STERN IAG

Board of Advisors Meeting

May 13th, 2020

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Letter from Portfolio Managers

Dear Board of Advisors,

We are pleased to introduce ourselves as the new portfolio managers of IAG. We have been a part of the club since Fall 2018/Spring 2019 and are excited to take the reins of the club from Steve, who is graduating this semester. With discussion with the rest of the portfolio team, we are excited to implement several changes in our investment process and educational programs. These changes are highlighted below:

Investment process refinement: we adapted the existing process to a **four-stage process** through which an investment idea goes to our portfolio. The **first** stage is a visible "idea pipeline", where each portfolio team members put initial, one-sentence ideas on a tracker. The **second** stage is quick screen, where ideas are presented in the meeting on 1-2 pages of writeups instead of more detailed diligence reports as was done before. Portfolio team members provide constructive feedback and questions during this stage. The **third** stage is "due diligence update", where members bring more detailed update in specific areas of due diligence, with the **fourth** stage being the preparation of financial models and board of advisor meeting materials.

Meeting format improvement: we aimed to make meetings more efficient and collaborative. On the efficiency front, we cap time spent on each quick screen at 15 minutes as opposed to 30-40 minutes previously, so that we can go over more ideas in a meeting. On the collaboration front, each member is now required to fill out a poll after each meeting, offering their two-sentence takes on each idea discussed. Portfolio managers make decisions of proceeding with the reference of the poll results.

Portfolio monitoring enhancement: we also aim to place greater emphasis on portfolio monitoring with one meeting focused on existing position updates before each board of advisor meeting. Analysts covering ideas are each required to reevaluate the thesis given the development and justify selling or holding decisions. We also combined portfolio monitoring with our mentorship program by assigning one upperclassman and one upperclassmen to each of our fourteen existing positions.

Greater class size in the fall semester: in light of our enhanced analyst training program and the number of applications we received each semester, we decided to double the portfolio team class size from 6 to around 12 in the fall semester. A greater class size would give us more manpower and access to more talents on campus who are interested in public equity investing.

Today, we'd like to propose adding the three following positions to our portfolio. We firmly believe that these companies are attractive in their own right and in the context of our portfolio in reducing our overexposure to industrials.

- Grocery Outlet Group
- FNKO Inc.
- Bilibili Inc.

We look forward to finishing this semester on a high note despite the challenge of doing it over Zoom. We are happy to be a new source of information for the board, and we encourage you to reach out with any questions or feedback.

Thank you,

Chen Zhou & Jaro van Diepen

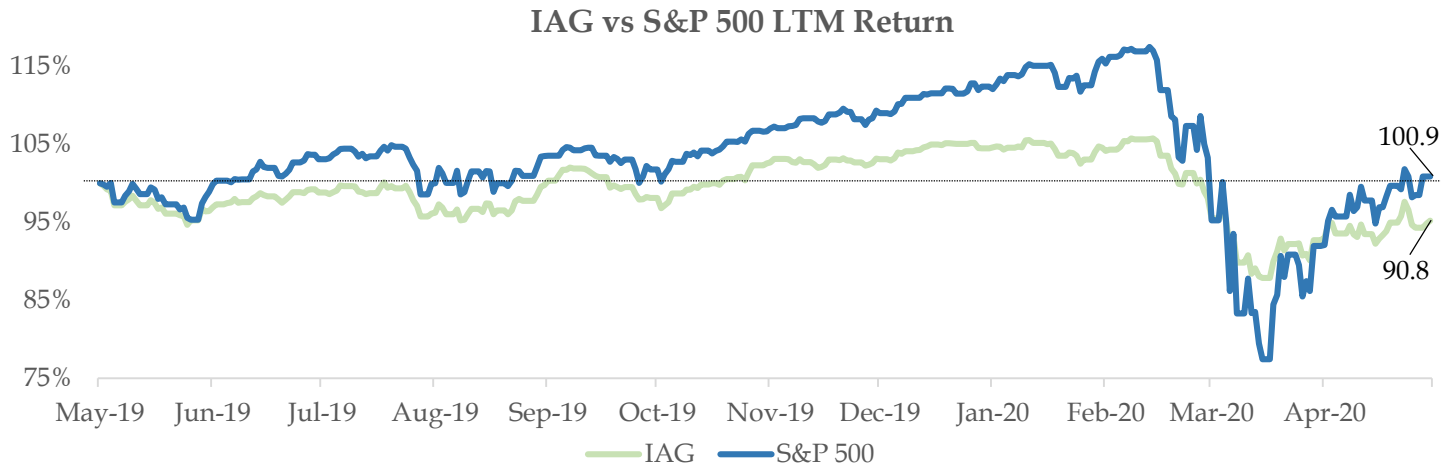
Portfolio Managers

II. Performance Analysis

Holdings Summary *(as of May 11th, 2020)*

Core Holdings									
Company Name	**Ticker**	**Analyst**	**Purchase Date**	**% of Port.**	**Shares**	**Purchase Price**	**Share Price**	**Return**	**Industry**
Allison Transmissions	ALSN	Cody Fang	12/3/2019	**4.5%**	50	$47.4	$35.9	-24.2%	Industrials
BorgWarner	BWA	Chen Zhou	3/14/2019	**4.0%**	55	$38.3	$29.3	-23.7%	Con. Cyclical
CVS Health Corp	CVS	Michael Giese	12/6/2016	**3.2%**	20	$77.3	$63.8	-17.4%	Healthcare
Dell Technologies	DELL	Caleb Nuttle	4/9/2020	**5.2%**	48	$41.8	$43.3	3.8%	TMT
First Energy	FE	Liam Coohill	10/29/2019	**5.1%**	50	$47.3	$40.4	-14.5%	Utilities
HCA	HCA	Srikar Alluri	9/26/2019	**5.0%**	19	$119.2	$104.1	-12.7%	Healthcare
Stanley Black and Decker	SWK	Simran Korpal	5/3/2018	**6.8%**	24	$139.5	$113.7	-18.5%	Con. Staples
TransDigm Group	TDG	Tony Wang	4/9/2020	**5.3%**	6	$360.5	$349.1	-3.2%	Industrials
United Rentals	URI	Caleb Nuttle	3/14/2019	**7.9%**	27	$123.0	$116.5	-5.2%	Industrials
XPO Logistics	XPO	Chen Zhou	10/20/2019	**7.7%**	45	$79.4	$68.3	-14.0%	Industrials
ZTO Express	ZTO	Chen Zhou	3/14/2019	**8.1%**	100	$19.3	$32.5	68.3%	Industrials
SPDR S&P 500 ETF Trust	SPY			**5.9%**	8		$292.6		
Total Core Holdings				**68.7%**			**$27,389.7**	-7.2%	

Opportunistic Holdings									
Company Name	**Ticker**	**Analyst**	**Purchase Date**	**% of Port.**	**Shares**	**Purchase Price**	**Share Price**	**Return**	**Industry**
Green Brick Partners	GRBK	Srikar Alluri	12/3/2017	**3.6%**	162	$11.4	$8.9	-21.9%	Real Estate
Recro Pharma	REPH	Nisha Honnaya	10/29/2019	**2.0%**	160	$13.2	$5.1	-61.5%	Healthcare
Western Digital Corp	WDC	Mateo Panjol-Tuflija	10/3/2018	**4.5%**	42	$56.5	$42.4	-24.9%	TMT
Total Oppt. Holdings				**10.1%**			**$4,034.7**	-43.0%	
Total Equity Holdings				**78.8%**			**$31,424.4**		
Cash				**21.2%**			**$8,463.2**		
Total Portfolio Holdings				**100.0%**			**$39,887.6**		

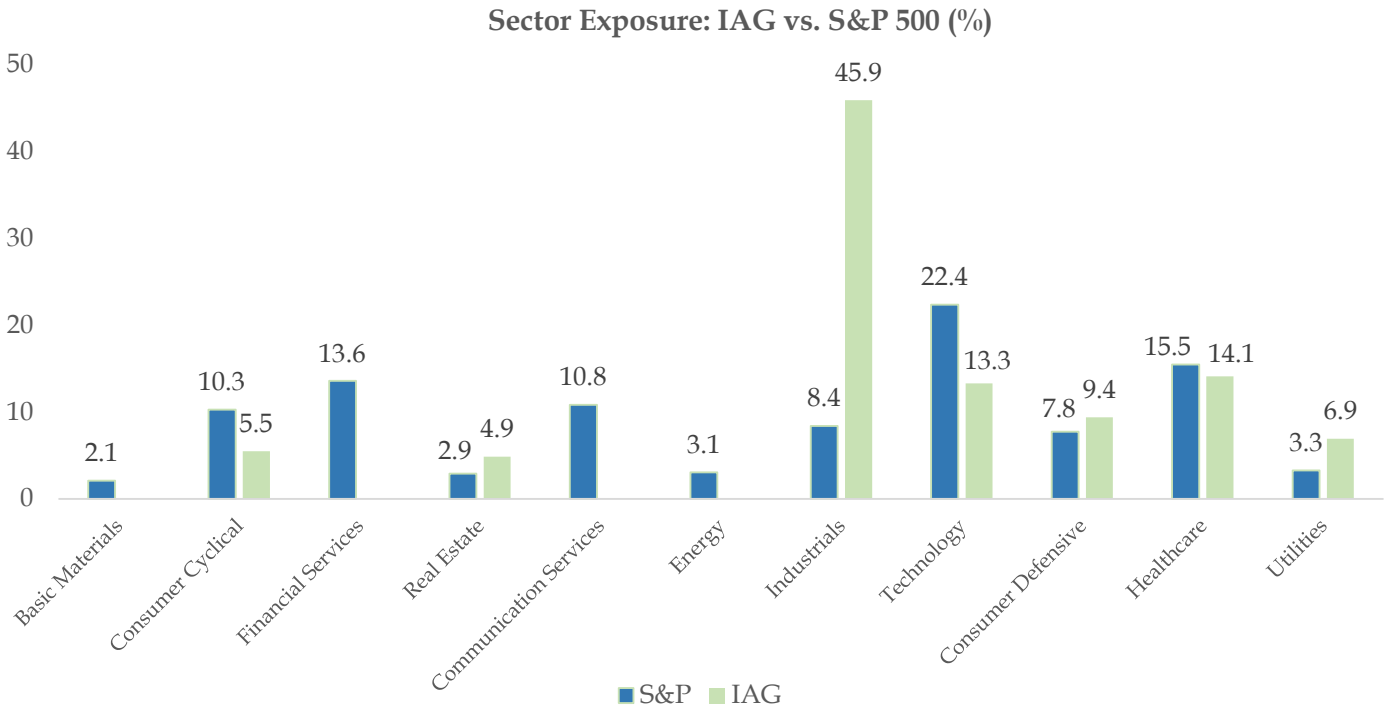


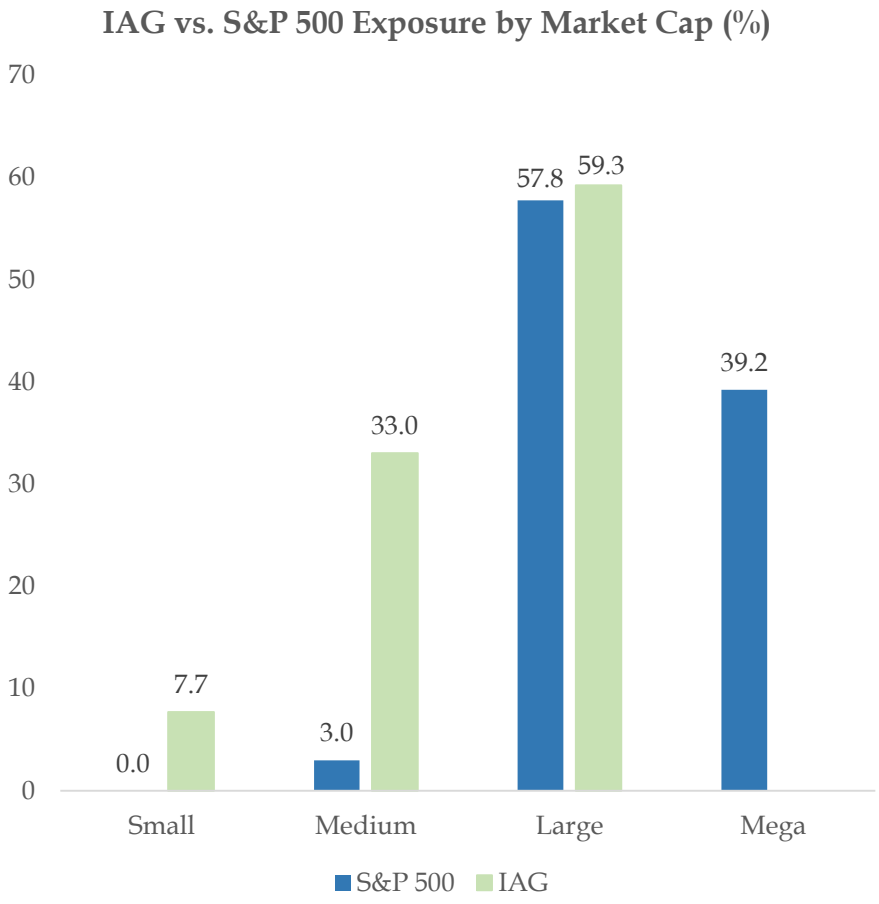
Portfolio KPIs	
Indicator	**Number**
Daily Sharpe Ratio	(0.01)
Annualized Sharpe Ratio	(0.21)
Portfolio Beta	0.91
Daily Volatility	1.31%

In the past year, **IAG's portfolio has returned -7.71%** while the **S&P 500 returned 1.81%.** Our positions are long term focused and therefore were less impacted by the downturn but are also slower to recover. Since the last oversight meeting, **the spread between IAG and S&P 500 decreased from -8.44% (3/20/2020) to -5.90% (4/3/20).**

As of (4/3/20), 36.9% of the portfolio was in cash. We would like to propose to limit our cash exposure to a maximum of 15%. The cash weighting has decreased to 21.4% and with four new positions proposals, we look to get below the 15% threshold.

Portfolio Exposure vs. Benchmark





IAG continues to target the S&P 500 benchmark specified in the fund mandate. As of May 2020, **IAG remains overexposed to industrials**. We hope to gradually address this overexposure through our new position proposals. Furthermore, IAG lacks exposure to energy or basic materials.

IAG continues to be underexposed to mega-cap positions, yet drastically overexposed to small-cap companies. We don't believe this is an issue given the nature of our mandate but will continue to look at the Mega Cap universe for both our core and opportunistic holdings.

Pitch Log Since Apr. 2020

Internal Piches Since April 2020 Meeting				
	Company	Stage	Date	Analysts
1	Darling Ingredients	First Update	4/9/20	Cody Fang, Tony Wang
2	Bilibili	Quick Screen	4/9/20	David Zhou
3	Grocery Outlet Group	Quick Screen	4/16/20	Larry Wang
4	Darling Ingredients	Second Update	4/16/20	Cody Fang, Tony Wang
5	Funko	Quick Screen	4/16/20	Caleb Nuttle, Vinny Ye
6	Bilibili	First Update	4/16/20	David Zhou
7	Trunpanion	Quick Screen	4/16/20	Nisha Honnaya
8	Grocery Outlet Group	First Update	4/23/20	Larry Wang
9	Bilibili	Second Update	4/23/20	David Zhou
10	ANSYS	Quick Screen	4/23/20	Achyut Seth
11	TJMaxx	Quick Screen	4/23/20	Simran Korpal, Sophie Pan
12	Centene	Quick Screen	4/23/20	Srikar Alluri, Catie Wang
13	Centene	First Update	4/30/20	Srikar Alluri, Catie Wang
14	Broadmark Realty	Quick Screen	4/30/20	Jaro Van Diepen
15	Cintas	Quick Screen	4/30/20	Michael Giese, Nisha Honnoya, Vinny Ye
16	Darling Ingredients	Third Update	4/30/20	Cody Fang, Tony Wang
17	Adyen	Quick Screen	4/30/20	Ian Chen
18	Funko	First Update	4/30/20	Caleb Nuttle, Vinny Ye
19	Iron Mountain	Quick Screen	4/30/20	Catie Wang
20	Bilibili	Third Update	4/30/20	David Zhou
21	International Workplace Group	Quick Screen	4/30/20	Vinnny Ye, Jonathan Liu
22	TJMaxx	First Update	4/30/20	Simran Korpal, Sophie Pan
23	Grocery Outlet Group	Second Update	4/30/20	Larry Wang, Aashka Sanghvi
24	Polar Power	Quick Screen	5/7/20	Jaro Van Diepen
25	NortonLifeLock	Quick Screen	5/7/20	Aashka, Sanghvi

Additions to Bench				
	Company	Stage	Date	Analysts
1	Centene	First Update	4/30/20	Srikar Alluri, Catie Wang
2	Darling Ingredients	Third Update	4/30/20	Cody Fang, Tony Wang
3	Iron Mountain	Quick Screen	4/30/20	Catie Wang
4	Polar Power	Quick Screen	5/7/20	Jaro Van Diepen

Oversight Meeting				
	Company	Stage	Date	Analysts
1	Bilibili	Third Update	4/30/20	David Zhou
2	Grocery Outlet Group	Second Update	4/30/20	Larry Wang, Aashka Sanghvi
3	Funko	First Update	4/30/20	Caleb Nuttle, Vinny Ye

III. Key Holdings Update

Portfolio Updates Since Apr. 2020 Meeting

Company	Ticker	Update
Allison Transmissions	**ALSN**	We propose that we hold our position in Allison Transmissions off of strong Q1 earnings and continued competitive advantages. The company reported better than expected earnings with a 6% drop in top line mainly driven by weaker class 5-7 North American On-highway demand. In regards to COVID-19, the company's own plants are up and running, but shutdowns at OEM factories are causing a build up in inventory. While there is definite short term uncertainty, with the company withdrawing FY 2020 guidance, the company's liquidity position remains strong with $595 million in undrawn revolver and $114 million in cash with the earliest debt maturity being 2024. The company continues to have a strong competitive advantage and exhibit significant market share in the medium to heavy duty automatic transmission space.
BorgWarner	**BWA**	We would like to propose a hold on BorgWarner based upon a strong quarter considering COVID-19 headwinds and the resolution that was reached between Delphi Technologies on the topic of the $500 million revolver breach that had put the acquisition on a temporary pause. BWA had taken this opportunity to negotiate improved terms upon the stock transaction and placed restrictions for Delphi Technologies' revolver balance. The updated terms dictate that there is a 5% reduction on the equity exchange ratio and Delphi's gross revolver balance can only have $225 million or less outstanding. This renegotiated deal serves them better in the long run despite some dilution in the near future. Even though the market reacted negatively towards the acquisition at first, completing this acquisition for DLPH will put BWA ahead for expanding their electrification portfolio. Regarding their COVID-19 updates, in April they had shut down 20 of their 22 plants in the Americas and 19 of 20 plants in Europe, however they only shut down 5 of their 21 plants in Asia. Despite the halt in production, BWA had a strong Free Cash Flow this quarter of $146 million and their earnings were down 8.1% organically while the rest of the automobile parts market was down 20%.
CVS Health Corp	**CVS**	We would like to hold onto CVS Health Corp given that the fundamental business has not been changed and liquidity is not a going concern. The company has chosen to cut capital expenditures in the near term while also delaying the rollout of the HealthHub concept. We are starting to see the cross-selling opportunities take place with the Aetna integration and we believe that the health ecosystem system CVS is building will bear fruits long term. The company has enough liquidity to weather the current pandemic issues, and raised an additional $4bn in bonds to have extra cash on-hand. The company saw a strong 20Q1 performance seeing a better mix in customers and prescriptions.
Dell Technologies	**Dell**	We would like to propose a hold on Dell Technologies given limited information has been released since our purchase of the stock. Our thesis statements require that some catalyst come into effect to achieve value realization, namely through a potential VMWare tax-free spinoff event as projected in 2021. Since this catalyst is very time conscious, the short period between our purchase of our stake in April 2020 and now does not require any action be made at this point. The stock closed at $43.65 as of May 8, 2020, up 8.1% from our cost-basis of $40.38.

Portfolio Updates Since Apr. 2020 Meeting

Company	Ticker	Update
First Energy	**FE**	We would like to propose a hold on our stake in First Energy (FE). In spite of a selloff due to macroeconomic conditions, we believe the company is well positioned to weather the storm. Despite a slight revenue miss in 1Q20, FE beat on earnings expectations, at least partially due to mild weather patterns. First Energy's majority exposure to the residential energy sector as well as transmission based revenues have benefitted from, or at least not been impacted by, current conditions. Management is confident in their ability to maintain performance and has reaffirmed prior guidance through 2020, while also hinting at a potential dividend bump. Share price is currently $40.60, down 14.4% from our cost-basis of $47.30. Any concern of lowering electricity prices is nominal given constant or increasing load for FE, especially given the phenomenally low fuel prices we've observed lately. We continue to believe that First Energy trades at an undeserving discount to the broader utilities sector despite being positioned better than most to battle Covid-19. Complete decoupling in Ohio (20% of total load) increases FE's ability to drive load-independent revenues, particularly now. First Energy maintains 3.5 billion in liquidity, easing concerns about a rather heavy debt load coming into this crisis. First Energy should prove a resilient name in the portfolio in tumultuous times that also provides a healthy 4-5% yield.
Green Brick Partners	**GRBK**	We would like to propose a hold on our stake in GRBK. Despite adverse effects from coronavirus, the company operates in two of the most desirable housing markets in the U.S. with increasing demand and supply constraints which creates favorable conditions for future growth. Home closings and residential units revenue have consistently increased – another indicator of the strong fundamental business. GRBK stock fell from $12.93 to $8.91 in the span of two months. While earnings will be hit by declining home sales, GRBK can manage the short-term earnings drop since the company maintains lower leverage than other industry players (28.1% net debt to capital, compared to industry average of 36.7%). The company has enough liquidity to pay off maturing debts in the next 24 months as well as $41 million in non-core assets that are readily convertible to cash. Demand has been relatively insulated from coronavirus fears, as GRBK's premium clients have more disposable income, low interest rates support the business, and preferences shift toward single-family residences.
HCA	**HCA**	We are proposing a hold on HCA for several reasons. Given that coronavirus has caused a significant drop in patient volume, many outpatient facilities, clinics, and departments have been temporarily closed. In Q1 of 2020, HCA experienced 1.8% and 5.9% declines of same facility inpatient and outpatient surgeries, respectively, compared to the same period in 2019. Management believes that once HCA can return to caring for patients, these drops in volume will not persist. Since HCA controls leading inpatient market share for most markets and has diversified exposure, the company is relatively insulated from pressures that other U.S. hospitals are facing. HCA has also prepared a third stage action plan in case of long term structural revenue changes – the company's established scale will guarantee its survival during these times and a revival after. HCA has accounted for coronavirus by preparing added inventory levels of protective gear in the supply chain and opening capacity for patient volume surges. The company is maintaining liquidity by suspending annual share buybacks, cutting back on acquisitions, suspending the quarterly dividends program, and other cost reduction initiatives.

Portfolio Updates Since Apr. 2020 Meeting

Company	Ticker	Update
Recro Pharma	**REPH**	We would like to propose holding our position in Recro Pharma. Since our last update, Recro has rescheduled its first quarter earnings to May 11, 2020, and as such, there is limited new information to analyze with regards to the company's financials. However, with this upcoming update, we plan to continue monitoring the growth of Recro's core CDMO business, its contract developments in light of COVID-19 including those currently preexisting with Teva, and ongoing transactions within the CDMO acquisition space at large. Over the past month, the CDMO acquisition space has remained active, with Orbis Biosciences, Kindeva, and Dalton Pharma Services serving as targets. Though further insight into these deal transaction multiples is still coming to light, we view this as a positive headwind, given that a key tenet of our thesis actualization will be Recro's stance as a favorable acquisition target for larger pharma companies or private equity. Though Recro currently trade at $8.33, 58.46% down from our initial cost basis of $13.20, we believe holding our position will allow us to continue watching Recro's thesis play out.
Stanley Black and Decker	**SWK**	We would like to hold our stake of Stanley Black & Decker. We believe that the company has great management that will continue to allocate capital efficiently, acquire promising new lines of business, and invest in their brand. In the recent Q1 earnings, SWK has seen a 6% drop- in revenue from last year primarily due to the impacts of COVID-19. The segment hardest hit was the tools & storage segment which fell 10% in revenue and 15% in profit, primarily due to the government shutdowns in the United States. However, since the turbulence caused by COVID-19 management has outlined a few important steps they plan to take. First, they introduced a 1-billion-dollar flexible cost savings plan that will adjust supply chain to match demand, reduce staffing and compensation and indirect costs, as well as capture the significant raw materials deflation opportunity. In addition, in terms of their liquidity SWK possesses 1 billion of cash on hand and access to 1.7 billion in their revolver as well as $750 million from their preferred stock cash proceeds. While the next few months are uncertain with SWK, we believe that with their cost saving initiatives and liquidity the company will allow them to weather this time period. In addition, the SWK management has outlined three scenarios (base, bull, bear) for how the market will re-emerge from their pandemic and has emphasized that when demand does rebound the company will be able to quickly ramp up on production again. Lastly, we look forward to the growth of the ecommerce platform and their acquisition into the lawn and garden market.
Transdigm	**TDG**	We would like to hold our stake in Transdigm (TDG). While short-term fleet utilization poses a notable risk, the firm has taken substantial measures to promote liquidity and maintain run-rate EBITDA margins. Overall, the majority of costs flex with volume. TDG has cut its workforce by 25% this quarter, significantly reducing operating leverage. Additionally, defense spending, which represents a third of sales, has shown resilience in the midst of macroeconomic headwinds, with stable order flow to support revenues in the coming months. The company has taken out an additional $1.5 billion in debt to prepare for worst case scenarios. Management has indicated that they could deploy this capital for attractive M&A opportunities given the low-rates environment. We are still monitoring ESL synergies, with organic growth of 1-5%. TDG is a long-term outperformer with plenty of capital to weather immediate headwinds.

Portfolio Updates Since Apr. 2020 Meeting

Company	Ticker	Update
United Rentals	**URI**	We would like to recommend a hold on our stake in United Rentals (NYSE: URI). Since our last oversight meeting, where we increased our stake in the position, the company has released Q1 earnings for 2020. Revenues came in $42.7 milion higher than expectations at $2.13 Billion for the quarter, while earnings similarly came in above street expectations at $3.35 per share. Utilization rate was still rather high for the period, with the company cutting Capex by $50 million for the quarter. In our initial investment thesis for the company we argued that construction rental companies were better positioned than traditional OEM manufacturers, such as Caterpillar. This appears to be playing out, with URI rebounding by 7.17% since our last meeting on April 8th, while CAT has fallen by 12%. Overall, we view our United Rentals position as being a core holding, and would like to continue holding the position at least over the near-term.
Western Digital Corp	**WDC**	We would like to recommend maintaining our stake in Western Digitial Corp (NASDAQ: WDC). Key takeaways from Q3 2020 is that the company missed revenue and earnings estimates (even though revenue went up 14% YoY), is suspending dividends, and planning on deleveraging gross debt by $3 billion (debt-to-EBITDA 5.0x right now). The company is in a strong liquidity position to weather the storm, as the company has $5.2 billion in cash and an undrawn credit revolver. One of the original thesis points was that the NAND industry is experiencing a cyclical decline due to oversupply, which is squeezing pricing of NAND Flash. Beginning of 2020, management underlined how they expect to see a slow, but gradual recovery in revenue with inventory in the supply chain returning to normal levels and demand tightening. As such, our thesis hasn't fully actualized and we would like to continue to monitor the space and the company to find the right exit point.
XPO Logistics	**XPO**	We would like to hold our stake in XPO Logistics (XPO). Since doubling down in April, we have seen slightly declining revenues due to global supply chain obstructions. However, these declines were offset by significant cost improvements, thanks in great part to XPO's industry-leading investments in automation and pricing tools. As a result, operating ratio declined 420 basis points to 83.4%. 77% of costs are variable, meaning operating leverage is a minimal concern. Buoying revenues going forward, we've seen that last-mile operations are continually favorable and indicative of growing e-commerce demand. Additionally, XPO protects its cash flows through recurring logistics contracts. We will see revenues accelerate as XPO continues opening up logistics space; China is already 90% operational. Lastly, XPO maintains plenty of liquidity, with $2.5 billion between cash and debt. There are no significant maturities until mid-2022. They have cut back a third of capex and pulled $600 million from the revolver. Overall, the thesis is playing out and XPO should be among the first to capitalize on global recovery.
ZTO Express	**ZTO**	We would like to propose a hold on our current position in ZTO Express taking into account that from the previous update the fundamentals of the business have not changed. The share price has performed exceedingly well and is currently trading at P/E of 34.77x and EV/EBITDA of 21.85x. The initial thesis that ZTO is well positioned in a consolidating industry undergoing a price war is sound. It's scale and fixed assets investments will continue to drive up marginsAs a cost leader, we believe that ZTO is on track to become the future monopoly in the market. ZTO was also able to avoid COVID-19 headwinds, since their profits were dependent upon e-commerce in China. The stock closed at $31.15 as of May 8, 2020, up 61.6% from the time of purchase.

IV. New Position Proposal

STERN IAG

Grocery Outlet (NYSE: GO)

A Stable and Recession-Proof Business with Long-Term Organic Growth Potentials

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Price Target: $41.95

May 10th, 2020

Business Description:

Grocery Outlet is a high-growth, extreme value grocery retailer based in the U.S. The company employs an opportunistic buying model that offers shoppers quality, name-brand products at prices generally 40% to 70% below those of conventional retailers. To complement its discounted products, GO also offers everyday staples that are priced closer to peers but complete the one-stop grocery shopping experience. As of 2019, the company operated 337 stores in California, Washington, Oregon, Pennsylvania, Idaho, and Nevada.

Investment Thesis:

- **Off-Price Leadership in the More Attractive Side of Retail:**
  GO's strong foothold in the deep discount retail space is well-aligned with growing consumer preference toward extreme value. Since 2001, value chains have grown market share by ~7%, as price has become the greatest motivator for consumers when considering which grocery store to visit. GO operates as a small-box retailer, an industry that is still under-developed in the U.S., despite superior store efficiency and value proposition. Small-box retail currently only represents 5% of the U.S. Consumables Market, compared to 15% in U.K. As increase in demand reduces this gap, current sales base of small-box retail may nearly double in the next decade.
- **Flexible Sourcing & Distribution Model Difficult to Replicate:**
  GO's efficient sourcing capability serves as the biggest competitive strength in the secondary market, where it's currently the largest buyer with ~15% market share. The market should see continuous growth, driven by structural industry tailwinds such as new emerging brands, product innovation, and ongoing trend toward fresh food. GO's large and experienced sourcing team, with on average each member having over 10 years of sourcing experience, enables to it to be a preferred partner of choice for CPGs. What further differentiates GO's procurement model is its ability to determine price and request quantity quickly – purchase orders are made by GO to suppliers within 24 hours.
- **A Truly Localized Business with Reduced Operational Risks:**
  Unlike conventional retailers that appoint regional managers, GO's stores are operated by Independent Operators (IOs) who have ownership in the stores. Such model is key to the company's long-term success, as it incentivizes managers to aggressively drive sales and control costs. IOs, who are residents of their local communities, are responsible for selecting ~75% of the merchandise and adjusting product prices based on their knowledge of local demand. (99% of IOs only operate a single store). IOs also engage in local marketing efforts to promote their stores, creating a more tailored approach to reaching targeted customers. GO's IO selection process remains ultra-competitive with the number of applicants doubling in last two years, driven by attractive compensation and increased retail closure. Less than 0.5% of them make the cut the become GO's operating partner.
- **Credible Store Growth Opportunity in New Markets:**
  With only 337 stores, GO remains under-developed even within its existing markets. With current stores predominantly located on the west coast, GO near-term growth opportunities will likely come from existing and neighboring states such as Arizona and Colorado, where we believe have a plenty of white space – due to lack of access to supermarkets in lower income communities. GO's compelling value propositions as a grocery retailer is a perfect fit for penetrating these markets. Its treasure hunt shopping experience will drive new repeat visits, as it stands to benefit from COVID-19 recessionary trends.

Key Ratios and Statistics:

Price Target	$41.95
Upside	14.3%
Share Price (5/8/2020)	$36.71
Market Cap	$3.26B
Average Daily Volume	1,359,741
52-Week Low	$27.75
52-Week High	$47.57
Cash	$166M
Net Debt	$372M
P/E	38.31x
EV/EBITDA	22.70x

FY ($mm)	2017A	2018A	2019A	2020E
Revenue	$2,276	$2,288	$2,560	$2,900
Gross Profit	$632	$695	$787	$893
EBITDA	$135	$152	$165	$184

Figure 1 – Stock Performance Since Inception

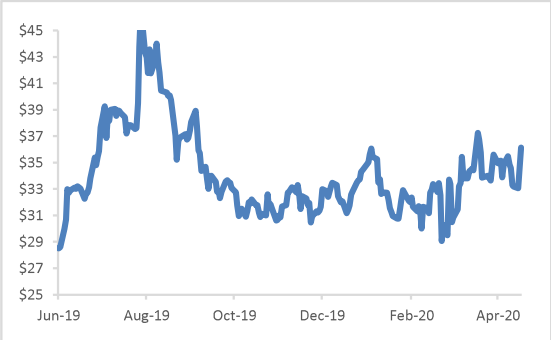
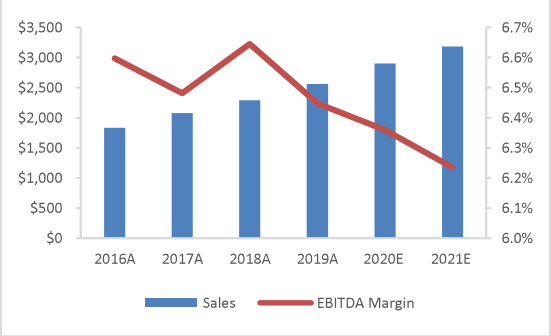
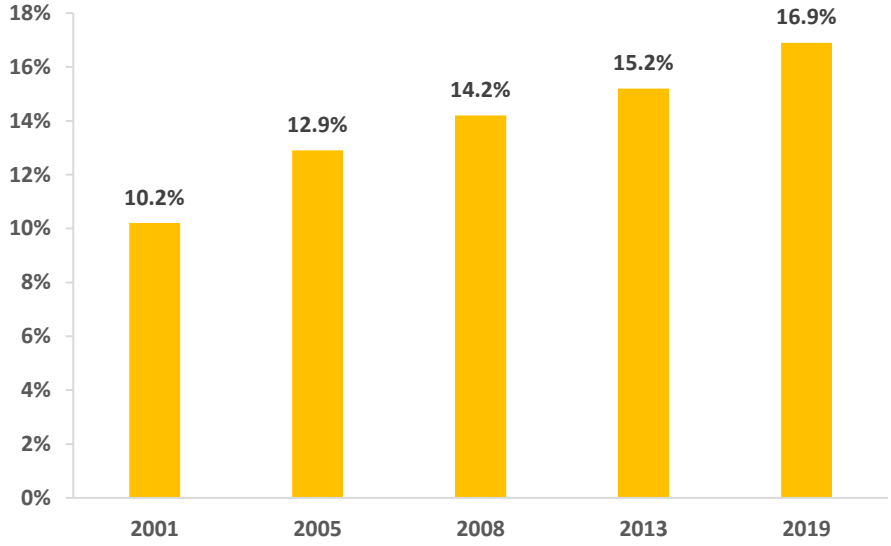


Figure 2 – Forecasted Financials ($mm)

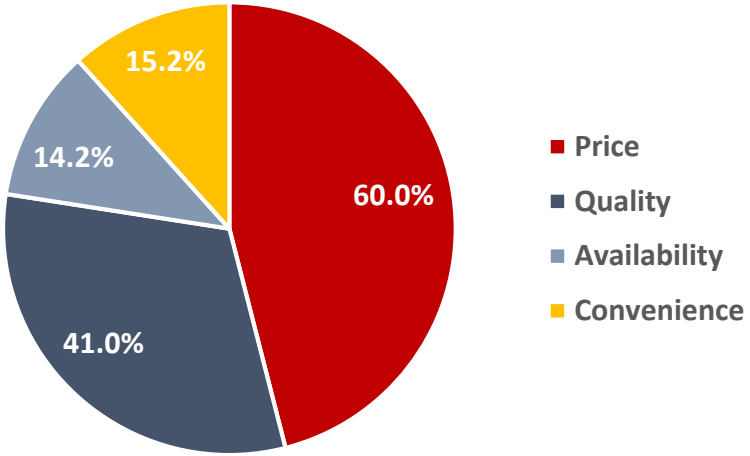


Favorable Off-Price Industry Dynamics

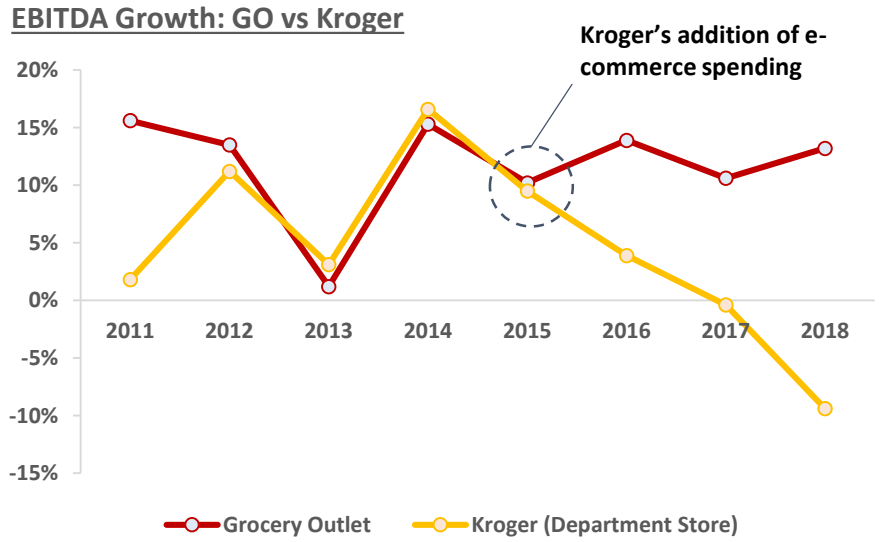
Value Chains Growing Retail Market Shares



Price as Priority For Grocery Shoppers



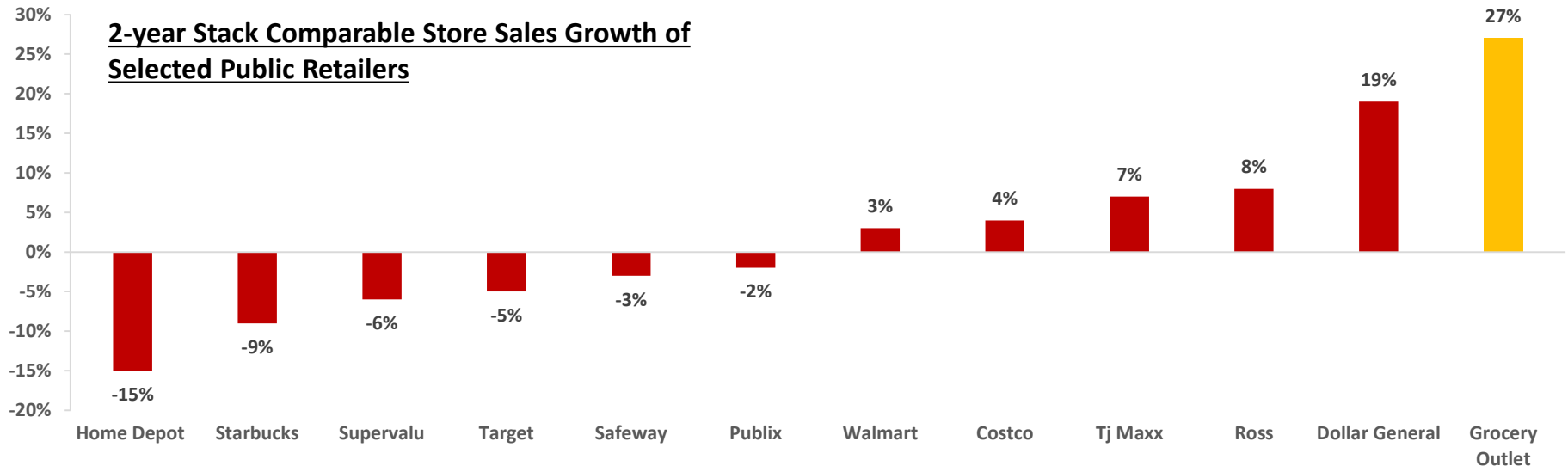
Resiliency of Off-Price vs Traditional Retail



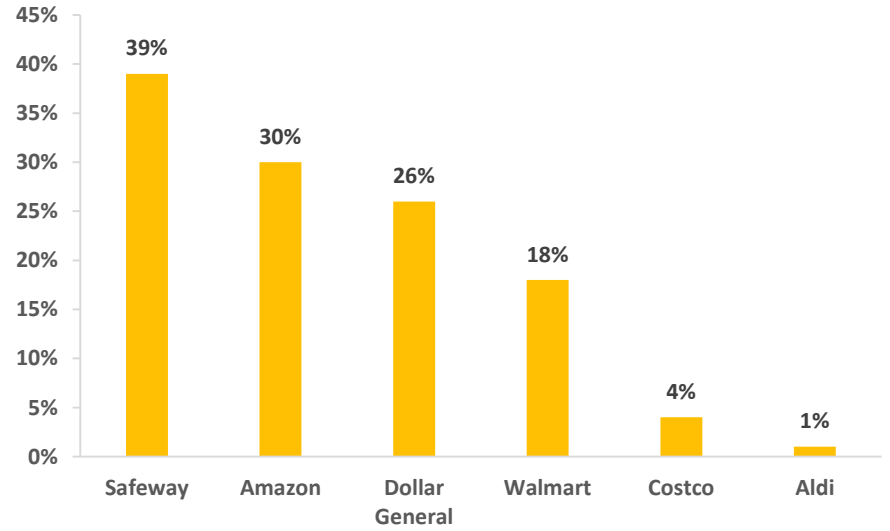
Superior Store Efficiency (Avg Sqf / Store)

Stable Retail Business that Outperforms During Recession

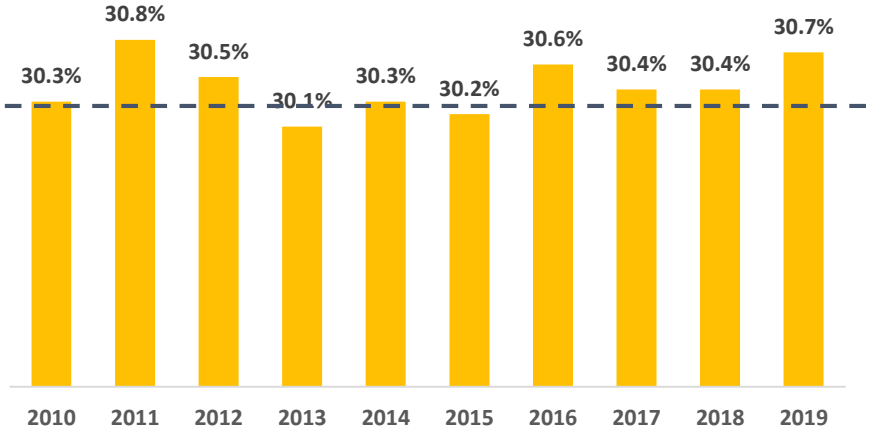
Recessionary Conditions (2008 – 2009)



GO Average Pricing Discount to Competitors



GO Historical Gross Margins



Efficient & Flexible Sourcing Model in Secondary Market

Three-step Sourcing Model

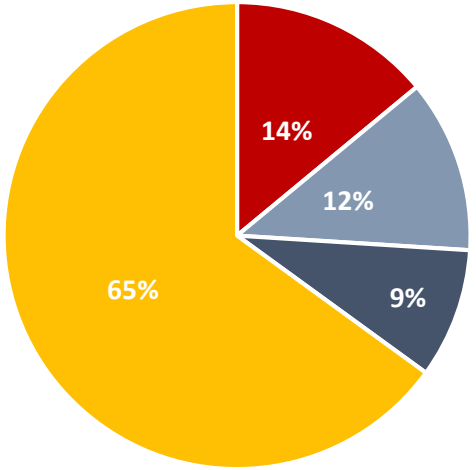
Order Placement (1-day) → **Pick-up / Receive Products (1-2 weeks)** → **Delivery to GO Stores (2-3 days)**

- GO maintains regular contact with suppliers
- Purchase orders are made within 24 hours after contact

- GO picks up products at the supplier facility
- Or the product is shipped by the suppliers to GO distribution centers

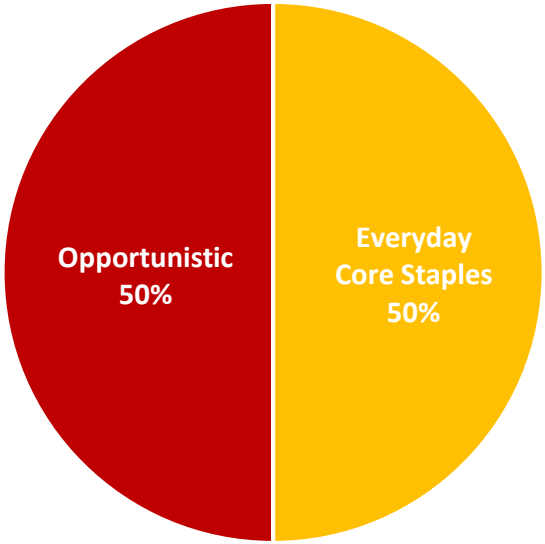
- Once a IO places an order, products will be shipped from GO distribution centers to stores within 2-3 days

Secondary Market Share



- Grocery Outlet
- Big Lots
- 99c Only
- Other

Primary Purchasing Methods



Supplier Relationship

Supplier	Relationship (Years)	Supplier	Relationship (Years)
General Mills	40+	Chobani	5
Kellogg's	40+	Newman's Own	5
Nestle	40+	Chosen Foods	4
Campbell's	30+	Alasko	3
Conagra	30+	Three Twins	3
Smucker's	30+	Bragg	2
Kraft Heinz	20+	Dr. Bronner's	2
Mars	20+	Humm Kombucha	2
P&G	20+	Quest Nutrition	2
Unilever	20+	YesTo	2

Independent Operator Model to Reduce Fixed Cost

Division of Profits / Roles

Grocery Outlet Role:

Operational

- Sourcing & Pricing
- Recruiting & Training IOs
- Real Estate

Financial

- Own Inventory (consigned to IOs)
- Regional Marketing
- Rent, Corporate SG&A, capex

Independent Operator Role:

Operational

- Merchandise & Manage inventory
- Hire& Train Employees
- Modify Pricing

Financial

- Employee Wages
- Store Operating Expenses, Assets, Working Capital
- Local Marketing

GO sets prices centrally but IOs do have the ability to adjust prices locally

50% ← Split on Gross Profit → 50%

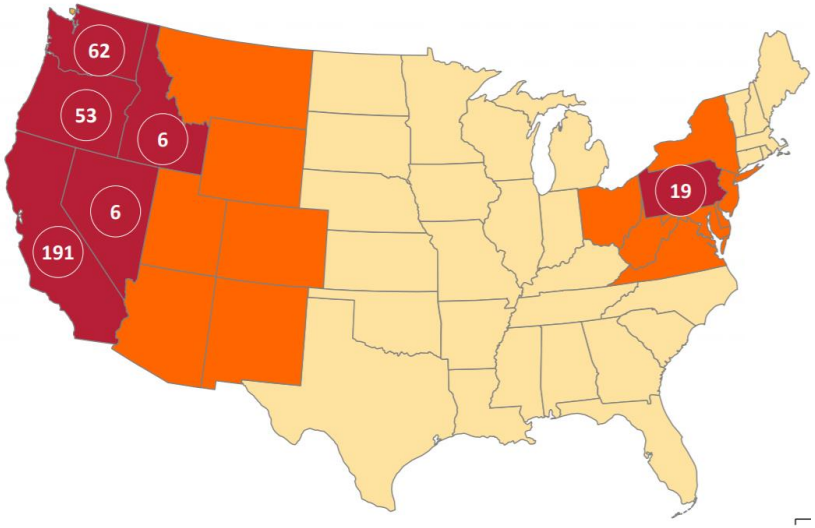
Projected Store Unit Economics ($000)

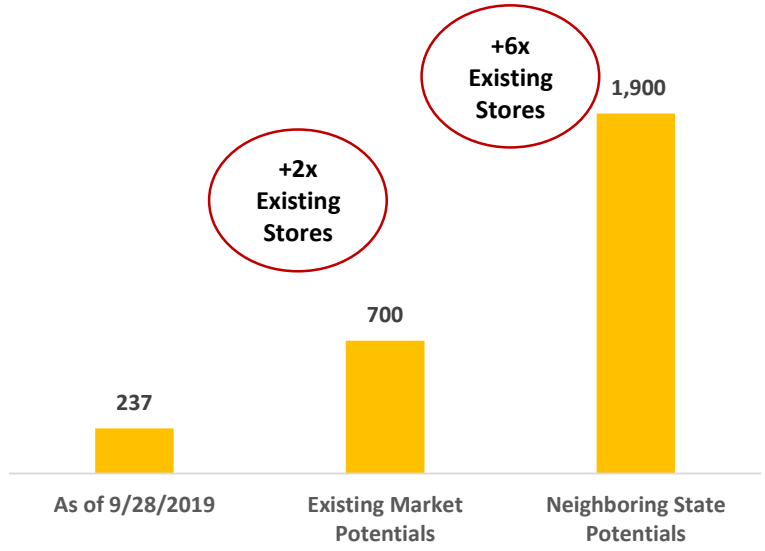
Upfront Investment	GO	IO	Total
Capex Buildout	$1,700		$1,700
Inventory/ Pre-opening	$250		$250
IO Assets/ Working Capital		$250	$250
Total Investments	$1,950	$250	$2,200

Illustrative Year 4 P&L	GO	IO	Total
Sales(total)	$6,875		$6,875
Gross Profit(total)	$2,100		$2,100
Share of Gross Profit (50%/50%)	$1,050	$1,050	$2,100
Wages, Taxes, Benefits		($600)	
Occupancy	($350)		
Other	($20)	($250)	
Total Expenses	($370)	($850)	($1,220)
4- Wall EBITDA	$680	$200	$880
% of Sales	10%	3%	13%
% of Total EBITDA	77%	23%	100%
Payback Period	< 3 Years		

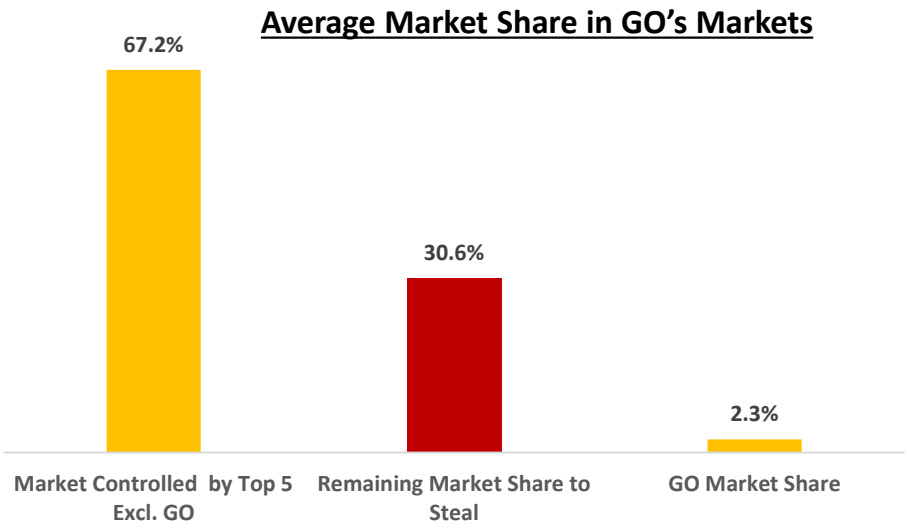
Expansion Strategy & Success

Management Guidance on Long-Term Store Target





Taking Shares in Existing Markets

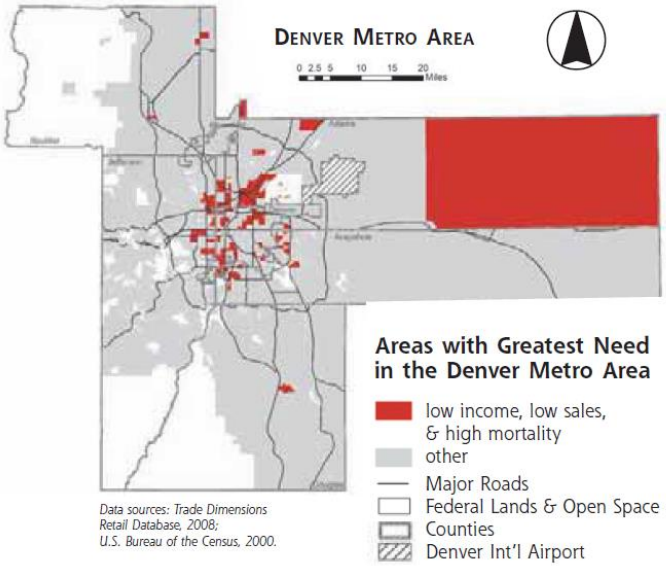


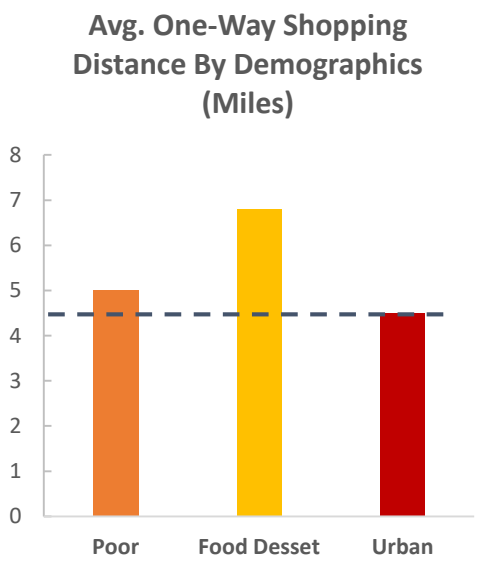
Long-term Growth in East Cost Via Acquisition

GO Acquired Amelia's in 2011 – since then has rebranded and expanded to 19 store locations at a 10% growth rate

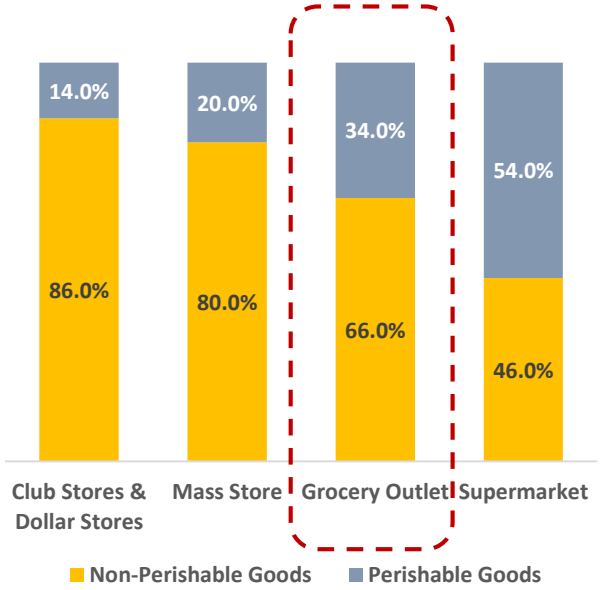
Closing Grocery Gap Through New Markets Penetration

Grocery Store Shortages in Lower Income Areas





Fresh Offering to Drive Traffic



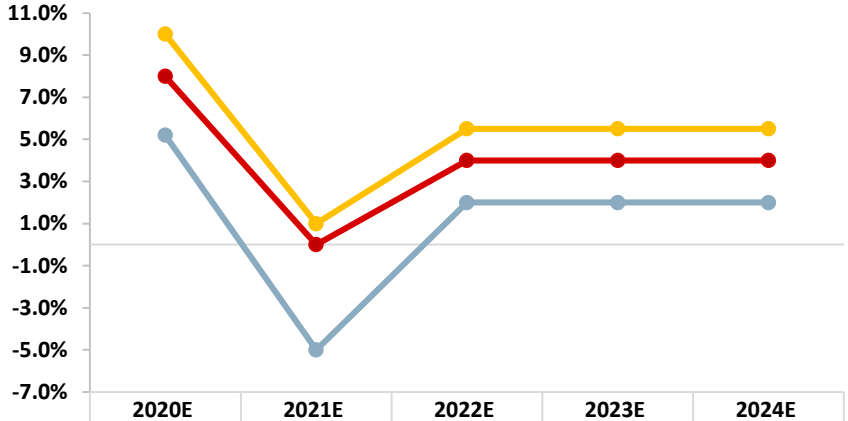
TAM Analysis - Limited Market Saturation Supports Near-Term Expansion

	California	Arizona	Colorado
Current store units	7,813	449	533
Populations	39,510,000	7,279,000	5,758,736
Per capita Income	$35,021	$29,265	$36,415
Grocery spending / Income	10%	10%	10%
Grocery Spending per capita	$3,502	$2,927	$3,642
Total Grocery Spending	$138,367,971,000	$21,301,993,500	$20,970,437,144

	Low-end	High-end	Low-end	High-end	Low-end	High-end
Average Revenue per Store	$20,000,000	$15,000,000	$15,000,000	$10,000,000	$15,000,000	$10,000,000
Estimated Saturation units	6,918	9,225	1,420	2,130	1,398	2,097
Growth Opportunity units	**(895)**	**1,412**	**971**	**1,681**	**865**	**1,564**

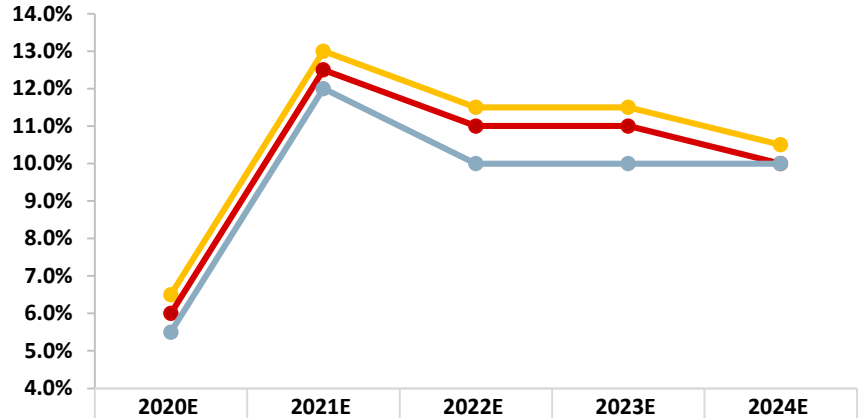
Valuation: Assumptions – Case Scenarios

Comparable Store Sales Growth



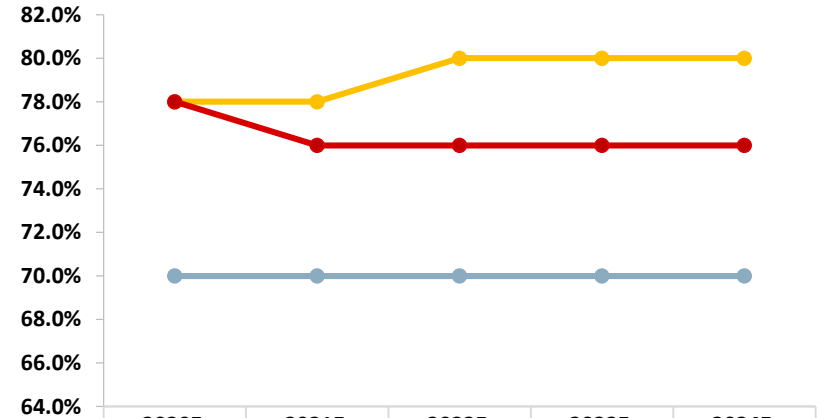
	2020E	2021E	2022E	2023E	2024E
Bull Case	10.0%	1.0%	5.5%	5.5%	5.5%
Base Case	8.0%	0.0%	4.0%	4.0%	4.0%
Bear Case	5.2%	-5.0%	2.0%	2.0%	2.0%

New Store Opening Growth



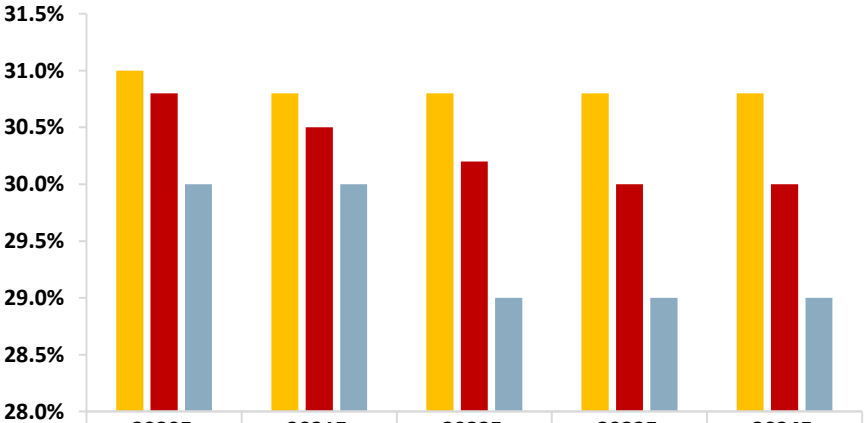
	2020E	2021E	2022E	2023E	2024E
Bull Case	6.5%	13.0%	11.5%	11.5%	10.5%
Base Case	6.0%	12.5%	11.0%	11.0%	10.0%
Bear Case	5.5%	12.0%	10.0%	10.0%	10.0%

New Store Productivity Factor



	2020E	2021E	2022E	2023E	2024E
Bull Case	78.0%	78.0%	80.0%	80.0%	80.0%
Base Case	78.0%	76.0%	76.0%	76.0%	76.0%
Bear Case	70.0%	70.0%	70.0%	70.0%	70.0%

Gross Margin



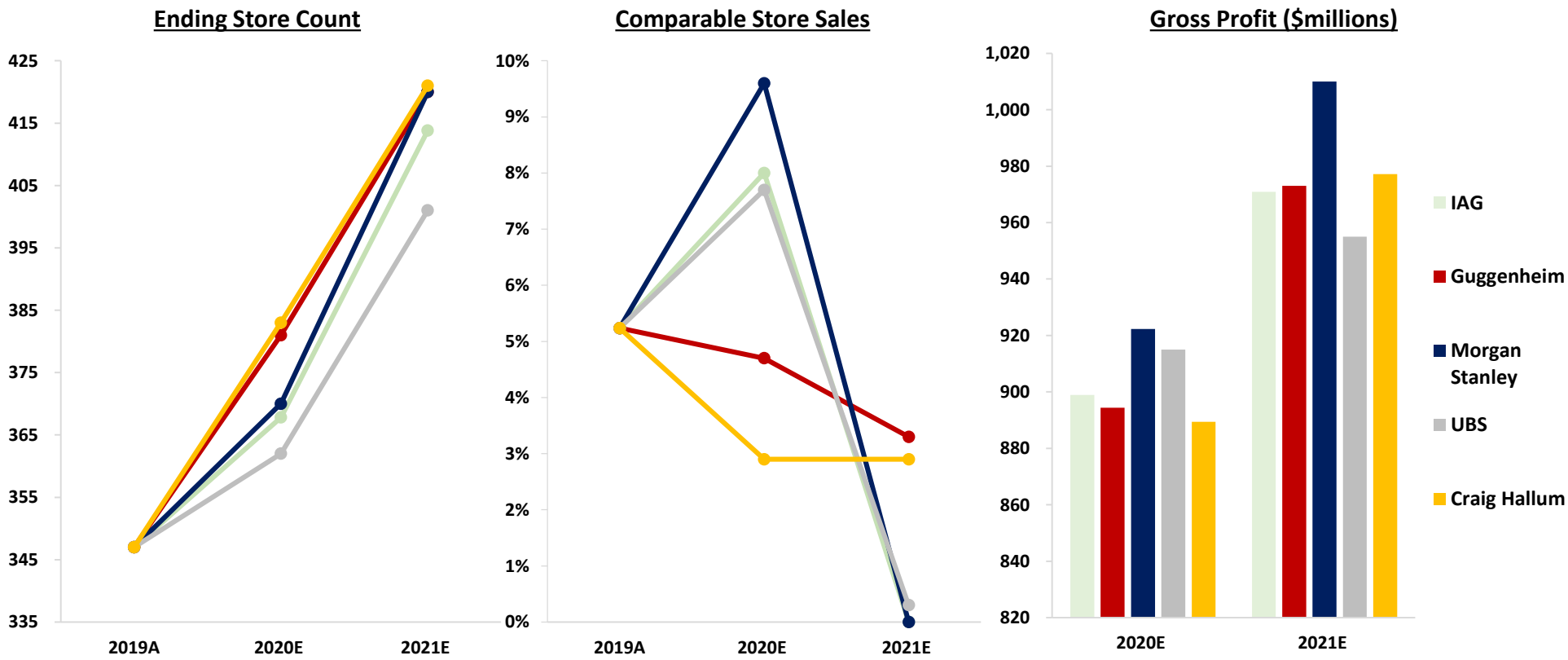
	2020E	2021E	2022E	2023E	2024E
Bull Case	31.0%	30.8%	30.8%	30.8%	30.8%
Base Case	30.8%	30.5%	30.2%	30.0%	30.0%
Bear Case	30.0%	30.0%	29.0%	29.0%	29.0%

Valuation: Assumptions – Case Scenarios (Cont.)

Share Price Upside / (Downside)

Current Price: $36.71	Base Case: $41.95 Upside: 14.3%	Bear Case: $29.89 Downside: -18.6%	Bull Case: $51.04 Upside: 39.0%

IAG (Base Case) vs Equity Research Estimates



Valuation: Revenue Build – Base Case

Revenue Build (in $ Millions)	2016A	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E
Store Metrics									
Stores (Beginning of Period)	237	265	293	316	347	368	414	459	510
Net New Stores	28	28	23	31	21	46	46	51	51
Ending Stores	**265**	**293**	**316**	**347**	**368**	**414**	**459**	**510**	**561**
% Change		**10.6%**	**7.8%**	**9.8%**	**6.0%**	**12.5%**	**11.0%**	**11.0%**	**10.0%**
Bull Case					6.5%	13.0%	11.5%	11.5%	10.5%
Base Case					6.0%	12.5%	11.0%	11.0%	10.0%
Bear Case					5.5%	12.0%	10.0%	10.0%	10.0%
Total Square Footage (000's)	3,710	4,102	4,424	4,858	5,149	5,793	6,430	7,138	7,852
% Change		*10.6%*	*7.8%*	*9.8%*	*6.6%*	*13.5%*	*10.0%*	*10.0%*	*10.0%*
Avg Square Footage (000's)	3,710	3,906	4,263	4,641	5,004	5,471	6,112	6,784	7,495
% Change		*5.3%*	*9.1%*	*8.9%*	*7.8%*	*9.3%*	*11.7%*	*11.0%*	*10.5%*
Avg. Sq. Footage Per Store	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
% Change		*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*

Store Sales									
Sales Per Average Store (000's)	$7,296.9	$7,438.9	$7,512.8	$7,721.3	$8,113.4	$8,145.5	$8,254.8	$8,414.5	$8,554.9
% Change		*1.9%*	*1.0%*	*2.8%*	*5.1%*	*0.4%*	*1.3%*	*1.9%*	*1.7%*
Sales Per Average Sq. Ft.	$493.7	$531.4	$536.6	$551.5	$579.5	$581.8	$589.6	$601.0	$611.1
% Change		*7.6%*	*1.0%*	*2.8%*	*8.8%*	*-1.0%*	*0.8%*	*2.2%*	*2.2%*
Comparable Stores Sales		$1,928.7	$2,155.7	$2,407.4	$2,764.4	$2,899.8	$3,310.6	$3,747.8	$4,240.6
Comp Growth	**3.6%**	**5.3%**	**3.9%**	**5.2%**	**8.0%**	**0.0%**	**4.0%**	**4.0%**	**4.0%**
Bull Case					10.0%	1.0%	5.5%	5.5%	5.5%
Base Case					8.0%	0.0%	4.0%	4.0%	4.0%
Bear Case					5.2%	-5.0%	2.0%	2.0%	2.0%
New/Acquired Stores		$146.8	$132.0	$124.9	$135.4	$283.5	$293.1	$329.7	$339.1
Productivity Factor		**151.8%**	**69.2%**	**75.0%**	**78.0%**	**76.0%**	**76.0%**	**76.0%**	**76.0%**
Bull Case					78.0%	78.0%	80.0%	80.0%	80.0%
Base Case					78.0%	76.0%	76.0%	76.0%	76.0%
Bear Case					70.0%	70.0%	70.0%	70.0%	70.0%
Total Sales	**$1,832**	**$2,075**	**$2,288**	**$2,560**	**$2,900**	**$3,183**	**$3,604**	**$4,077**	**$4,580**
% Change		*13.3%*	*10.2%*	*11.9%*	*13.3%*	*9.8%*	*13.2%*	*13.1%*	*12.3%*

Valuation: Operating Build – Base Case

Operating Build ($ millions)	2016A	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E
Sales	$1,831.5	$2,075.5	$2,287.7	$2,559.6	$2,899.8	$3,183.3	$3,603.7	$4,077.5	$4,579.7
Cost of Sales	1,270.4	1,443.6	1,590.6	1,770.2	2,006.7	2,212.4	2,515.4	2,854.2	3,205.8
Gross Profit	**561.2**	**631.9**	**695.4**	**787.1**	**893.1**	**970.9**	**1,088.3**	**1,223.2**	**1,373.9**
IO Commissions	269.4	303.3	333.8	377.8	428.7	466.0	522.4	587.2	659.5
Rent	62.8	79.4	86.0	96.2	110.2	121.0	136.9	154.9	174.0
Advertising Expense	19.8	20.8	21.2	23.7	26.1	28.6	32.4	36.7	41.2
Other SG&A	88.4	93.9	104.1	123.3	135.7	147.8	168.4	191.8	214.1
Total SG&A	**440.3**	**497.4**	**545.0**	**621.0**	**700.7**	**763.4**	**860.1**	**970.6**	**1,088.8**
Depreciation & Amortization	24.5	30.2	34.3	40.8	46.5	51.1	57.8	65.4	73.5
Stock Based Compensation	2.9	1.7	10.4	31.2	8.1	9.0	9.1	9.2	9.4
Total Operating Expenses	**467.8**	**529.2**	**589.8**	**693.0**	**755.3**	**823.5**	**927.0**	**1,045.2**	**1,171.6**
Operating Profit	**$96.3**	**$104.3**	**$117.7**	**$124.3**	**$137.9**	**$147.4**	**$161.3**	**$178.0**	**$202.3**
Depreciation & Amortization	24.5	30.2	34.3	40.8	46.5	51.1	57.8	65.4	73.5
EBITDA	**$120.8**	**$134.5**	**$152.0**	**$165.0**	**$184.4**	**$198.5**	**$219.1**	**$243.5**	**$275.8**

Margins Analysis									
Gross Margin	**30.6%**	**30.4%**	**30.4%**	**30.8%**	**30.8%**	**30.5%**	**30.2%**	**30.0%**	**30.0%**
Bull Case					31.0%	30.8%	30.8%	30.8%	30.8%
Base Case					30.8%	30.5%	30.2%	30.0%	30.0%
Bear Case					30.0%	30.0%	29.0%	29.0%	29.0%
SG&A	**24.0%**	**24.0%**	**23.8%**	**24.3%**	**24.2%**	**24.0%**	**23.9%**	**23.8%**	**23.8%**
IO commission (% of GM)	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%
Rent (% of Sales)	3.4%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Advertising (% of sales)	1.1%	1.0%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
Other SG&A (sales)	4.8%	4.5%	4.5%	4.8%	4.7%	4.6%	4.7%	4.7%	4.7%
D&A (% of sales)	1.3%	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
EBITDA Margin	**6.6%**	**6.5%**	**6.6%**	**6.4%**	**6.4%**	**6.2%**	**6.1%**	**6.0%**	**6.0%**
EBIT Margin	**5.3%**	**5.0%**	**5.1%**	**4.9%**	**4.8%**	**4.6%**	**4.5%**	**4.4%**	**4.4%**

Capital Expenditures & NWC									
Total Capital Expenditures	**58.7**	**71.1**	**64.8**	**97.2**	**76.8**	**143.3**	**148.7**	**165.6**	**171.1**
Capex % of Sales	*3.2%*	*3.4%*	*2.8%*	*3.8%*	*2.7%*	*4.5%*	*4.1%*	*4.1%*	*3.7%*
New Store Capex	**$44.70**	**$46.07**	**$45.76**	**$67.19**	**$46.85**	**$110.35**	**$113.79**	**$126.31**	**$127.46**
Capex / New Store	$1.60	$1.65	$1.99	$2.17	$2.25	$2.40	$2.50	$2.50	$2.50
Existing Store Capex	**$14.00**	**$25.00**	**$19.00**	**$30.00**	**$30.00**	**$32.94**	**$34.92**	**$39.28**	**$43.61**
Capex / Existing Store	*$0.06*	*$0.09*	*$0.06*	*$0.09*	*$0.09*	*$0.09*	*$0.09*	*$0.09*	*$0.09*
Change in NWC	**($9.2)**	**($8.1)**	**($0.9)**	**$22.3**	**($0.4)**	**($0.5)**	**($0.6)**	**($0.6)**	**($0.7)**
% of Sales	-0.5%	-0.4%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%

Valuation: DCF – Base Case

Free Cash Flow Calculation								
	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E
EBIT	104.3	117.7	124.3	137.9	147.4	161.3	178.0	202.3
Taxes @ 21%	*(21.9)*	*(24.7)*	*(26.1)*	*(29.0)*	*(31.0)*	*(33.9)*	*(37.4)*	*(42.5)*
EBIAT	**82.4**	**93.0**	**98.2**	**108.9**	**116.4**	**127.4**	**140.6**	**159.8**
D&A (+)	30.2	34.3	40.8	46.5	51.1	57.8	65.4	73.5
Adjusted SBC (+)	1.7	10.4	31.2	8.1	9.0	9.1	9.2	9.4
CapEx (-)	(71.1)	(64.8)	(97.2)	(76.8)	(143.3)	(148.7)	(165.6)	(171.1)
Change in NWC (-)	(8.1)	(0.9)	22.3	(0.4)	(0.5)	(0.6)	(0.6)	(0.7)
FCF	**$35.1**	**$72.0**	**$95.2**	**$86.2**	**$32.7**	**$45.0**	**$49.1**	**$70.9**
Period				1.0	2.0	3.0	4.0	5.0
Discount Factor				0.94	0.89	0.83	0.78	0.74
PV of CF				**$81.1**	**$29.0**	**$37.5**	**$38.5**	**$52.3**

Weighted Average Cost of Capital	
Risk Free Rate	0.6%
Beta	0.8
Equity Risk Premium	6.9%
Cost of Equity	**6.1%**
Cost of Debt	6.6%
After-tax Cost of Debt	**5.2%**
WACC	**6.3%**

Terminal Value: Exit Multiple	
Exit EV/EBITDA Multiple	19.0x
EBITDA (2024E)	$275.8
PV of FCF	$238.3
Present Value of TV	$3,862.9
Total EV	$4,101.2
Less: Net Debt	$371.5
Equity Value	$3,729.7
Equity Value Per Share	$41.95
Upside / (Downside)	**14.3%**

Sensitivity Analysis: Share Price Upside

Discount Rate \ Terminal Multiple	14.0x	17.0x	19.0x	20.0x	21.0x
9.0%	-27.7%	-11.2%	-0.2%	5.3%	10.8%
8.0%	-23.9%	-6.6%	4.9%	10.6%	16.4%
7.0%	-19.9%	-1.8%	10.3%	16.3%	22.3%
6.3%	-16.9%	1.8%	14.3%	20.5%	26.7%
6.0%	-15.6%	3.3%	15.9%	22.3%	28.6%

Discount Rate \ Perpetuity Growth	4.00%	4.50%	4.75%	5.00%	5.25%
9.0%	-77.6%	-74.5%	-72.7%	-70.6%	-68.2%
8.0%	-68.8%	-63.5%	-60.3%	-56.5%	-52.0%
7.0%	-54.1%	-43.7%	-36.8%	-28.2%	-17.2%
6.3%	-35.8%	-16.4%	-1.9%	18.1%	47.8%
6.0%	-24.4%	2.6%	24.3%	56.7%	110.8%

Funko Inc. (NASDAQ: FNKO)

Funko: Not a Fad but the Best Monetizer of Fads

Caleb Nuttle
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Vincent Ye
Junior Analyst
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Price Target: $7.34 - $5.96 (55.15% - 26.08% upside)

May 11th, 2020

Business Description:

Funko Inc. is an American based company which designs and manufactures licensed pop culture collectibles. Sales for the company for 2019, 2018, and 2017 were $795 million, $686 million, and $516 million, respectively. This represents a sales growth of 24.12% CAGR over the three-year period. The company primarily relies on their "Pop!" branded figurines, which represent ~80% of the company's annual revenues. The remaining 20% is generated from recent acquisitions of "Loungefly" - which makes primarily plushies and kids backpacks - and "Forrest-Pruzan Creative" - a board-game company. Funko primarily sells in the US, representing ~66% of annual sales, with international sales representing the remaining ~34%. The collectibles are usually retailed for ~$20 a model, and are sold through a distribution network including GameStop, Hot-Topic, and Amazon. The company's products focus on including the products iconic style, with the figurines having oversized heads and eyes with no mouth (*Fig. 2*).

Business Quality:

- **Attractive Customer Base:** It is especially important to analyze the consumer base of Funko Pops to fully understand why so many people would willingly pay $20+ for some plastic bobble-heads. Firstly, there is a missive fandom for these Funko Pops, eBay has over 450,000 unique listing for reselling certain Pops. There is a subreddit called r/Funkopop that has over 128,000 active members, with entire YouTube channels focused on searching for rare pops. Funko intentionally fosters this treasure hunt experience, with the company creating and randomly spreading special versions of their products called "flocked" models, which will have a different color palette or finish. These models are sold at regular retail prices, but some can easily be resold for over $1,000 a few years later. In consumer research for Funko Pops, 36% of customers were pure collectors of Funko Pops (collecting the toy for a collection rather than the underlying IP), 33% buying for both the IP and Funko, and the remainder buying just for the IP.
- **Licensing Relationships:** Funko does not own the underlying IP for most of their products, as such the company must continually collect and manage new IPs. Funko has over 800 active licensed properties with over 200 individual content providers. Funko works with large media and entertainment companies (such as *HBO*, *Disney*, and *Valve*) to get a confidential pipeline of new shows/movies/games that will be coming out in the next few years. The company then predicts which they believe will be successful and negotiate licenses for usually 15-18% of the model's revenues. Additionally, Funko can design and begin manufacturing within 24 hours of signing the contract and can quickly retool and build molds for the model for only $5-7K each product.

Industry Drivers:

- **Traditional Brick & Mortar Struggles:** A significant portion of Funko sales are through traditional brick & mortar retail. GameStop and Hot Topic represents ~10% and 8% of sales, respectively. Around 4% of 2019 sales were directly through Funko's online shop, with management investing significant resources into growing this in the future. GameStop and Hot Topic are a source of risk for the company, as both companies have significant leverage and declining sales. However, Funko sells on average $1 million on average per store location, and as such most retail stores have increased dedicated shelf space for Funko every year.

Key Ratios and Statistics:

Recommendation	**Buy/Long**
Price Target	$7.34 - $5.96
Implied Return	55.15% - 26.08%
Share Price (5/8/2020)	$4.73
EV/EBITDA	6.84x
P/E	13.28x
Market Cap	$233.99 M
52-Week Low	$3.12
52-Week High	$27.89

Figure 1 – (FKNO) 52-Week Stock Performance

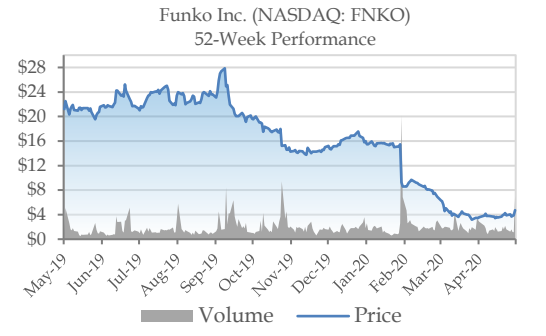
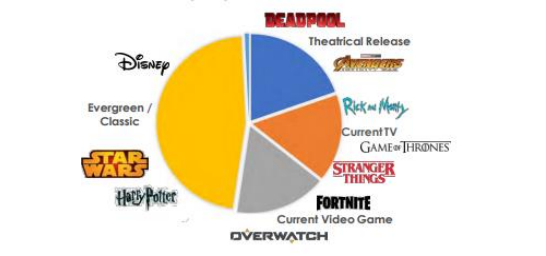


Figure 2 – Funko "Pop!" Figurine Example

Figure 3 – License Contract Distribution



Investment Thesis:

- **Market Overreaction to Inventory Write-Down:** Shortly following the initial sell-off in early February, management wrote down inventory by $16.8 million. This prompted a significant sell-off as well as a weaker holiday season than 2018. Additionally, there has been a shareholder lawsuit filed against the company, claiming management mislead investors on the value of the products. While this is a concern, many retail companies often write-down assets/inventory during a downturn. Additionally, this write-down makes sense, as 13% of Funko's product launches fail to clear inventory. This sell-off seems unjustified, as it is not indicative of the success of future model launches for the company.
- **Strong Customer Base Offsets Weak Retail Exposure from COVID:** The most recent quarterly earnings for Funko came in -18% YoY due to store closures but showed resilience in pre-sale revenues. Consumers who are avid collectors of Funko are still buying the collectible products online, and preordering future releases. Overall, as the company begins strengthening their online retail business, we believe the products loyal customer base will offset a lot of future impacts of COVID quarantine. Additionally, the market valuation of Funko implied a -16% sales drop for 2020, and a 4-year recovery period to return to 2019 revenues.
- **Strengthening IP Creates Favorable Royalty Contracts Going Forward:** Funko has a very friendly relationship with content creators, such as HBO and Disney. While the royalty fees are higher than might be seen across other products, the rates have fallen by ~0.5% annually for the past 4 years. This is due to Funko developing its own brand, adding value to the product over just the underlying IP. Additionally, Disney – who is a key partner to Funko – has begun buying and designing unique "Pops" after their rides in all their parks, which can only be bought in the actual gift-shop location. This signals to us that Disney recognizes the value that the Funko brand and style adds, and as such Funko will be able to negotiate to keep more revenues going forward.

Risks:

- **Disney & Media Industry Consolidation:** If the media and entertainment industry begin consolidating even further going forward, Funko will be in a worse position to negotiate royalty fees.
- **Corporate Structure:** Funko Inc is a subsidiary of FAH LLC. Funko Inc. controls 68.7% of FAH LLC, and as such we as equity holders are entitled to 68.7% of net income. The remaining stake of FAH LLC is controlled by private-equity firm "*ACON Investments*", who bought the company back in 2015. ACON is allowed to raise additional capital in Funko trough issuing additional shares, which could dilute initial equity holders in the business.
- **Prolonged COVID Retail Struggle Through 2021:** If COVID continues to disrupt retail into 2021 as significantly as it will in 2020, Funko will have a hard time recovering historic sales growth numbers.

Catalysts:

- **"The Funko Movie" Release:** Warner Animation Group (WAG) announced in late 2019, that they were in full development on a Funko Pop movie. WAG had previously produced "*The LEGO Movie*". The Funko movie is being directed by Mark Dindal, who famously directed both "*The Emperor's New Groove*" and "*Chicken Little*". Additionally, Pixar artist Teddy Newton, who worked on "Toy Story 3" and "Wall-E", was working on animation and story for the movie. As a point of reference, "*The LEGO Movie*" increased sales of LEGO toys by 25% the next year. The movie would help build Funko's brand and is likely to release in late 2020 or early 2021.
- **COVID Recovery in Retail:** Currently ER analysts predict Funko will recover back to full 2019 revenues by the end of 2021, but if recovery time is faster due to online sales growth, Funko could likely rebound. Funko recently released an app for collecting and selling Pops and has expanded the number of products available from their online store.

Figure 4 – Funko IP Contract Portfolio

Figure 5 – Funko Corporate Structure

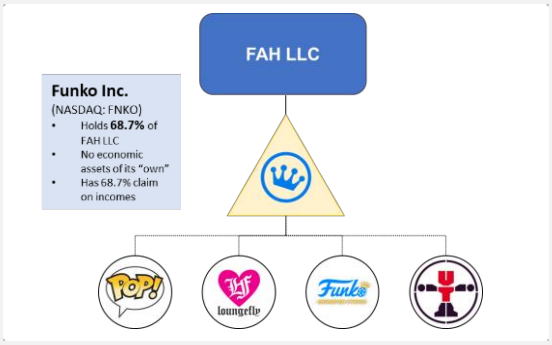
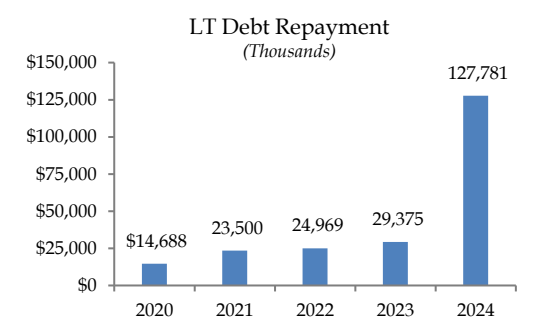


Figure 6 – Funko Retail Network

Figure 7 – Funko Debt Repayment (2020-2024)



Income Statement (Thousands)								
Date	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**
Net Sales	**516,084**	**686,073**	**795,122**	**652,000**	**717,200**	**788,920**	**852,034**	**894,635**
Cost of Sales,	317,267	430,746	512,580	414,290	455,719	501,291	541,394	568,464
Selling, General and Administrative Expenses	120,944	155,321	193,803	154,486	169,935	186,929	201,883	211,977
Depreciation & Amortization	31,975	39,116	42,126	42,890	38,964	34,033	37,465	30,390
Acquisition Transaction Costs	3,641	28	-	-	-	-	-	-
Total operating expenses	473,827	625,211	748,509	611,666	664,618	722,253	780,742	810,831
Income from Operations	**42,257**	**60,862**	**46,613**	**40,334**	**52,582**	**66,667**	**71,291**	**83,804**
Interest Expense, Net	30,636	21,739	14,342	11,016	22,031	22,031	27,539	27,539
Other Income/expense-net	(734)	4,082	(25)	-	-	-	-	-
Loss on Extinguishments of Debt	5,103	4,547	-	-	-	-	-	-
Earnings before Taxes	**7,252**	**30,494**	**32,296**	**29,318**	**30,551**	**44,636**	**43,752**	**56,265**
Provision for Income Tax	1,266	5,432	4,476	6,157	6,416	9,373	9,188	11,816
Net Income	**5,986**	**25,062**	**27,820**	**23,161**	**24,135**	**35,262**	**34,564**	**44,450**
Less: Minority Interest (After Tax)	2,047	17,599	16,095	10,423	10,861	15,868	15,554	20,002
Net Income Attributable to Funko Inc. (Loss)	**3,939**	**7,463**	**11,725**	**12,739**	**13,274**	**19,394**	**19,010**	**24,447**

Funko (FNKO)		
Cost of Equity		6.49%
Market Value of Equity	$	198,370,000
Cost of Debt		12.50%
Market Value of Debt	$	315,260,000
Total Market Value of Debt and Equity	$	513,630,000
Tax Rate		21.00%
Beta Coefficient		0.98
WACC		**8.57%**

Years Ended (In Thousands, Except Per Share Amounts)	2020	2021	2022	2023	2024	TV
EBIT	46,319	59,165	73,908	79,112	92,016	
Less: Income Tax	(9,727)	(12,425)	(15,521)	(16,614)	(19,323)	
Tax Rate	21%	21%	21%	21%	21%	
(+) D&A	42,890	38,964	34,033	37,465	30,390	
(-) Changes in NWC	23,411	20,626	22,238	18,545	12,906	
(-) Capital Expenditures	53,385	51,738	51,294	49,375	47,753	
Free Cash Flow	**2,685**	**13,340**	**18,889**	**32,043**	**42,423**	**658,739**
Discount Factor	1.00	2.00	3.00	4.00	5.00	5.00
Discount Period	1.00	2.00	3.00	4.00	5.00	5.00
Discount Rate	8.57%					
Present Value of Cash Flow	2,473.42	11,317.36	14,760.58	23,063.07	28,124.07	436,703.14
Cash Flows	79,738.50					
Terminal Growth	2.0%					
Terminal Value	436,703.14					
"-Debt + Cash - Minority Interest"	-274817					
$ / Share	$ 7.34					
Shares Outstanding	32,926					
Implied Upside	**55.15%**		**Current Price (4/29/2020)**		**$ 4.73**	

Income Statement (Thousands)												
Date	**FY 2017**	**FY 2018**	**FY 2019**	**3/30/2020**	**6/30/2020**	**9/30/2020**	**12/30/2020**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**
Sales Growth (%)	20.9%	32.9%	15.9%	-18.0%	-18.0%	-8.0%	-5.0%	-11.7%	10.0%	10.0%	8.0%	5.0%
Cost of Sales (% of Sales)	61.5%	62.8%	64.5%	62.3%	62.3%	61.7%	67.6%	63.6%	63.6%	63.6%	63.6%	63.6%
SG&A (% Sales)	23.4%	22.6%	24.4%	24.9%	23.9%	23.4%	22.9%	23.7%	23.7%	23.7%	23.7%	23.7%
D&A (% of Total)	100.00%	100.00%	100.00%	23.9%	24.7%	25.2%	26.3%	100.00%	100.00%	100.00%	100.00%	72.14%

FY 2020 Revenue Impact											
Terminal Growth		-20.0%	-19.0%	-18.0%	-17.0%	-16.0%	-15.0%	-14.0%	-13.0%	-12.0%	-11.0%
	-0.50%	-67%	-61%	-56%	-51%	-46%	-41%	-36%	-31%	-26%	-20%
	0.00%	-56%	-51%	-45%	-40%	-35%	-29%	-24%	-18%	-13%	-7%
	0.50%	-45%	-39%	-33%	-27%	-22%	-16%	-10%	-4%	1%	7%
	1.00%	-31%	-25%	-19%	-13%	-7%	-1%	5%	11%	18%	24%
	1.50%	-16%	-10%	-3%	3%	10%	16%	23%	29%	36%	42%
	2.00%	1%	8%	15%	22%	29%	36%	43%	50%	57%	64%
	2.50%	21%	29%	37%	44%	52%	59%	67%	74%	82%	89%

Business Overview

Funko Inc. History & Overview

What is Funko?

- Funko is an American based company which designs, manufactures, and distributes licensed pop culture collectibles
- The company has many products, but primarily generates revenue from their "Pop" product line
- The company sold $795 million worth of products in 2019

"Everyone is a fan of something…and Funko has something for every fan"

Company History

1998 – Company founded in Washington State by avid toy collector

2005 – Company defines their own style and begins early production of "Pop" figurines

2012 – Hits annual sale target of $20 million

2013 – Funko sold to "*Fundamental Capital*", a San Francisco based private equity firm

2015 – Private Equity Firm "*ACON*" acquires Funko from "*Fundamental Capital*"

2017 – Funko is taken public on NASDAQ for $12 a share, implying a market value of ~$125 million

Private Equity History

fundamental capital smart investing by data **- 2013**

2015 - ACON

Business Overview

Product Lines, Revenues, and Turnover Times

Funko "Pops"

80% of Annual Revenue

- *Vinyl Bobble-head figurines*
- *Over 8,399 different figures*

Lounge-Fly

15% of Annual Revenue

- *Kids backpacks and bags*
- *Similar concept to "Pops"*
- *Targeted to younger audience*

Board-Games

<5% of Annual Revenue

- *Recent acquisition by Funko*
- *Attempting to grow Funko brand*
- *Sold in same locations as "Pops"*

Product Manufacturing Turnover Timeline

Company can ship figures within **70 days** of signing IP license

Low development cost of between **$5,000 to $7,500** per new figure

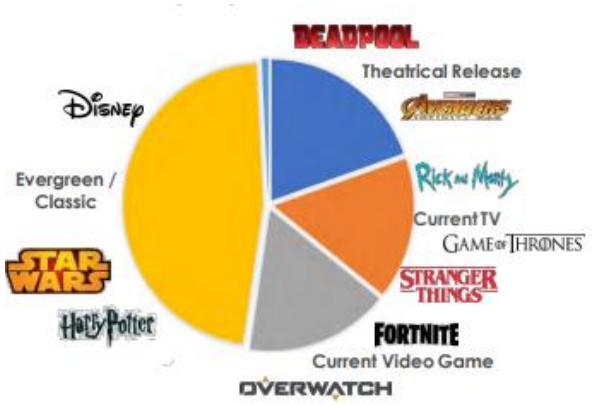
1. Time Frame: 24 Hours — **Develop Initial Design and Submit to Licensor**
2. Time Frame: 45 Days — **Develop Mold and Prototype**
3. Time Frame: 15 Days — **Receive Final License Approval**
4. Time Frame: 15 Days — **Sourced from Asian Facilities While Maintaining Quality Control**

Business Overview

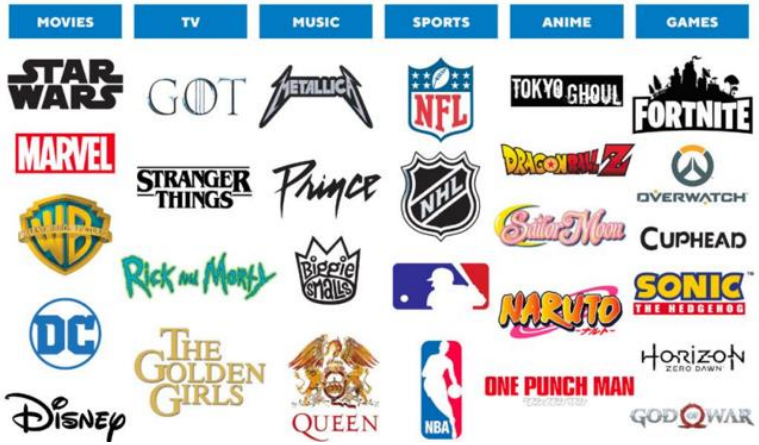
Intellectual Property & Media Relationships

Media & Entertainment Relationships

- Funko does not own the underlying IP for most of their products
- Funko has over 800 active licensed properties with over 200 individual content providers
- Funko works with large media and entertainment companies (such as *HBO*, *Disney*, and *Valve*)
- The company then predicts which they believe will be successful and negotiate licenses for usually 15-18% of the model's revenues.

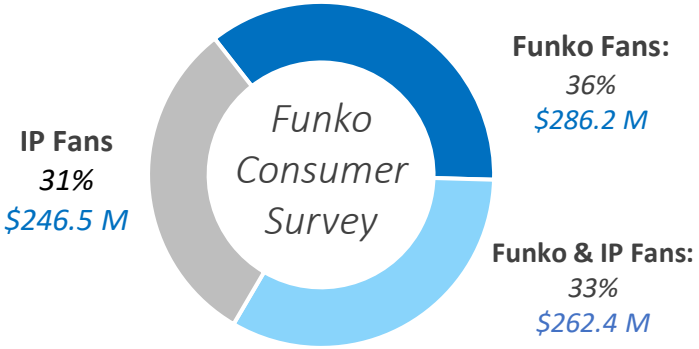


IP Portfolio



Customer Base Surveys

- Funko posses a very attractive customer base, with 1/3 buying Funko products for the brand
- Another 1/3 buys Funko over other non-branded IP products



Business Overview

Consumer Demographics & Product Sales Channels

Consumer Demographics

- The average Funko buyer is 35-years old, having annual income ~$70K
- Male consumers are more likely to be "Funko" only fans and collect figurines
- Female consumers buy more from specially locations (such as Disneyland) and buy Lounge-fly products

"Flocked"

- The company tries to foster treasure hunt experiences
- Special models, called "Chase" will resell for significantly higher than retail prices

Product Channels

Established Channels

Specialty Stores	Barnes & Noble, Smyths Toys Superstores, Hot Topic, Midtown Comics, GameStop, Best Buy
International Distributors	Hot Toys, JVLAT, Grosnor Distribution Inc., Ikon Collectables
Mass Market	Carrefour, Target, Walmart, Tesco

New/Emerging Channels

Online Retail	amazon.com, Fanatics, Walmart, Hot Topic, Target, EMP
New Chains	Dollar General, Costco Wholesale, 7-Eleven, Foot Locker, five BELOW, Ulta Beauty
Direct & Digital	Funko HQ, Comic-Con, Pop! Vinyl, Funko.com, Pop! Blitz, Gears

Valuation

Income Statement (Thousands)								
Date	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**
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0.50%	-45%	-39%	-33%	-27%	-22%	-16%	-10%	-4%	1%	7%
1.00%	-31%	-25%	-19%	-13%	-7%	-1%	5%	11%	18%	24%
1.50%	-16%	-10%	-3%	3%	10%	16%	23%	29%	36%	42%
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Valuation

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Free Cash Flow	**2,685**	**13,340**	**18,889**	**32,043**	**42,423**	**658,739**
Discount Factor	1.00	2.00	3.00	4.00	5.00	5.00
Discount Period	1.00	2.00	3.00	4.00	5.00	5.00
Discount Rate	8.57%					
Present Value of Cash Flow	2,473.42	11,317.36	14,760.58	23,063.07	28,124.07	436,703.14
Cash Flows	79,738.50					
Terminal Growth	2.0%					
Terminal Value	436,703.14					
"-Debt + Cash - Minority Interest"	-274817					
$ / Share	$ 7.34					
Shares Outstanding	32,926					
Implied Upside	**55.15%**		**Current Price (4/29/2020)**		**$ 4.73**	

STERN IAG

Bilibili Inc. (NASDAQ: BILI)

A Chinese PUGV platform with unique community culture and high monetization potential

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Price Target: $35.16 (21% upside)

May 13th, 2020

Business Description:

BILI is China's largest video platform that distributes professional user generated videos (PUGV) and games, comics, and anime (ACG) contents. It has 130 million MAU, 1 million monthly content creators, and over 2.8 million video uploads per month. The company monetizes its platform through virtual gifts, premium membership fees that grants exclusive access to ACG contents, and, increasingly, advertising revenue from online retailers and national brands. The company is also the largest distributor of anime mobile games and has operated some most successful games in the industry. As of 2019, games still account for 50% of BILI's revenue, but the company is looking forward to accelerate its platform monetization.

Investment Thesis:

- **Strong Network Effects through persisting community culture and Creator-Viewer-IP Relationships:**
  1. BILI started in 2009 as a platform that specializes in ACG contents. The ACG community is very close-knit and sticky; people would upload videos and host offline meetings or celebrations to interact with one another. The attractive community gradually drawn more users to the platform that were not ACG fans, but through various unique engagement functions and increasingly popular offline celebrations, the company has managed to maintain this sense of connectedness even though its user base continues to expand.
  2. There are strong positive feedback loops among creators, viewers and IP producers. In addition to the creator-viewer network effect, a user base consists of over 80% Gen Z population provides crucial data for IP producers. BILI is leveraging this to gain exclusive distribution rights, bargain for lower costs, and expand vertically up the supply chain. The company has already demonstrated its ability to understand and entertain its key audience through successful productions of documentaries, anime series, and exhibitions.
- **Market Doubt over Monetization Potential is misplaced:**
  1. The market currently questions whether a platform with such emphasis on community, culture, and content quality is apt for commercialization, which tends to homogenize online eco-systems.
  2. The three major growth factors for BILI will do little harm to the community. BILI's ad revenue growth comes from 1) algorithm improvement; 2) Key Opinion Leader (KOL) recommendation; and 3) innovative native ads. With the high user engagement on BILI's platform, a maturing algorithm is great level up the click through rates and conversion rates of users. KOL recommendation and native ads are innovative ways of advertising that blends with the existing culture. They are also more effective because they leverage the trust relationship between viewers and creators, and assimilate with the videos that would interest BILI's audiences.
- **Unit Economy through Operating Leverage**
  1. BILI's costs mainly include fixed costs, revenue sharing costs, content costs, and marketing expenses. The bargaining that BILI has with its rare user community will deliver margin improvements on revenue sharing and content acquisition. With the right revenue scale, the company will become a profitable giant in the online video industry.

Key Ratios and Statistics:

Price Target	$35.16
Upside	21%
Share Price (05/08/20)	$29.00
Market Cap	$10.02B
52-Week Low	13.23$
52-Week High	30.35$
Cash	972$M
Debt	488$M
Avg. Daily Volume	5.86M

RMB:MM	2018A	2019A	2020E	2021E
Revenue	4,129	6,778	10,513	14669
Growth	67%	64%	55%	40%
EBIT	(722)	(1496)	(1472)	(660)

Figure 1 – Share Price

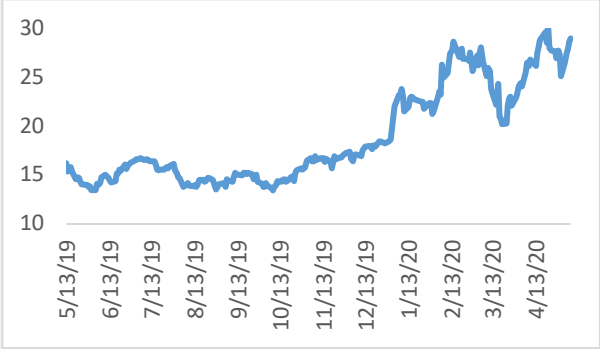


Figure 2 – NTM EV/Revenue

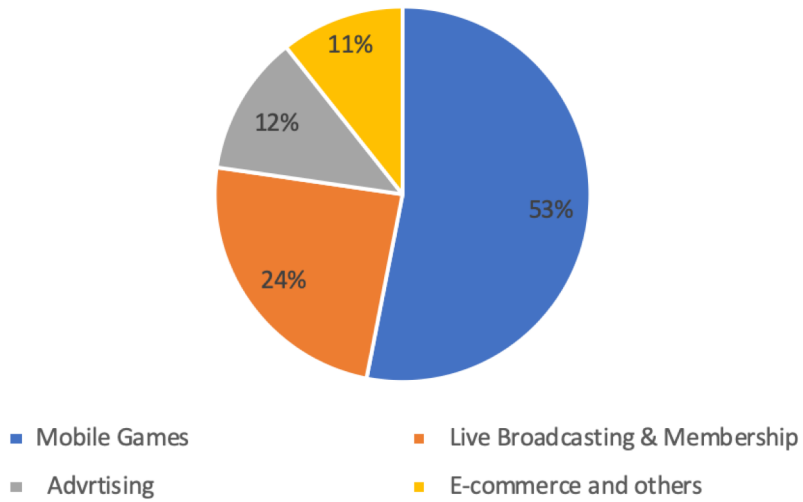
Content

Company Overview: A unique community with high monetization ceiling

Business Overview

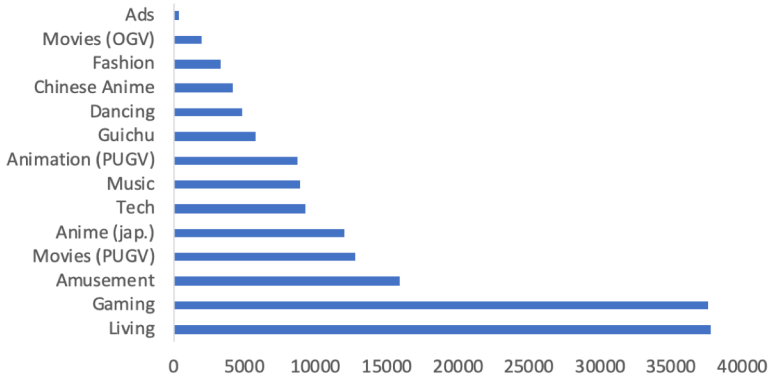
- The largest pan-entertainment media company in China that operates a PUGV (professional user generated video) model with MAU of **130 million,** monthly active creators of **1 million,** and monthly uploaded videos of **2.8 million**
- The dominant ACG (animation, comics, & games) content distributor and producer in China with exclusive cooperation with Japanese animation companies
- A cultural leader of the Gen Z population with multiple annual celebrations; Gen Z accounts for roughly **80%** of total users

Revenue Breakdown



Content Category (mn views)

The 3 most popular contents are: gaming, living, and anime-related videos



Company Overview: Management & History

CEO: Rui Chen (Since 2014)

- Over 15 years of experience in the internet and technology space since graduation
- Former general manager of internet security and research of Kingsoft (HK: 3888)
- Founder of Beike Internet Security Co. and served at CEO from 2008-2010
- Co-founder of Cheetah Mobile (NYSE: CMCM) from 2010-2014 before joining BILI
- Named by *Fortune* as one of China's "40 under 40" in 2018
- Invested in BILI in 2011 as the first investor, transforming the platform into a company
- Joined BILI in 2014 as CEO, with the goal of making BILI one of the largest ACG and pan-entertainment video platform in China

Company History

2009: Founded as an ACG platform for watching anime and uploading related contents

2010: Held the first online new year celebration, laying the foundation for its intimate culture

2016: Distributed FGO, the single most successful mobile anime game

2018.01: Launched uploader incentive plan to accelerate development

2018.03 Co-founded animation firm in Jap with GREE, marching into IP production

2019: Hallmark success in 10th anniversary and new year eve gala

2020: Produced documentary of corona crisis, cooperation with government in documentary and online education

Company Overview: Content Portfolio

Gaming

Largest category. BILI has 1.8 million gaming content creator, over 20 million game videos with 60+ billion views. Many videos are demos or evaluations of less well-known games, introducing them to wider public.

Living & Amusement

BILI has 500 thousand vloggers with over 3.3 billion views. Various traditional celebrities (singers, musicians, actors), usually with younger age, have also created official accounts, including Ouyang Nana, Chen Guo, etc.

Education

Over 4.5 million education video uploads with over 20 million viewers. During coronavirus, BILI is a designated official online education site; colleges also use the platform to market themselves to high school students

Documentary

BILI has launched a number of successful documentaries targeting the young population. In 2020, BILI is named as one of the official producers and documented the coronavirus crisis in Wuhan (over 10 million views)

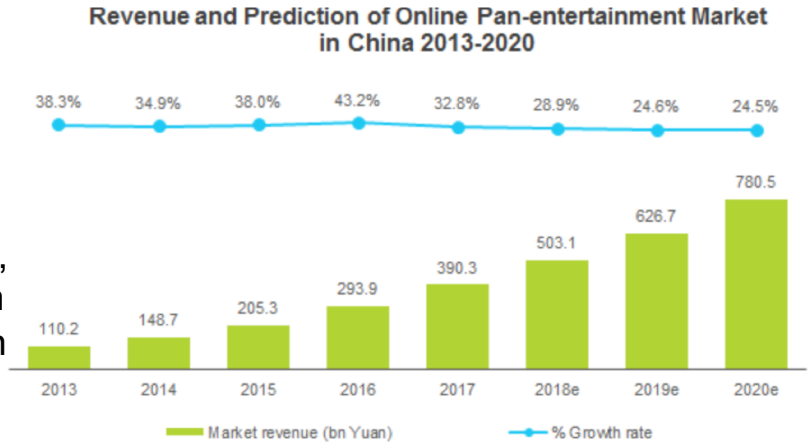
Anime

Anime content continues to be imperative to core users and premium members. Besides Japanese anime, BILI is also dominant in Chinese anime origination, accounting for 50% of new releases in past 3 years.

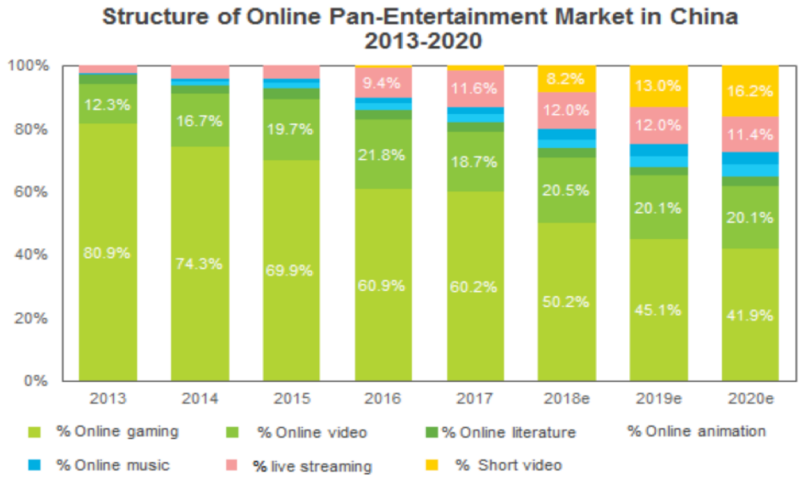
Industry Landscape: Pan-entertainment—Growth & Diversification

Consistent Growth in Market Size

- Pan-entertainment is a concept that Tencent invented in 2011 to consolidate the industry **vertically** by production & distribution and **horizontally** by content categories
- Consistent growth in entertainment spending largely comes from **the younger population**, who's grown up in with the internet net and in a period of high economic growth, and are on average more willing to spend on idols and pursuing their interests



Diversifying Content Portfolio



- The market was previously dominated by gaming, but recently video, streaming, music, animation are outgrowing the industry, leading to more diversified entertainment categories
- This is **a successful result of the pan-entertainment concept**, which essentially relies on creating an ecosystem in which one IP is made and remade over and over into different forms of contents, and in the process **encourages innovation and new IP production.**

Industry Landscape: Video Platforms—Highly Competitive

Short Video

Short video apps have becoming increasingly popular recently with strong user activities. Most videos are under 15 sec; the viewer experience is thus more superficial and impulse-based. Contents with this length are difficult to differentiate, so marketing and recommendation tech become central.

Long Video

Traditional long video platform distributing movies, tv series, and tv shows is dominated by Tencent, IQiyi, and Youku. Driven entirely by IP, thus competition largely boils down to who pays more to distribution and broadcasting rights. Content costs over 80% of revenue, hardly profitable.

Streaming

Major players in the streaming segment are Tencent related entities and YY related. A difficult business like the previous one, for the fight over hot streamers boils down to a price fight. Not surprisingly, margins are very low, although revenue is almost doubling yoy.

Medium-Long

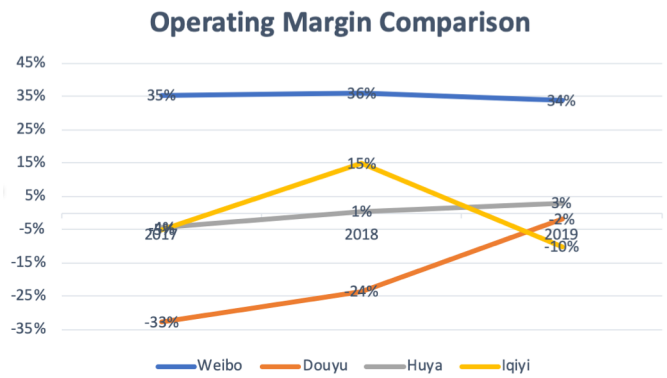
Falls between short video and long video. Compared with former, the length allows more unique contents and a deeper user experience. Compared with latter, it avoids the costly chase for IP. Content creator ecosystem and the quality of video are the most important factors of competition here.

Industry Landscape: How is BILI different?

PUGV & OGV

Content Type	Explanation	Sources	Examples
PUGV	Uploaded Videos	Organizations, Partners	Xiaomi offical account, State Media Accounts
		Traditional Stars, Internet Celebrities	PDD, Ouyang Nana, Top Content Creators
		Ordinary Uploaders	Gaming, Living, Education, Anime
OGV	Productions of Media Companies	Purchased IP	Japanese Anime, Movies, TV Series
		Original IP	Chinese Anime, Documentaries

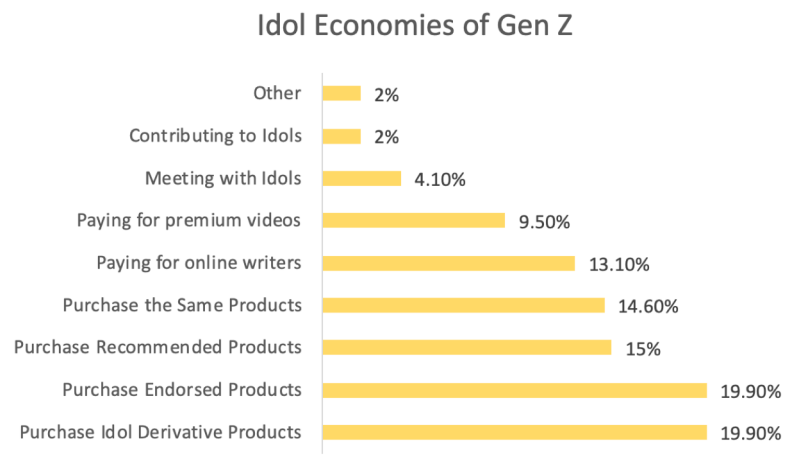
PUGV: better business model



- Weibo is a social media platform with a PUGV model and revenue sharing program
- Revenue sharing cost started at 30% but eventually falls to 20-15%.
- Visible operating leverage explains the margin superiority of Weibo

Gen Z: Better User Base

Gen Z on average spends more for their idols, in particular on the products they use, endorse, or recommend.



Thesis 1: Competitive Advantage–Community Culture

Bullet Chatting Culture

- Bullet chats are first created by a Japanese ACG platform
- Their function includes: instant interaction, emotional expression & resonance, information supplementation, decoration, etc.
- BILI is one of the earliest platform that adopts bullet chatting, and has the most advanced bullet chatting program design
- **2.1 billion** monthly bullet chat/comment interactions from **37 million** users, coining most of the online buzzwords that go viral

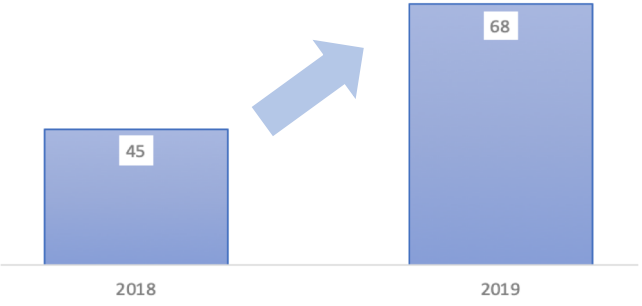
Cultural Preservation: Official Member System

- The level system is a key cultural heritage that facilitates censoring inappropriate comments and enhances stickiness
- The "Judge" function that unlocks at level 4 is a censorship committee consists of ordinary users that meet the requirement, mobilizing people to safe-guard the community

Functions/Membership Level	LV0	LV1	LV2	LV3	LV4	LV5	LV6
Upload Videos	Y	Y	Y	Y	Y	Y	Y
Bullet Chatting	N	Y	Y	Y	Y	Y	Y
Messaging	N	Y	Y	Y	Y	Y	Y
Commenting	N	N	Y	Y	Y	Y	Y
Multi-color Bullets	N	N	Y	Y	Y	Y	Y
Special Bullets	N	N	Y	Y	Y	Y	Y
Top-row Bullets	N	N	N	Y	Y	Y	Y
Bottom-row Bullets	N	N	N	Y	Y	Y	Y
Judge	N	N	N	N	Y	Y	Y
Anime Commentary	N	N	N	N	Y	Y	Y
Invitation Ticket	N	N	N	N	N	1/month	2/month

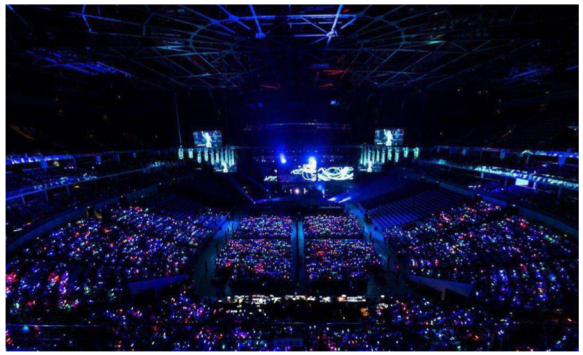
Official Member

- To become an official member, the user must pass an 100-question test with 50 guideline Qs and 50 misc. Qs
- Used to be very strict and difficult, now becomes more of a ceremonial practice



Thesis 1: Competitive Advantage—Cultural Awareness

Cultural Heritage



- Starting as an ACG community, BILI has managed to **maintain and popularize** its various celebrations
- These events include: Bilibili Macro Link (BML), Bilibili World (BW), New Year Eve Celebrations, and offline meetings among content creators
- These offline exhibitions popularize the ACG culture to a wider audience, and **deepen the connection** among users

2020 New Year Eve Gala

"This is the voice of young people. This is the voice of the generations!"
----People's Daily

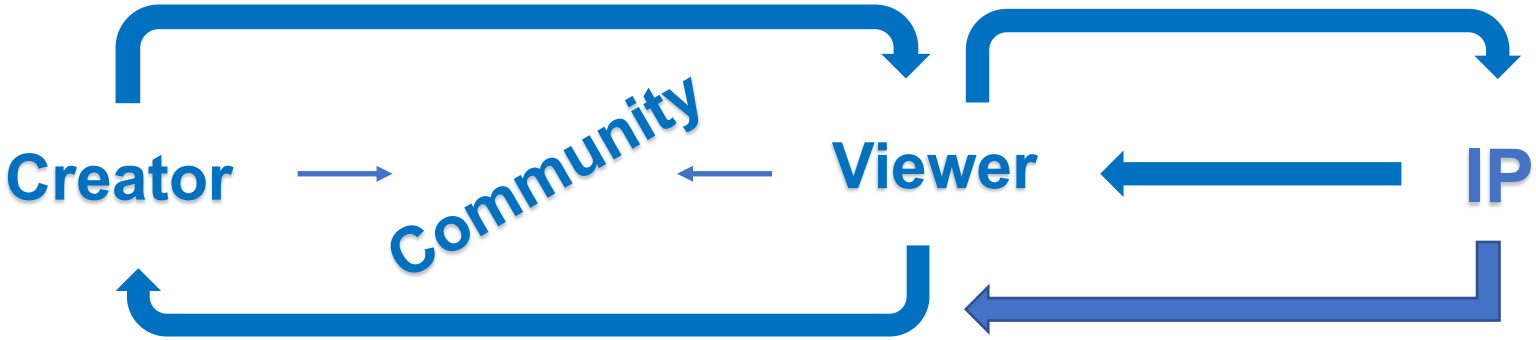
- The New Year Eve Gala of 2020 is a major success in BILI's attempt to break out of the ACG circle
- It garnered **90+ million video playbacks** by Feb 2020 and **3+ million bullet chats**.
- The live broadcast had **3.67 million** peak viewers, overshadowing the **2.42 million** on CCTV official channels

Creator Offline Meetings

Offline meetings to foster cooperation, learn video clipping, and make friends with top creators.

Thesis 1: Competitive Advantage—Network Effect

Three Positive Feedback Loops



Creator-Viewer

Network effect + community culture locks users up to this platform. We believe that this positive feedback is a long-term moat that BILI has that would give it additional **bargaining power to keep down revenue costs**. This user dynamic explains why BILI has a high **12-month retention rate of over 80%.**

Viewer-IP

BILI is **a rare platform that attracts IP with its users**. Its solid user ecosystem allows BILI to successfully **expand vertically up the supply chain and bargain with IP producers** to grant BILI with **exclusive** distribution rights with **lower prices**. BILI has produced several successful IPs that demonstrates its superiority.

Creator-IP

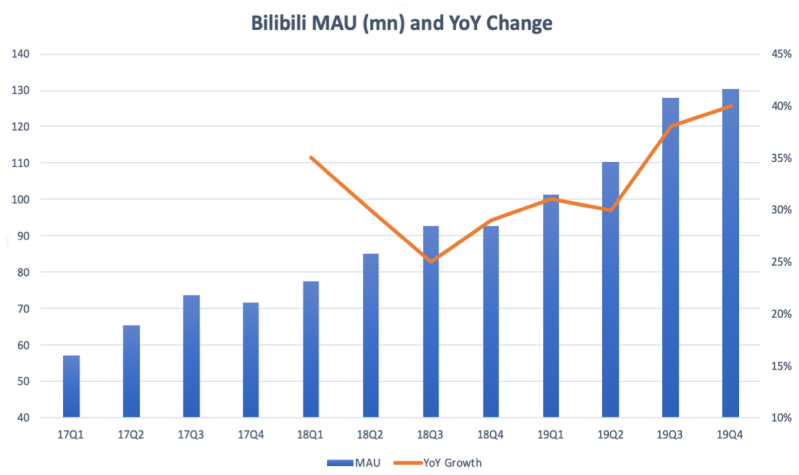
Successful IP stirs secondary innovations and supplies creators with evermore materials. Conversely, **uploader activity is a powerful feedback to IP generators** on what interests the audience. The new year even gala is a strong evidence of the positive loop between creators and IP originators.

Thesis 1: Competitive Advantage—User Metrics

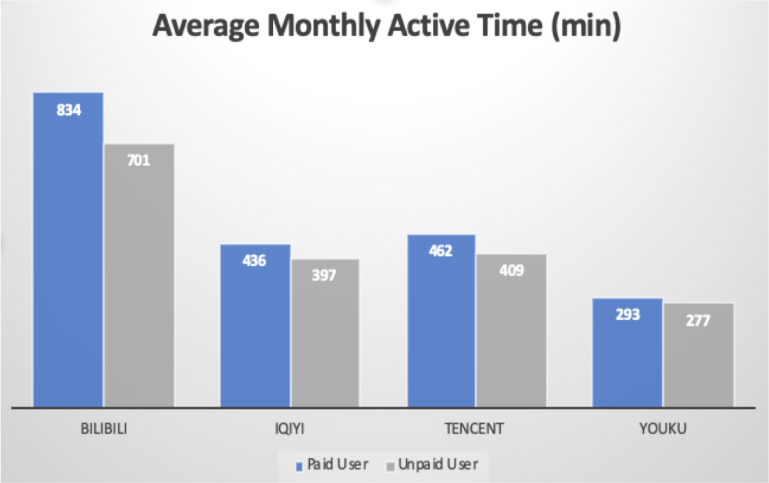
Strong User Metrics

- As a result of the network effect, BILI has achieved compelling user metrics.
- It has the highest user retention rate and active time per user across the industry, outperforming long video platforms and short video platforms alike.
- China has over 500 million people below 35, and the MAU of BILI stands at 130 million. As the company continues to expand and attract older users with more serious contents, the potential ceiling of its user base is high.

MAU



Active Time per User



Thesis 2: Market Doubts Over Monetization Prospect

Doubt One:

As BILI expands its user base and commercializes the platform, is it still able to preserve the sense of community critical to original users?

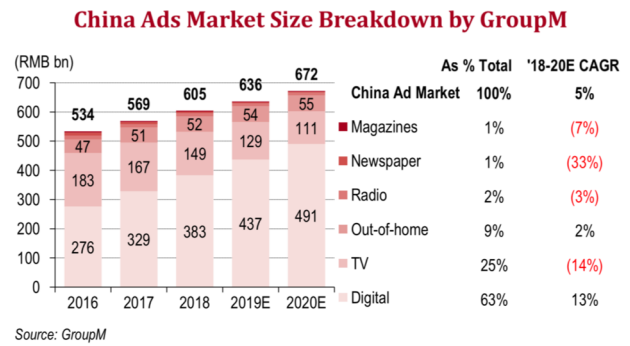
Doubt Two:

Users on BILI dislike ads and are not used to ads, can the company really go so far in monetization as YouTube, Byte Dance, or Tencent does?

Doubt Three:

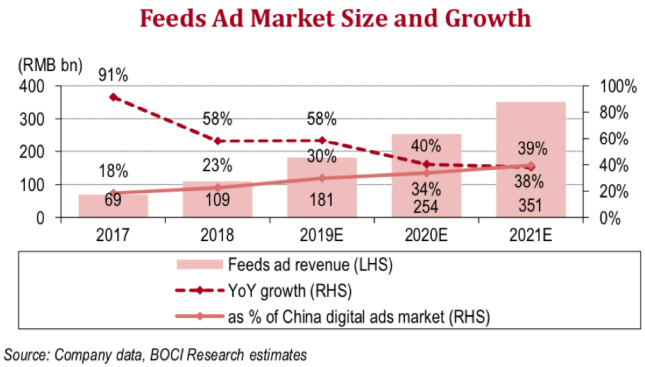
When and how profitable can the company become? Can BILI afford to slow down revenue sharing costs and marketing expenses?

Thesis 3: Monetization Potential— Favorable Ads Market Dynamic



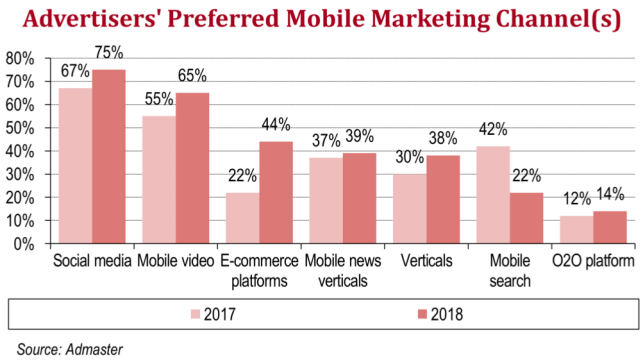
Besides organic growth, the expansion of the digital advertising market rests on the decline of traditional channels including magazines, newspaper, TV, and radios.

Traditional Channels



Within the digital ad market space, feeds ad outperforms. Its market share is expected to rise to 40% by 2021. Feeds ad possesses the advantage of **accuracy** as algorithm improves and **measurable effects**.

Feeds Ad



Advertisers prefer social media, video, e-commerce. BILI falls among all three. This preference is driven by **user engagement and user relationship,** in which BILI has a strong & unique advantage.

The few winners

Thesis 3: Monetization Potential—Growth Factors

Comparison with Major Ad Platforms

Compared with major advertising platforms in China, BILI has much potential in the average revenue per user metric. User growth will be an important revenue growth factor, but **improving the ARPU is the explosive factor** that would drive up ads revenue in multiples. Currently, BILI is behind competitors because 1) the firm is **young in monetization attempt and algorithm perfection**; 2) the company is **cautious with this transformation.**

	App Type	Ads Revenue (bn RMB)	MAU (mn)	ARPMU (RMB)
Alibaba	E-commerce	139	699	198
Baidu	Search/Video	73	525	138
Tencent	Social Media/Video	58	1098	53
Byte Dance	Short Video	50	765	65
Weibo	Social Media/Video	10	462	22
BiliBili	**Short-long Video**	**0.464**	**90**	**5**

Further De-constructing Ad Revenue

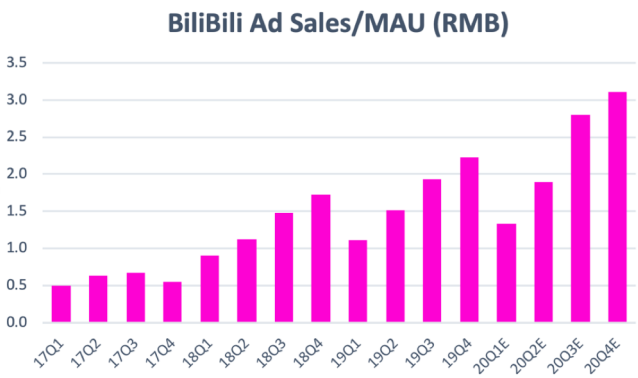
Further dissecting the ARPU into 3 factors, we see that it is really **the eCPM, or the price of advertisement, that explains where the potential is**. The price of feed ads is determined by clicks and conversions, or in other words the accuracy of algorithm. Price of other ads is determined by the effectiveness of KOLs (key opinion leaders) & innovative ways of advertising.

	ARPDU (RMB)	Daily Use Time (min)	Ad Load	eCPM (RMB)
Tik Tok	156	60	5-10%	100-150
Weibo	50	60	<5%	20-40
BiliBili	**21**	**80**	**2-3%**	**<10**

Thesis 3: Monetization Potential—Unlocking Commercial Value

Algorithm Investment

- High user engagement and consistent investments in technology and content operations ensures continuous perfection of algorithm.
- This growth comes **at no expense of user experience or increased costs to advertisers**. It is an organic growth of algorithm that improves eCPM through click through rates and conversion rates



Key Opinion Leader Recommendations

- A recent trend in digital advertising that involves celebrities/content creators directly recommending products to people
- It is a highly effective way of advertising as people love spending for idols
- As people get more used to channels getting monetized, creators can more frequently and more boldly recommend products to the audience

Innovation in Native Advertising

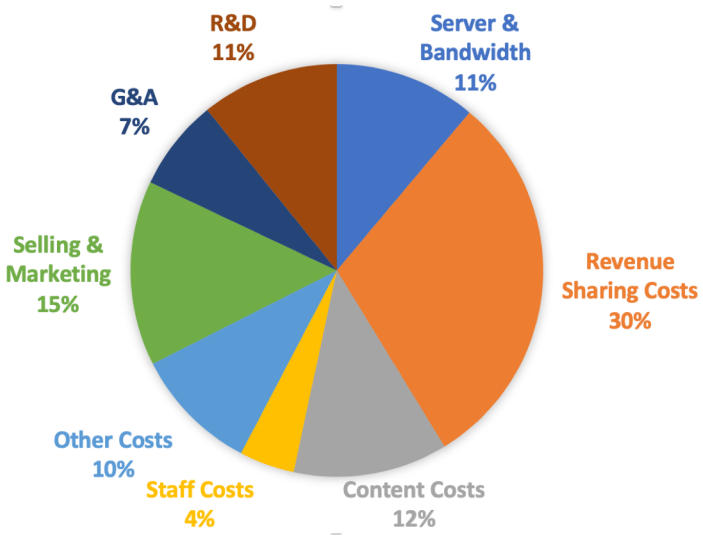
Most companies are still very conservative in their way of advertising. However, increasingly more are embracing innovative ways, and as BILI furthers cooperation with state media, it is on track to become a major ad destination

Thesis 4: Unit Cost Reduction

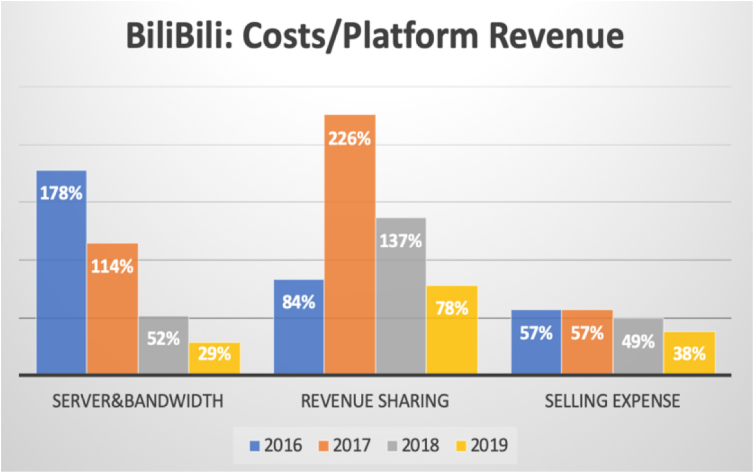
Economies of Scale

- Fixed or largely fixed costs include: server & bandwidth costs, G&A, R&D, and other costs (mainly merchandise costs and costs of holding offline celebrations)
- Costs reducible with bargaining power: revenue sharing costs, content costs
- Variable cost: selling & marketing expense. This expense mainly includes wages to marketing team and discounts in BILI's ACG games. As BILI eventually slows down user attraction and relies less on games for revenue, this expense also has great chance to drop

BILI Cost Structure 2019



Unit Cost Reduction



Valuation: Base Scenario—Ads Revenue Forecast

Methodology

- Comparing with firms that have similar feeds ad revenue model and similar platform characteristics
- Breaking down ads revenue into 5 variables: MAU, DAU/MAU, Daily Time/User, Ad Load, and eCPM

Growth Drivers

- Continuous user growth driven by marketing attempts and increasing popularity
- eCPM growth due to bettering algorithm and innovative advertising methods
- Slight increases in DAU/MAU and Time per user as new users are gradually turned into stickier users

	MAU (million)	DAU/MAU	DAU (million)	Time/day,user (min)	Ad Load	eCPM	ARPU (RMB)	Ad Revenue (mn)
Weibo 2019	491	43%	213	60	<5%	20-40	50	10710
BILI 2019	**120**	**32%**	**38**	**80**	**2-3%**	**<10**	**21.5**	**817**
BILI 2020	**175**	**33%**	**58**	**82**	**2-3%**	**15**	**33**	**1897**
BILI 2021	**220**	**34%**	**75**	**83**	**2-3%**	**20**	**45**	**3337**
BILI 2022	**260**	**35%**	**91**	**85**	**2-3%**	**25**	**57**	**5166**
BILI 2023	**300**	**36%**	**108**	**86**	**2-3%**	**30**	**69**	**7488**
Tik Tok 2019	500	64%	320	60	10-15%	100-150	156	50000

Valuation: Base Scenario—Income Statement

(Mn RMB)	2016	2017	2018	2019	2020E	2021E	2022E
Online Gaming	**342**	**2058**	**2936**	**3598**	**4605**	**5573**	**6408**
yoy growth		*502%*	*43%*	*23%*	*28%*	*21%*	*15%*
BiliBili Platform	**181**	**410**	**1193**	**3180**	**5907**	**9096**	**13197**
yoy growth		*127%*	*191%*	*167%*	*86%*	*54%*	*45%*
Broadcasting & Membership	80	176	585	1641	2824	4097	5753
Advertising	61	159	464	817	1959	3425	5399
E-commerce & others	41	75	143	722	1124	1574	2046
Revenue	**523**	**2468**	**4129**	**6778**	**10513**	**14669**	**19606**
yoy growth		*372%*	*67%*	*64%*	*55%*	*40%*	*34%*
Server & Bandwidth	323	469	619	920	1367	1760	2157
Revenue Sharing Costs	151	926	1631	2494	3679	4547	5686
Content Costs	146	262	534	1002	1682	2420	3333
Staff Costs	89	129	240	357	526	733	980
Other Costs		134	242	815	631	880	1176
Cost of Revenue	**709**	**1920**	**3266**	**5588**	**7885**	**10341**	**13332**
Gross Profit (loss)	**-186**	**548**	**863**	**1190**	**2628**	**4327**	**6274**
Selling & Marketing	103	232	586	1199	2103	2787	3529
G&A	451	261	461	593	841	880	784
R&D	91	280	538	894	1156	1320	1568
Operating Expense	**645**	**773**	**1585**	**2686**	**4100**	**4987**	**5882**
Operating Income (loss)	**-831**	**-225**	**-722**	**-1496**	**-1472**	**-660**	**392**
Costs/Revenue:							
Server & Bandwidth	*62%*	*19%*	*15%*	*14%*	*13%*	*12%*	*11%*
Revenue Sharing Costs	*29%*	*38%*	*40%*	*37%*	*35%*	*31%*	*29%*
Content Costs	*28%*	*11%*	*13%*	*15%*	*16%*	*16.5%*	*17%*
Staff Costs	*17%*	*5%*	*6%*	*5%*	*5%*	*5%*	*5%*
Other Costs		5%	6%	12%	6%	6%	6%
Selling & Marketing	*20%*	*9%*	*14%*	*18%*	*20%*	*19%*	*18%*
G&A	*86%*	*11%*	*11%*	*9%*	*8%*	*6%*	*4%*
R&D	*17%*	*11%*	*13%*	*13%*	*11%*	*9%*	*8%*
Gross Margin	**-36%**	**22.2%**	**20.9%**	**17.6%**	**25.0%**	**29.5%**	**32.0%**
Operating Margin	**-159%**	**-9.1%**	**-17.5%**	**-22.1%**	**-14.0%**	**-4.5%**	**2.0%**

Valuation: Base Scenario—DCF

DCF Valuation, WACC=9%, Terminal Growth=3%

(mn RMB)	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue	**4,129**	**6,778**	**10,513**	**14,669**	**19,606**	**25,096**	**31,118**	**37,342**	**44,064**	**51,114**	**58,270**	**65,262**	**71,789**
yoy growth	*67%*	*64%*	*55%*	*40%*	*34%*	*28%*	*24%*	*20%*	*18%*	*16%*	*14%*	*12%*	*10%*
EBIT	**(722)**	**(1,496)**	**(1,472)**	**(660)**	**392**	**1,932**	**4,170**	**5,975**	**7,711**	**9,456**	**11,188**	**12,922**	**14,429**
EBIT Margin	*-17.5%*	*-22.1%*	*-14.0%*	*-4.5%*	*2.0%*	*7.7%*	*13.4%*	*16.0%*	*17.5%*	*18.5%*	*19.2%*	*19.8%*	*20.1%*
Income Tax Rate	*-4.8%*	*-2.8%*	*0.0%*	*0.0%*	*14.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*	*18.0%*
EBIAT	**(757)**	**(1,538)**	**(1,472)**	**(660)**	**337**	**1,585**	**3,419**	**4,899**	**6,323**	**7,754**	**9,174**	**10,596**	**11,832**
D&A	642	1,168	1,503	1,907	2,431	2,936	3,423	3,884	4,362	4,754	5,128	5,352	5,600
D&A/Revenue	*15.6%*	*17.2%*	*14.3%*	*13.0%*	*12.4%*	*11.7%*	*11.0%*	*10.4%*	*9.9%*	*9.3%*	*8.8%*	*8.2%*	*7.8%*
Capex	(1,334)	(1,565)	(2,003)	(2,504)	(3,005)	(3,515)	(4,043)	(4,487)	(4,891)	(5,234)	(5,495)	(5,660)	(5,717)
Capex/Revenue	*32.3%*	*23.1%*	*19.1%*	*17.1%*	*15.3%*	*-14.0%*	*-13.0%*	*-12.0%*	*-11.1%*	*-10.2%*	*-9.4%*	*-8.7%*	*-8.0%*
Increase in NWC	(537)	(203)	(370)	(287)	(328)	(308)	(318)	(313)	(315)	(314)	(315)	(314)	(315)
% of Revenue	*-13.0%*	*-3.0%*	*-3.5%*	*-2.0%*	*-1.7%*	*-1.2%*	*-1.0%*	*-0.8%*	*-0.7%*	*-0.6%*	*-0.5%*	*-0.5%*	*-0.4%*
Unlevered FCFF	**(1,985)**	**(2,138)**	**(2,342)**	**(1,544)**	**(565)**	**698**	**2,482**	**3,983**	**5,479**	**6,960**	**8,492**	**9,973**	**11,400**
FCFF Margin	*-48.1%*	*-31.5%*	*-22.3%*	*-10.5%*	*-2.9%*	*2.8%*	*8.0%*	*10.7%*	*12.4%*	*13.6%*	*14.6%*	*15.3%*	*15.9%*
Time Factor			0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5
Discount Factor			0.96	0.88	0.81	0.74	0.68	0.62	0.57	0.52	0.48	0.44	0.40
Discounted FCFF						**516**	**1,684**	**2,479**	**3,129**	**3,647**	**4,082**	**4,398**	**4,613**

PV of CF	24,548
Terminal Value	130,472
PV of Terminal Value	52,788
Enterprise Value	77,337
Net Cash	3,393
Equity Value	80,729
Shares	328
TP	¥ 246.13
TP	**$ 35.16**
Current Price	$ 29.00
Impied Upside	**21%**
WACC	9%
Terminal Growth	3%

	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%	10.50%
2.00%	55%	42%	30%	20%	11%	4%	-3%
2.50%	56%	43%	31%	21%	11%	4%	-3%
3.00%	56%	43%	31%	21%	12%	5%	-3%
3.50%	57%	44%	32%	21%	12%	5%	-2%
4.00%	57%	44%	32%	22%	13%	5%	-2%

Valuation: Bull Scenario

Additional Growth Drivers

- Gaming: Cooperation with Sony and the two new feature games that would come out this year provide new sources of growth in the ACG games section.
- Streaming: Contracts with a celebrity streamer and purchase of League Of Legends S Competition broadcasting right drive up revenue higher than expected
- Membership & E-commerce: ACG content increasingly gains popularity. Animation of "The Three-Body Problem" becomes a phenomenal success
- Ads: Growth roughly in line with expectations

Multiples Valuation

	2020E	2021E	2022E
Revenue	11,339	16,743	23,145
P/S	7.8	6.3	5.1
Market Cap	88,447	105,479	118,040
Shares Outstanding	328	328	328
Implied Price	¥ 269.66	¥ 321.58	¥ 359.88
Exchange Rate	7	7	7
Implied Price	$ 38.52	$ 45.94	$ 51.41
Implied Upside	33%	58%	77%

Industry	Company	Market Cap (bn)	Revenue (bn)	Growth	P/S		
					2019	2020E	2021E
Games	Tencent	3429	377	20.4%	9.1	7.6	6.0
	Net Ease	308	59	15.8%	5.2	4.5	4.0
Content	Tencent Music	129	25	31.0%	5.2	4.0	4.0
	IQIYI	89	29	16%	3.1	3.5	3.0
Streaming	Douyu	17	7	98%	2.4	2.1	1.8
	Huya	25	8.4	80%	3.0	2.6	2.2
Ads	Weibo	54.6	12.5	2.8%	4.4	4.3	4.1
E-commerce	Alibaba	3770	489	30%	7.7	5.9	4.9
	Pingduoduo	340	30	131%	11.3	8	5.5
	JD	441	577	25%	0.7	0.65	0.6

Valuation: Bull Scenario—Revenue

BULL Scenario

(mn RMB)	2018A	19Q1	19Q2	19Q3	19Q4	2019A	20Q1E	20Q2E	20Q3E	20Q4E	2020E	2021E	2022E
Revenue	**4,129**	**1,374**	**1,538**	**1,859**	**2,008**	**6,778**	**2,307**	**2,697**	**3,063**	**3,149**	**11,339**	**16,743**	**23,145**
YoY Growth	*67%*	*58%*	*50%*	*72%*	*74%*	*64%*	*68%*	*75%*	*65%*	*57%*	*67%*	*48%*	*38%*
Mobile Games	**2,936**	**874**	**920**	**933**	**871**	**3,598**	**1,361**	**1,254**	**1,251**	**1,058**	**5,111**	**6,507**	**7,621**
YoY Growth	*42%*	*27%*	*16%*	*25%*	*22%*	*23%*	*56%*	*36%*	*34%*	*21%*	*42%*	*27%*	*17%*
Game MPU (thousand)	860	1,023	971	1,461	1,256	1,178	1,504	1,311	2,176	1,658	1,662	2,228	2,718
YoY Growth	*41%*	*23%*	*19%*	*60%*	*43%*	*37%*	*47%*	*35%*	*49%*	*32%*	*41%*	*34%*	*22%*
Sales/MPU (RMB)	3,414	854	947	639	694	3,055	905	957	575	638	3,075	2,921	2,804
YoY Growth	*1%*	*3%*	*-2%*	*-22%*	*-14%*	*-11%*	*6%*	*1%*	*-10%*	*-8%*	*1%*	*-5%*	*-4%*
Bilibili Platform	**1,193**	**500**	**618**	**926**	**1,136**	**3,180**	**946**	**1,442**	**1,812**	**2,091**	**6,228**	**10,236**	**15,524**
YoY Growth	*191%*	*179%*	*162%*	*177%*	*157%*	*167%*	*89%*	*133%*	*96%*	*84%*	*96%*	*64%*	*52%*
Live Broadcasting	**255**	**124**	**120**	**194**	**260**	**698**	**365**	**397**	**441**	**499**	**1,697**	**2,977**	**4,877**
YoY Growth		*70%*	*135%*	*190%*	*306%*	*174%*	*194%*	*231%*	*128%*	*92%*	*143%*	*76%*	*64%*
Platform MPU (thousand)	2,489	4,719	5,287	6,486	7,561	6,014	9,911	10,469	11,351	12,098	10,957	14,792	19,230
YoY Growth	*462%*	*187%*	*146%*	*147%*	*114%*	*142%*	*110%*	*98%*	*75%*	*60%*	*82%*	*35%*	*30%*
Sales/MPU (RMB)	102.5	26.3	22.7	29.9	34.4	116.1	36.8	37.9	38.9	41.3	154.8	201.3	253.6
YoY Growth		*-41%*	*-4%*	*17%*	*90%*	*13%*	*40%*	*67%*	*30%*	*20%*	*33%*	*30%*	*26%*
Membership	**331**	**168**	**206**	**258**	**310**	**942**	**383**	**423**	**445**	**490**	**1,738**	**2,652**	**3,861**
YoY Growth		*630%*	*203%*	*153%*	*125%*	*185%*	*128%*	*105%*	*73%*	*58%*	*85%*	*53%*	*46%*
Platform MPU (thousand)	2,489	4,719	5,287	6,486	7,561	6,014	8,967	9,517	9,729	10,586	9,700	13,095	17,023
YoY Growth	*462%*	*187%*	*146%*	*147%*	*114%*	*142%*	*90%*	*80%*	*50%*	*40%*	*61%*	*35%*	*30%*
Sales/MPU (RMB)		35.6	39.0	39.8	41.0	156.6	42.7	44.4	45.7	46.3	179.2	202.5	226.8
YoY Growth		*154%*	*23%*	*2%*	*5%*	*18%*	*20%*	*14%*	*15%*	*13%*	*14%*	*13%*	*12%*
Advertising	**464**	**113**	**168**	**247**	**290**	**817**	**132**	**381**	**541**	**586**	**1,584**	**2,914**	**4,585**
YoY Growth	*191%*	*60%*	*75%*	*80%*	*81%*	*76%*	*17%*	*127%*	*119%*	*102%*	*94%*	*84%*	*57%*
MAU (million)	87	101	110	128	130	117	132	142	168	167	152	192	234
YoY Growth	*30%*	*31%*	*30%*	*38%*	*40%*	*35%*	*30%*	*29%*	*31%*	*28%*	*29%*	*26%*	*22%*
Sales/MAU (RMB)	5.3	1.1	1.5	1.9	2.2	7.0	1.0	2.7	3.2	3.5	10.4	15.2	19.6
YoY Growth	*125%*	*22%*	*35%*	*30%*	*29%*	*31%*	*-10%*	*76%*	*67%*	*58%*	*50%*	*46%*	*29%*
E-commerce and others	**144**	**96**	**124**	**226**	**276**	**722**	**67**	**242**	**384**	**516**	**1,209**	**1,693**	**2,201**
YoY Growth	*92%*	*621%*	*488%*	*705%*	*241%*	*403%*	*-30%*	*95%*	*70%*	*87%*	*68%*	*40%*	*30%*

Valuation: Bear Scenario

Risk Factors

- User metrics below expectation due to worsened community discipline
- Ads revenue growth slower than expected
- Inability to produce or distribute new popular games as BILI's current feature game gradually becomes less popular over time
- Inability to maintain production or distribution of successful anime, documentary, and other IPs
- Inability to effectively cut marketing expenses or revenue sharing expenses as the company matures

Multiples Valuation

	2020E	2021E	2022E
Sales	9316	12078	15032
YoY growth	45%	30%	24%
P/S	6.8	5.1	3.7
Market Cap	63347	61599	55620
Shares Outstanding	328	328	328
Price RMB	¥ 193.13	¥ 187.80	¥ 169.57
Exchange Rate	7	7	7
Price USD	$ 27.59	$ 26.83	$ 24.22
Return	-5%	-7%	-16%