest sponsor was Nongfu Spring (beverage/water brand), which spent \$18M (120M RMB) for the entire season. This is high, but affordable comparable to traditional TV, where prices can run 4x that.
 - “But one of the biggest beneficiaries of the show has undoubtedly been the New York clothing brand Supreme, which Wu, the show's star, wears. On search engine Baidu, queries about Supreme are up about 170% this summer compared with the same period last year, according to Kantar Media CIC. That's just a stroke of luck for the Supreme brand: IQiyi says it's not a product placement.” – AdAge, [“Rapper’s Delight: China’s Hip-Hop Talent Showcase Boosts Brands”](#)*
- Not every show is this profitable (obviously), but it gives an idea of iQiyi’s influence and reach.
 - iQiyi’s “advertising as content” (see link below for example) concept allowed Hot-Blood Dance Crew to pull in record-breaking 650M RMB (~\$100M USD) in sponsorships alone.

Rap of China – Unit Economics

In millions of RMB

Rap of China

Newly Acquired Customers	8.0
x Subscription Price per Month	¥16.0
x Attributable Months	3
= Subscription Revenue	¥384.0
+ Advertising Revenues	306
= Total Revenues	¥690.0
- Production Cost	200
= Profit on Rap of China	¥490.0
memo: Return on Investment	245.0%
memo: Number of Episodes	12
memo: Cost per Episode	¥16.7

Rap of China Commercial (“Ads-As-Content”)

Absolut Vodka commercial, original themed song performed by ROC contestants

(English subtitles [LINK](#) (requires some navigating), Go to Episode 10 - part 2, min 44:55 – 46:07)



Using Netflix As A Case Study

- Netflix isn't an exact comp (they don't sell advertisements). But it's useful for understanding how IQ's economics may roughly develop over time. If we use Netflix as a case study for potential pricing power, using the figures below, it implies \$0.22 rev per hour watched for NFLX vs. just \$0.03 for iQiyi.
 - Even if we adjust for disposable income / GDP per capita, this is a 84% premium (admittedly very rough calc).
 - Although iQiyi has negative margins today, we see no reason it can't achieve Netflix's ~12.5% EBITDA Margin.
 - Traditional US Media distributors (CBS, TWX, VIAB, etc) all have margins between 20% - 30% too.
- So how do you close the gap? For example, we broke down iQiyi's revenues generated per hour from Paid users vs. Free Users:
 - Our analysis indicates free users generate only 1/10th the revenues of paid subscribers... a key driver for revenues, is converting them to paid subscriptions.
 - We fully expect this to happen, as 1) people get into the habit of paying for subscriptions like in the US, and 2) as industry competition dissipates.
 - At TechNet, management stated that ARPU will increase when they feel there's ample quantity and quality of content.
 - Their goal is 70% paying sub penetration. On average, each member actually has ~1.5 accounts, and pays for 7mo/yr (vs. 2mo/yr in 2016). It's significant, as Chinese users are cost-conscious, and historically pay only when a hit show comes out, then cancel after. We think this up-tick indicates changing habits, and higher customer value.

IQ vs. Netflix – Revenue per Hour Watched

Figures for the avg user (both paid & free)

<i>iQiyi Revenue / Hour Watched</i>						
	2016	2017	2018E	2019E	2020E	2021E
Total Hours Watched	94,572	109,537	126,551	167,263	199,296	233,060
/ Total Revenues	11,237	17,378	25,091	38,995	54,783	76,613
= Total Revenue per Hour Watched	¥0.12	¥0.16	¥0.20	¥0.23	¥0.27	¥0.33
/ RMB to USD Conversion	6.45	6.45	6.45	6.45	6.45	6.45
= Rev per Hour Watched (USD)	\$ 0.02	\$ 0.02	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.05

<i>Netflix Revenue / Hour Watched</i>	
Hours Watched per Week	1,000
x 52 Weeks	52
= Total Hours Watched in 2017	52,000
2017 Revenue	11,685
/ Total Hours Watched	52,000
= Rev / Hour Watched	\$ 0.22

iQiyi Potential Pricing Power – GDP adjusted

In \$

GDP Adjusted Pricing

China GDP per Capita (Tier 1-2 cities)	\$ 14,500
/ US GDP per Capita	\$ 57,500
= Difference	25.2%
x NFLX Revenue per hour watched	\$ 0.22
= IQ "GDP adjusted" Rev per Hour	\$ 0.06
/ IQ Current Rev per Hour	0.03
= Potential Incremental Pricing Power	84.3%
memo: China GDP per Capita - Growth Y/Y	6.1%

Path To Break-even – Sights on 2021

- iQiyi is barely gross profitable, and has -22% operating margins today. What are the levers IQ can pull to turn this around?
- 1) Converting Free Users to Paid Subscribers
 - If iQiyi can grow paid users to ~35% of total users (vs. just ~15% today), they would be immediately profitable.
 - Rev/hour for paid subscribers (RMB 0.62 / \$0.10) is ~6.5x higher than for free users (RMB 0.10 / \$0.016), but this is narrowing. Paid subscribers are watching more hours per user (a sign of growing customer value), so rev/hour is trending down. At the same time, advertisers are paying more per commercial as the user base grows, so free user rev/hour is going up. We expect the gap to narrow to ~4.2x for 2018E.
- 2) Increasing Monthly Price, as GDP per Capita rises + the industry matures (discussed on previous slide).
- 3) Advertisers spending more on commercials, thus driving up free user revenues per hour.
 - Advertisers currently pay RMB 0.08/hour in 2017, vs. just RMB 0.06/hour in 2016. Going forward, we expect a high growth rate to continue, growing to RMB 0.16/hour in 2020E, for a 26% CAGR.
 - This growth is likely, since online video advertising costs are still 20-50% below rates for traditional TV.
- The key for all of this is exclusive content. It's what drives up barriers for the industry, creates pricing power & customer value, and generates differentiation among the platforms. As mentioned before, iQiyi is starting with mid-tier, niche content, and moving up-market as its production quality rises.

iQiyi Revenues per Hour – Paid vs. Free Users

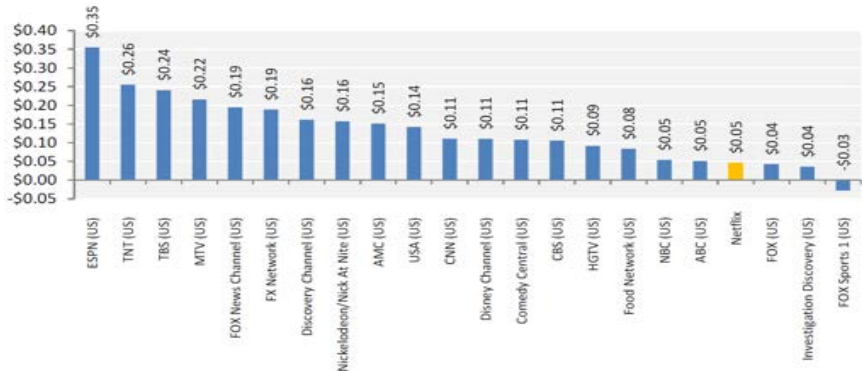
In RMB per hour watched

Paid User Revs per Hour

	2016	2017	2018E	CAGR '16-'18E
Membership Services	3,762	6,536	10,935	190.6%
/ Hours Watched by Subscription Users	4,771	10,530	22,626	374.3%
= Rev per Hour Watched - Subscription Users	¥0.79	¥0.62	¥0.48	(38.7)%
memo: Rev / Hr - Free Users	¥0.06	¥0.10	¥0.11	
memo: Rev / Hr - Difference	12.1x	6.5x	4.2x	

EBITDA per Hour of Viewership (2015) – US Networks

In \$ per hour watched; from Credit Suisse



Subscriber Economics & Incremental ROICs

Subscriber LTV Model	
Inputs	2017
Paid Subs	
Number of Subscribers	50.8
Annual Subscription Revenue/ Subscriber	¥161.38
Free Subs	
Number of Subscribers	380.8
Annual Revenue/ Subscriber	¥21.43
Allocated Costs (Annual)	
Technology & Development Cost	1,270
Content Cost per User (Existing)	¥29.95
Percentage of Content Costs Attributed to New Sub	25.0%
Bandwidth Cost per User	¥5.20
Sales Tax, Surcharge & Other Costs per User	¥6.12
Customer Acq. Cost	
Selling & Marketing	2,217
+ Incremental Content Cost	4,315
= Total CAC	6,532
/ New Paid Users	21
= CAC per User	¥317
% of Incremental Content Cost Allocated to Attract New Subs	
Annual Churn Rate	20.0%
Growth rate in Subscription Charge	6.0%
Growth rate in Service Cost/Subscriber	2.0%
Cost of Capital	10.0%
Margin on Incremental Paid Subscriber - Year 0	
Revenue per Paid Sub	¥161.38
- Allocated Content Cost	7.49
= Gross Profit	¥153.90
- Bandwidth Cost	5.20
- Sales Taxes, Surcharge, & Other (pass-thru paid by sub)	6.12
= Operating Profit	¥142.58
memo: Incremental Operating Margin	88.3%

- In terms of “Incremental ROIC,” one of iQiyi’s largest investment projects is acquiring paid subscribers.
- Our Subscriber Model estimates iQiyi gets returns as high as a 55% IRR.
 - Customer acquisition cost of RMB ~317, with each sub generating RMB 161 in revenue per year (which doesn’t even include mid-roll ad revenue), and RMB 143 in operating income per year per sub.
- Incremental margins are very high at 88%. This will only increase over time as content cost is largely fixed, and iQiyi produces more original content (there’s no revenue share deals for self-produced content).

Free Users											
Year	0	1	2	3	4	5	6	7	8	9	10
Retention Rate	100.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Sales per Free User	¥21.4	¥22.7	¥24.1	¥25.5	¥27.0	¥28.7	¥30.4	¥32.2	¥34.1	¥36.2	¥38.4
- Incremental Cost per Free User	18.8	19.2	19.6	20.0	20.4	20.8	21.2	21.6	22.0	22.5	22.9
= Op Income per Free User	¥2.6	¥3.5	¥4.5	¥5.6	¥6.7	¥7.9	¥9.2	¥10.6	¥12.1	¥13.7	¥15.4
x Remaining Accounts	100.0%	80.0%	64.0%	51.2%	41.0%	32.8%	26.2%	21.0%	16.8%	13.4%	10.7%
= Wgt. Op Income per Acct Created	¥2.6	¥2.8	¥2.9	¥2.8	¥2.7	¥2.6	¥2.4	¥2.2	¥2.0	¥1.8	¥1.7
x Discount Rate	1.0x	1.1x	1.2x	1.3x	1.5x	1.6x	1.8x	1.9x	2.1x	2.4x	2.6x
= PV of Cash Flows	¥2.6	¥2.6	¥2.4	¥2.1	¥1.9	¥1.6	¥1.4	¥1.1	¥0.9	¥0.8	¥0.6
memo: Wgt. Yearly Sales per Acct Created	¥21	¥18	¥15	¥13	¥11	¥9	¥8	¥7	¥6	¥5	¥4
memo: Cumulative Sales Per Acct Created	¥21	¥40	¥55	¥68	¥79	¥89	¥97	¥103	¥109	¥114	¥118
memo: Cumulative Op. Income Per Acct Created	¥3	¥5	¥8	¥11	¥14	¥17	¥19	¥21	¥23	¥25	¥27
Paid Subscribers											
Year	0	1	2	3	4	5	6	7	8	9	10
Retention Rate	100.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Sales per Paid Sub	¥161.4	¥171.1	¥181.3	¥192.2	¥203.7	¥216.0	¥228.9	¥242.7	¥257.2	¥272.7	¥289.0
- Incremental Cost per Paid Sub	18.8	19.2	19.6	20.0	20.4	20.8	21.2	21.6	22.0	22.5	22.9
= Op Income per Paid Sub	¥142.6	¥151.9	¥161.8	¥172.3	¥183.4	¥195.2	¥207.7	¥221.1	¥235.2	¥250.2	¥266.1
- Customer Acq Cost	317.1	-	-	-	-	-	-	-	-	-	-
= Cash Flow per Paid Sub	¥-174.5	¥151.9	¥161.8	¥172.3	¥183.4	¥195.2	¥207.7	¥221.1	¥235.2	¥250.2	¥266.1
x Remaining Accounts	100.0%	80.0%	64.0%	51.2%	41.0%	32.8%	26.2%	21.0%	16.8%	13.4%	10.7%
= Wgt. Cash Flow per Acct Created	¥-174.5	¥121.5	¥103.5	¥88.2	¥75.1	¥64.0	¥54.5	¥46.4	¥39.5	¥33.6	¥28.6
x Discount Rate	1.0x	1.1x	1.2x	1.3x	1.5x	1.6x	1.8x	1.9x	2.1x	2.4x	2.6x
= PV of Cash Flows	¥-174.5	¥110.5	¥85.6	¥66.3	¥51.3	¥39.7	¥30.7	¥23.8	¥18.4	¥14.2	¥11.0
memo: Wgt. Yearly Sales per Acct Created	¥161	¥137	¥116	¥98	¥83	¥71	¥60	¥51	¥43	¥37	¥31
memo: Cumulative Sales Per Acct Created	¥161	¥298	¥414	¥513	¥596	¥667	¥727	¥778	¥821	¥858	¥889
memo: Cumulative Op. Income Per Acct Created	¥-174	¥-53	¥51	¥139	¥214	¥278	¥332	¥379	¥418	¥452	¥480
Paid Sub IRR	54.6%										

Having the Right Friends

- Why did JD.com recently partner with iQiyi, instead of QQ Video, when Tencent owns 20% of JD? On the surface, it seems like betrayal...
 - Reading between the lines, we believe it all comes down to the differences in iQiyi vs. QQ Video's cohorts.
 - iQiyi skews younger (42% under 24yrs), more urban (54% in Tier 1 & 2 cities), and female (56%, which JD has been trying to heavily court, given women make more purchasing decisions, and JD has historically skewed male).
 - JD Plus (paid membership, similar to Amazon Prime) had <10M customers since launching in 2016... But within 1 week of the partnership, JD Plus and iQiyi both signed up 1M new paid subscribers.
- iQiyi is also partnered with Netflix, and share English language content. iQiyi content is also on Netflix (ex. Tientsin Mystic, Burning Ice)
 - Foreign media companies can't run a business in China, so partnering is the only way for Netflix to get China exposure.

iQiyi – JD Plus Strategic Partnership

Press Release from April 27, 2018

iQIYI and JD.com Announce Exclusive Strategic Partnership to Drive Growth of Paid Memberships

NEWS PROVIDED BY
iQIYI, Inc. →
Apr 27, 2018, 02:07 ET

SHARE THIS ARTICLE



New initiative provides users with unique combination of China's leading premium online entertainment content and retailing services

BEIJING, April 27, 2018 /PRNewswire/ -- iQIYI, Inc. (NASDAQ: IQ) ("iQIYI" or the "Company"), an innovative market-leading online entertainment service in China, today announced an exclusive strategic partnership with JD.com, China's largest retailer, in which the two companies will link membership programs in order to provide high quality cross-platform services to members and explore high-value opportunities in the online paid service market.

Under the new cooperation, users who purchase one-year memberships for either iQIYI or JD will be able to enjoy the premium service and benefits of both platforms. iQIYI paid members will receive access to the wide range of benefits provided by JD Plus, JD's premium membership program, including an array of special prices for selected products, coupons for free delivery, exclusive customer service and other exclusive benefits. JD Plus members will be able to enjoy the many benefits of iQIYI's VIP paid membership program, including exclusive content, ultra-high quality streaming

IQ Users Are Younger + More Urban

Data from Goldman Sachs, QuestMobile; As of June 2017

Exhibit 53: User geographical and age distribution

iQIYI has a more urban, younger viewer base, compared to Tencent Video as of June 2017

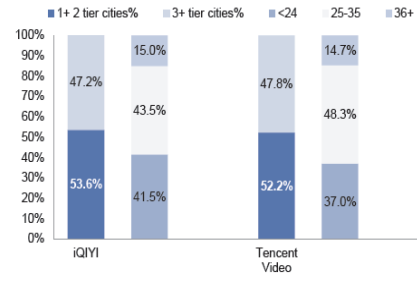
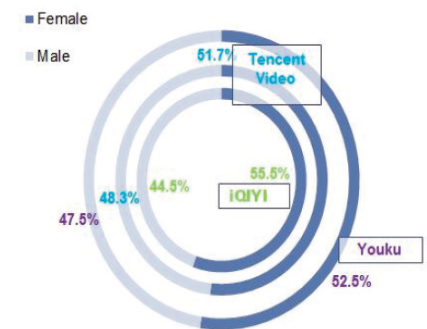


Exhibit 54: iQIYI has the highest percentage of female viewers
Gender distribution of top 3 video platforms' viewers, as of June 2017



We've Seen This Story Before

- It's only a matter of time before the industry matures (usually when there aren't anymore “un-tapped” user segments left), and industry margins rationalize. The “playbook” is typically as follows:
 - Step 1: The “land-grab” phase. Sign up as many users, as quickly as possible – with promos, free products, even giving away money (red envelopes) etc. The only goal is to get as many users addicted and in the habit of using your product as possible, before competitors get to them.
 - Typically dozens of start-ups will compete to be one of the top 3 surviving players. The key is to find a way to acquire customers cheaply, and have lots of cash. As this phase ends, smaller players seeing the writing on the wall, will merge with the top players to boost their market share.
 - Step 2: “Monetization”. Once the market becomes saturated and everyone has their “loyal users”, there's typically 2-3 top players left with ~90% share.
 - In the early phases, there's still intense competition and price cutting among the top 3, as they try to “pick off” marginal users from their competitors. But as the industry market share “firms up”, the focus becomes on rationalizing the business model & profitability. The goal is conversion of the large free user base, to paying users.
 - We believe the online video industry is in this phase, transitioning between the “early” to “later” stages.
- There are signs this “maturation” is happening. For example, in China the cost for famous talent is very high ([LINK](#)).
 - ~60 - 70% of a show's budget typically goes toward actor/actress salaries.
 - In order to reign in content costs, iQiyi, Tencent, Youku recently signed a joint agreement, to limit “unreasonable exorbitant remuneration” for high-profile stars (a textbook example of bargaining power over suppliers; [LINK](#)).
- We're confident the industry will rationalize, especially since many of the VCs / backers, are the same ones who supported other famous Chinese “Tech Wars”: Ctrip vs. Qunar, Bike Sharing (Ofo vs. Mobike vs. HelloBike), e-commerce, and many more.
 - We suggest studying these case-studies, to understand how margins inflected after rationalization.

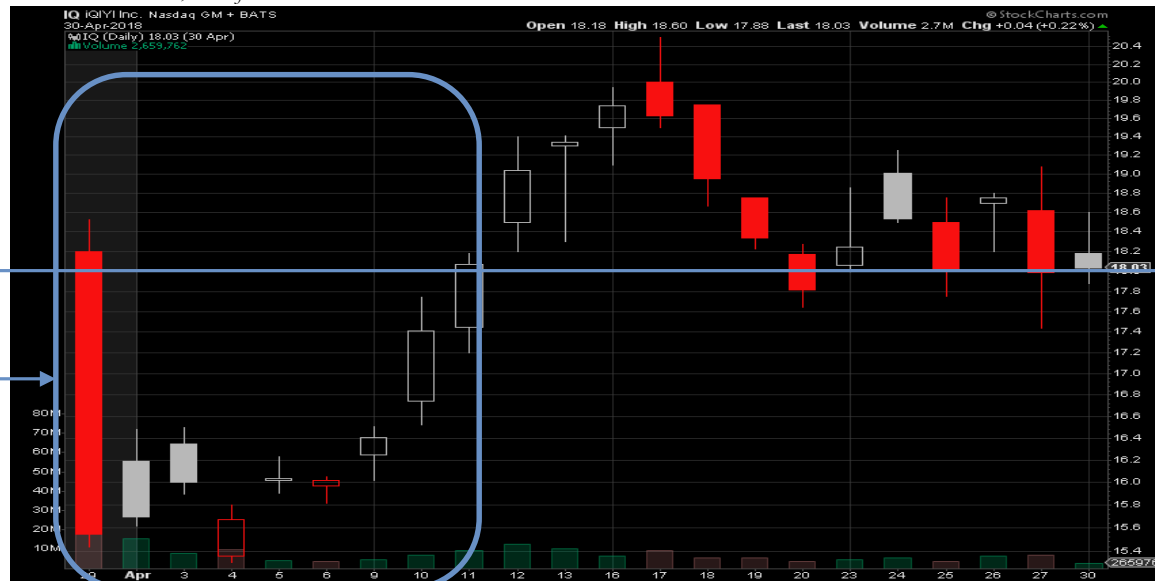
“What people from outside of China don't realize is that there is a period of rapid growth with lots of money being poured into a category. And then after the first three years, typically only two to three category leaders emerge. In e-commerce, you have Alibaba and JD.com. In ride-sharing, there's Didi. In bike-sharing, you have three right now – Mobike, Ofo, and Hello-Bike.” – Hans Tung (GGV Capital), [LINK](#)

Foreign Company + Unprofitable + Fear of Anything Chinese = Broken IPO

- We believe IQ's stock performance immediately after the IPO was indicative of a lack of interest in China Tech
- Foreign Company: Many investors buying the IPO probably had never even used the product.
 - By comparison, I spent over 20 hours watching the entire season of Rap of China for "Research". For example, many IQ shareholders we've spoken to have never even downloaded the app on their phones.
- + Unprofitable: It's very early stage, and isn't even gross profitable.
 - We think due to reasons laid out above, this will change over time – especially due to the high incremental margins per subscriber. However, this lack of profitability likely deterred those who didn't do as much work.
- + Fear of Anything Chinese: "China Hustle" (documentary about Chinese reverse merger frauds) had just come out the week before (3/23 Release Date vs. 3/29 IPO date). White House Trade War rhetoric was also heating up with China at that time.
- = Broken IPO: The result was shares immediately trading down -15% from it's IPO price over the following days.

IQ Trading History - 1 Month After IPO

IPO'd on March 29th, chart from stockcharts.com



Hayden purchased almost our entire position here (an avg price of ~\$17), over the following two weeks.

IPO'd at \$18 on March 29, 2018

This Is What Happened In The Next Two Months...

- In the next ~2.5 months, the stock price rose +170% as investors started understanding the company better, sell-side research started coverage (leading to more informed investors), and people recognizing / getting excited about the valuation discount vs. peers.
- For example, IQ was trading at 2.7x Sales (2018E) vs. NFLX at 7.5x Sales (2018E) after the IPO.
 - Recently, it's trading at 7.5x Sales (2018E) vs. NFLX at 10.7x Sales (2018E).
 - Sell-side expects NFLX to grow top-line from \$16BN to \$34BN from 2018-22 (27.5% CAGR). By comparison, the street expects IQ to grow from \$3.8BN to \$9BN from 2018-22 (33% CAGR).
 - *Note; iQiyi's business model isn't directly comparable to Netflix. In fact, they have publicly stated they view themselves more in-line with an "online Disney" (i.e. IP-centric).*

IQ Trading History – Since IPO

IPO'd on March 29th, chart from stockcharts.com



WARNING!

There's a lot of details and nitty-gritty, KPI-style analysis that wasn't able to make it into this deck (15min is too short!). Thus this presentation is very high-level, intended simply to give a taste of what's happening in China Tech.

As with everything China related, it's a much more dynamic and nuanced ecosystem, than you can get from a cursory glance. It's for this reason, I don't disclose our full thinking on valuation either.

This is a case study, not a recommendation (our initial purchase was also lower at ~\$17).

Deep due-diligence isn't just a suggestion... it's a requirement.

Having Said That... You Can't Ignore China

- Of the Top 20 Internet Companies, 25% of the value comes from Chinese Tech companies... and this share is growing rapidly.
- Even if you don't invest directly, it's beneficial to understand what's happening there, and what the new business models look like.
 - Sooner or later, Chinese companies will be coming to a country near you. (I'm sure many European retailers thought Amazon was a distinctly "American Problem" ten years ago too).
 - Examples of this include Alipay in the US & Canada (Chinese companies spreading globally), and the Dock-less Bike / E-Scooter trend (Limebike, Bird, etc) which began in China (new Chinese business models spreading to the West).

Top 20 Internet Companies, By Valuation

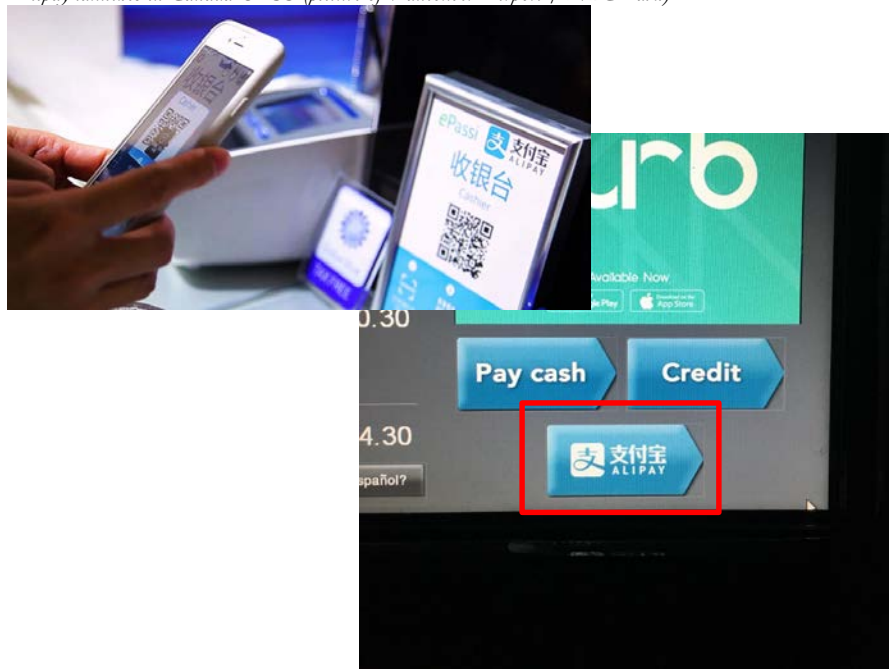
As of May 2018

Rank	Company	Region	Market Value (\$B)	
			5/29/13	5/29/18
1)	Apple	USA	\$418	\$924
2)	Amazon	USA	121	783
3)	Microsoft	USA	291	753
4)	Google / Alphabet	USA	288	739
5)	Facebook	USA	56	538
6)	Alibaba	China	--	509
7)	Tencent	China	71	483
8)	Netflix	USA	13	152
9)	Ant Financial	China	--	150
10)	eBay + PayPal*	USA	71	133
11)	Booking Holdings	USA	41	100
12)	Salesforce.com	USA	25	94
13)	Baidu	China	34	84
14)	Xiaomi	China	--	75
15)	Uber	USA	--	72
16)	Didi Chuxing	China	--	56
17)	JD.com	China	--	52
18)	Airbnb	USA	--	31
19)	Meituan-Dianping	China	--	30
20)	Toutiao	China	--	30
Total			\$1,429	\$5,788

Source: Kleiner Perkins 2018 Internet Trends, Hillhouse Capital, Goldman Sachs, iResearch

For Example, Alipay Is Already Here

Alipay launches in Canada & US (picture of Vancouver Airport / NYC Taxi)



But Haven't You Watched "The China Hustle"?...

- I'm sure some of you are sitting out there, saying "Aren't all Chinese companies frauds? What about the VIE structure?"
- Sure, it's not a 0% risk, but there *are* some mitigating factors (it's all about incentives)...
 1. China is launching its CDR (Chinese Depository Receipts) program this summer. The idea is to allow the large tech companies to "return home" and dual-list domestically. Most importantly for western investors, the guidelines call for the exact same legal structure as the ADRs. Given this, there's less incentive for China to do anything shady with the VIE structure, and harm their own citizen investors in the meantime. (*More information found here, [LINK](#)*)
 2. These are \$30BN+ market cap companies vs. the average reverse merger fraud was only \$125M in market cap. These tech companies are the "pride & joy" of the Chinese government, and a symbol of China's new level of innovation (hence why the government wants to bring them back domestically). Any large deception would be a stain to the entire country's credibility and damage the country's access to capital, which the government is unlikely to allow to happen.
 3. Just go to China and see for yourself. With the reverse mergers, the factories never existed at all. On the other hand, see if you can walk 100ft without bumping into someone who watches iQiyi videos on their phones, or a courier carrying Jingdong or Alibaba packages.

Investors Are Afraid of This...

The China Hustle Documentary (2018)



...Causing Them To Miss Out On This

JD Warehouse, Rap of China Los Angeles Audition, iQiyi App

There's a BIG difference here...
Just hop on a plane to see for yourself.



If There's One Takeaway It's:

There's Some Interesting Things Going On In China Tech...
So Investors, Pay Attention!

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