



Board of Advisors Meeting
Feb 17th, 2022



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Letter from Portfolio Managers

Dear Board of Advisors,

We hope that you all have had a restful holiday season and we are excited to kick off the spring semester! We have used the time during the winter break to research over 10 potential ideas and have extensively discussed many of them internally. Further, we recently welcomed several of our fall class of portfolio team trainees to join our analyst class.

Turning to the Portfolio, the recent market volatility has been especially painful for the Funds performance for the months of January and February. Ongoing fears of inflation – and an expected corresponding hike in interest rates by the Fed – as well as a tense Russia/Ukraine situation, have caused broader market indices to fall by ~10% YTD. As a result of these high-level macro factors, IAG's portfolio is down ~8.3% YTD. Regardless of the tremendous price volatility, we remain highly convicted in all our current positions, choosing to look beyond the short-term earnings impact of these developments, and instead continue to discuss, value, and analyze investment opportunities on the basis of their long-term sustainable cash flows.

In fact, rather than view the broader market selloffs as a deterrent, we have instead gone on the offensive, looking for undervalued, high-quality companies that we would be comfortable holding for the long-term. We have particularly seen these opportunities in the broader tech industry, with many high-quality growth companies seeing their market valuations sharply decline following even slightly disappointing earnings reports. Namely we are referring to Sea Ltd. (SE) – a company we are recommending today for inclusion in the portfolio – who has seen their market cap fall by ~60% since their high in November 2021 and a further 35.54% decline YTD.

Turning towards some of our work internally, we have had many fruitful discussions over the past several weeks and are happy to present the following investment recommendations to the Board:

1. Sea Ltd. (NYSE: SE) – a fast growing digital entertainment, e-commerce, and digital finance company in Southeast Asia, Latin America, and the broader Asian market

In addition, we have several ideas in the pipeline which we hope to present to the Board at upcoming meetings. Two notable new ideas are Restoration Hardware (NYSE: RH) and Brown & Brown (NYSE: BRO). We will continue researching these ideas and provide further updates at the next meeting.

Other internal developments since our last meeting in December include the recently completed end-of-year report to the NYU Stern's Dean's office. In accordance with the Club's constitution, we will continue sending this report to the Dean on an annual basis. We look forward to the remainder of the semester and are happy to continue being a source of information to the Board.

Best,
Caleb Nuttle & Tony Wang
Portfolio Managers

II. Performance Analysis

Holdings Summary (as of Feb 15th, 2022)

Current Holdings										
Company Name	Ticker	Coverage	Date of Purchase	% of Portfolio	Share Count	Price At Purchase	Share Price	Current Return	Industry	Holding Type
Allison Transmission Holding	ALSN	Mikhail Talib	12/3/19	2.4%	50	\$47.72	\$40.69	(14.7%)	Consumer Cyclical	Core
APi Group Corp	APG	Srikar Alluri	9/24/20	4.1%	160	\$14.29	\$21.79	52.5%	Industrials	Core
Concrete Pumping Holdings	BBCP	Alex Isaac	3/26/21	2.7%	300	\$7.07	\$7.71	9.1%	Industrials	Core
Berry Global Group Inc	BERY	Sophie Pan	12/2/20	3.7%	50	\$54.60	\$63.53	16.4%	Consumer Cyclical	Core
Builders FirstSource Inc	BLDR	Rahul Parikh	10/5/21	6.7%	80	\$52.20	\$70.88	35.8%	Industrials	Core
Catapult Group International	CAZGF	Rahul Parikh	12/7/21	2.7%	2,100	\$1.03	\$1.08	4.9%	Technology	Core
Constellation Energy Corp	CEG	Rhys Berezny	2/2/22	1.3%	23	\$45.00	\$47.76	6.1%	Utilities	Oppt.
Krispy Kreme Inc	DNUT	Robert Eisenma	12/7/21	4.3%	260	\$16.50	\$14.19	(14.0%)	Consumer Defensive	Oppt.
Exelon Corp	EXC	Rhys Berezny	4/30/21	3.4%	70	\$44.83	\$41.81	(6.7%)	Utilities	Oppt.
Flex Ltd	FLEX	Rhys Berezny	10/5/21	4.7%	230	\$17.88	\$17.37	(2.9%)	Technology	Core
HCA Healthcare Inc	HCA	Srikar Alluri	9/26/19	5.4%	19	\$119.99	\$241.88	101.6%	Healthcare	Core
Identiv Inc	INVE	Tony Wang	9/24/20	9.8%	400	\$5.68	\$20.89	267.8%	Technology	Core
JD.com Inc ADR	JD	David Zhou	4/30/21	3.6%	40	\$77.55	\$75.59	(2.5%)	Consumer Cyclical	Oppt.
Methode Electronics Inc	MEI	Achyut Seth	2/19/21	4.4%	80	\$38.56	\$46.74	21.2%	Technology	Core
Monster Beverage Corp	MNST	Achyut Seth	11/9/21	4.0%	41	\$91.00	\$82.21	(9.7%)	Consumer Defensive	Core
Office Properties Income Trust	OPI	Mikhail Talib	10/28/20	3.8%	130	\$17.85	\$24.90	39.5%	Real Estate	Core
Palo Alto Networks Inc	PANW	Alex Isaac	9/24/20	6.2%	10	\$240.50	\$527.12	119.2%	Technology	Core
Points.com Inc	PCOM	Tony Wang	10/28/20	4.9%	240	\$10.01	\$17.46	74.4%	Communications	Oppt.
TransDigm Group Inc	TDG	Tony Wang	4/9/20	6.9%	9	\$527.65	\$653.85	23.9%	Industrials	Core
United Rentals Inc	URI	Caleb Nuttle	3/14/19	5.3%	14	\$114.85	\$320.69	179.2%	Industrials	Core
Willis Towers Watson PLC	WTW	Mikhail Talib	11/9/21	4.5%	17	\$231.70	\$223.40	(3.6%)	Financial Services	Core
ZTO Express Inc.	ZTO	David Zhou	3/14/19	3.5%	100	\$19.43	\$30.14	55.1%	Industrials	Core
Total Equity Holdings				98.2%			\$83,628.32			
Cash				1.8%			\$1,497.10			
Total Portfolio Holdings				100.0%			\$85,125.42			

IAG vs S&P 500 LTM Returns

Portfolio Return (%)

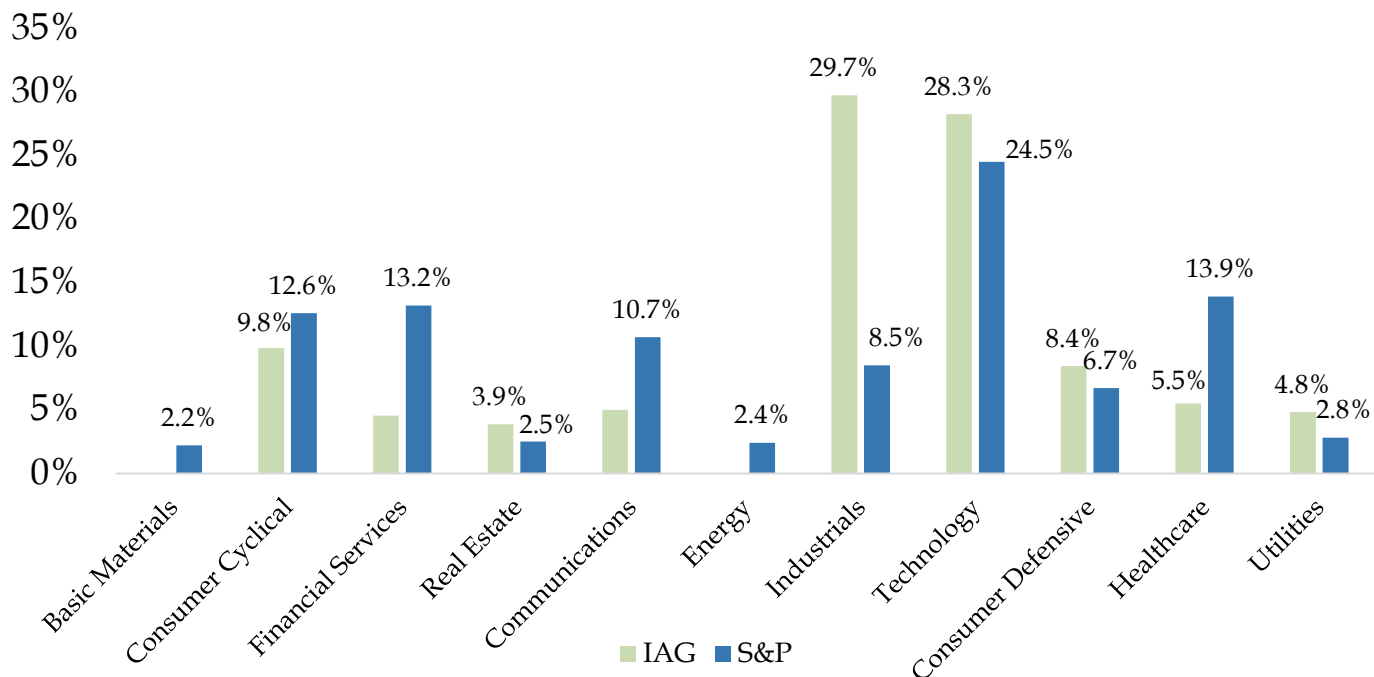


On a last twelve-month basis, **IAG's portfolio has returned 16.45%** while the S&P 500 returned 13.44%. Since the last oversight meeting, **the spread between IAG's portfolio and the S&P 500 narrowed from 18.94% (12/3/21) to 3.01% (2/15/22).**

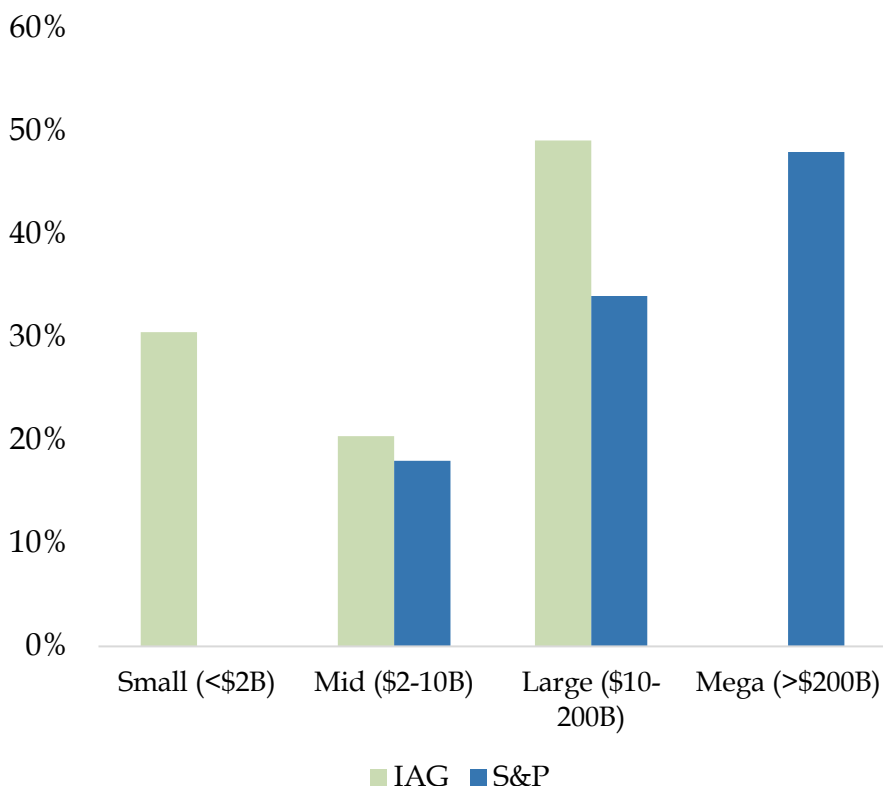
Our opportunistic positions now represent ~17% of our portfolio which is in line with our expectations.

Portfolio Exposure vs. Benchmark

Sector Exposure: IAG vs. S&P 500 (%)



IAG vs. S&P 500 Exposure by Market Cap



IAG continues to use the S&P 500 as the core benchmark as specified in the fund mandate. While our industrial exposure is still substantially overweight, the two proposed positions today will help improve the composition.

IAG continues to be underexposed to mega-cap positions, yet drastically overexposed to small-cap companies. We will continue to look at the mega cap space for potential opportunities but do not think that the underexposure poses a major issue.

Pitch Log Since Dec 2021 Meeting

Internal Pitches Since Nov 2021 Meeting

Company	Stage	Date	Analysts
1 Restoration Hardware Inc.	Quick Screen	1/26/22	Achyut Seth, Rahul Parikh
2 Morguard Corp.	Quick Screen	1/26/22	Vincent Ye
3 Barnes & Noble Education Inc.	Quick Screen	1/26/22	Alice Yu
4 Sea Ltd.	Quick Screen	1/26/22	Niranjan Narasimhan
5 Arco Platform Ltd.	Quick Screen	2/2/22	Rhys Berezny
6 Informatica Inc.	Quick Screen	2/2/22	Alex Isaac
7 Western Digital	Quick Screen	2/2/22	Sophie Pan
8 Restoration Hardware Inc.	Devils Advocate	2/2/22	Achyut Seth, Rahul Parikh
9 Brown & Brown, Inc.	Quick Screen	2/2/22	Mikhail Talib
10 Restoration Hardware Inc.	First Update	2/9/22	Achyut Seth, Rahul Parikh
11 Sea Ltd.	First Update	2/9/22	Niranjan Narasimhan
12 Sea Ltd.	Second Update	2/16/22	Niranjan Narasimhan
13 Abercrombie & Fitch Co,	Quick Screen	2/16/22	Amy Chen, Sophie Pan



Active Pipeline

Company	Stage	Date	Analysts
1 Barnes & Noble Education Inc.	Quick Screen	1/26/22	Alice Yu
2 Restoration Hardware Inc.	First Update	2/9/22	Achyut Seth, Rahul Parikh
3 Abercrombie & Fitch Co,	Quick Screen	2/16/22	Amy Chen, Sophie Pan
4 Western Digital	Quick Screen	2/2/22	Sophie Pan

Oversight Meeting

Company	Stage	Date	Analysts
1 Sea Ltd.	Second Update	2/16/22	Niranjan Narasimhan

III. Key Holdings Update

Portfolio Updates Since Dec 2021 Meeting

Company	Ticker	Update
Allison Transmissions	ALSN	Sell Note in Packet
APi Group	APG	We propose to hold our position in API group. Since the last oversight update, API group has completed a key acquisition by acquiring Chubb for an enterprise value of \$3.1 billion, which comprises \$2.9 billion cash and approximately \$200 million of assumed liabilities. This acquisition represents a significant expansion in API group's presence in the fire safety industry, especially in fast growing international markets. Chubb's acquisition provides attractive cross selling opportunities that will help increase revenue to our previously modeled \$4.127 Billion for FY22. This acquisition also introduces cost saving synergies that will help API expand EBITDA margins from 10% to our projected 12%. We remain confident in our 2 thesis points-Continued positive M&A and a focus on increasing margins. For our third thesis point about API being undervalued relative to comps: This has already played out to some degree. API now trades at 17.13x Forward P/E compared to 13.23x when we bought in. However, we believe that it is still undervalued relative to comps, as the current mean Forward P/E multiple for our comp set is 21.34x. We would like to hold and see our thesis play out as the business approaches 12% EBITDA margins and trades more in line with comps.
Berry Global	BERY	We propose a hold in our stake in Berry Global. Since the last oversight meeting, Berry reported Q1 2022 earnings which was subsequently followed by a ~8% drop in share price overnight. Mixed results, including earnings misses, were driven by labor and supply chain issues as well as cost inflation. These macro-environment impacts are not unique to Berry, but rather are industry-wide, and the company has a strong track record of cost recovery and managing these transitory factors. While we believe that some of the thesis points have materialized, most prominently reaching target leverage, we believe the overall business is still proving to be attractive. Organic volume growth remains strong in consumer packaging and health, with engineered materials lagging only -2%, which is not alarming due to inherent cyclicity of the segment and the strength of plastic and the growth pipeline for 2H acting as a buffer. Finally, it is worth noting the capital allocation strategy, such that the board approved a \$1bn share repurchase program (\$350mm in FY22, with \$50mm repurchased in Q1).
Builders FirstSource	BLDR	We propose a hold on Builders Firstsource. Since our last meeting, the stock has remained flat at ~72 dollars per share, but has experienced volatility with the rising interest rates and as a byproduct, the housing market. Our view on the housing market is relatively unchanged, we believe that the United States is still severely underbuilt and interest rates are attractive for the time being, so there is a positive view on housing starts. Additionally, with the anticipation being that interest rates will rise, the demand for housing has seen an uptick in the last month or so. On the financial results side, BLDR has not released earnings since our last oversight meeting (FY 21 results will come out on March 1). The fundamentals of the business remain consistent, with a higher % of the product mix shifting towards prefabricated goods, and the integration with BMC still on track for ~120M in cost synergies. We believe that over the long term, BLDR will deliver value by developing into the one-stop homebuilding shop, and the fundamental theses remain unchanged since our last meeting.

Portfolio Updates Since Nov 2021 Meeting

Company	Ticker	Update
Concrete Pumping Holdings	BBCP	We propose a hold on our position in Concrete Pumping Holdings. Our position is currently up 6.6% since our purchase at \$7.08 per share. The company posted strong earnings in its fiscal year earnings call, increasing fourth-quarter revenue by 11% year over year. This improvement was driven by higher construction volumes across operating segments. In the UK segment, quarterly revenue increased 27% y/y, aided by COVID-19 reopenings. US revenue grew at 8%, weakened by pockets of softness due to variant flare-ups. Management expects to capitalize on the newly issued bipartisan infrastructure bill, actively bidding on federal and state-level projects. US waste management services posted a health 11% growth in the quarter, reaffirming our thesis regarding its increasing prevalence. Unfortunately, short-term inflation headwinds have outpaced the company's cost-mitigation measures, impacting margins. Management is actively implementing pass-through pricing mechanisms and renegotiating prior contracts. Net Debt / EBITDA has continued to improve, dropping to 3.5x. Notwithstanding the short-term inflationary pressures, we believe that BBCP is in an excellent operating position and look to hold it going forward.
Catapult Group	CAT	We propose a hold on Catapult. Since we opened the position, there have been no financial results and the stock price has been relatively flat, with a bit of beta-driven volatility. The valuation remains at roughly 3-4x revenue, and the business is supposed to release its full year 2021 results in the coming month. In terms of news from the company, it's important to note that this is the first year Catapult is working with all 32 NFL teams (15 of which are multi solution customers). We will keep an eye on how metrics like Churn and ARPU develop as every team in the league is now a Catapult customer, so it will be interesting (and telling of other leagues) to see how the saturation develops. CAT has also signed its first multi sport cross service deal with Boston College since our last meeting, supplying both equipment and Video Analytics services for 10 of its sports teams. Lastly, Catapult released a new software for baseball to track advanced metrics like inertia-based movements. All in all, we believe our theses still remain intact, and our long-term view on CAT remains unchanged.
Constellation Energy Corp	CEG	Sell Note in Packet
Krispy Kreme Inc.	DNUT	We propose a hold on Krispy Kreme. Since adding the position to our portfolio in December, Krispy Kreme's stock has faced pressure from inflationary fears, bringing it to approximately \$14 per share. The 7% increase in CPI reported at the end of 2021 as well as the potential for faster rate hikes have affected other high-beta stocks like DNUT. Names like Dominos Pizza and Yum! Brands have faced similar declines, pointing to macro headwinds in the restaurant industry. Also since our last meeting, Bank of America has initiated coverage of DNUT with a buy and PT of \$23, predicting long term US/CAN access points of 8,000. Krispy Kreme will report Q4 2021 earnings on February 22nd.

Portfolio Updates Since Nov 2021 Meeting

Company	Ticker	Update
Exelon Corp.	EXC	Sell Note in Packet
Flex Ltd.	FLEX	We propose a hold on Flex. Flex's core business remains operationally sound and Flex had a solid Q3 which exceeded expectations, although with little upside. Production disruptions within the supply chain, especially for the automotive segment have pulled down margins YOY (110bp), but FAS has somewhat counteracted that with a 60bp margin increase. FY2022 guidance has been revised upwards since October, and the future looks relatively positive, although uncertain for Flex. However, the most important update is that Flex has sold \$500 million in preferred equity in NEXTracker to TPG. This implies an enterprise value of roughly \$3 billion dollars, which is much higher than the enterprise value we anticipated. After NEXTracker's IPO, which the date is still unknown, this will convert to common equity and there is even more value unlock potential for NEXTracker, which is especially likely now given TPG's significant share. We will keep a keen eye out on how this transaction progresses.
HCA Healthcare	HCA	We propose to hold our position in HCA Healthcare. The largest operator of both inpatient and out-patient facilities in the US, HCA maintains its presence in 21 states through 182 hospitals; roughly 5% of all US hospital visits in 2021 were within the HCA network. Our initial theses, which emphasize quality performance in high margin surgeries, pricing power through consolidation, high ROIC with acquisitions, and success in handling high labor costs and shortages, remain intact. With HCA treating more COVID-19 cases in the past years than any other health system in the US and acquiring nursing schools, all thesis points remain to be fully realized and relevant. In the fourth quarter, the omicron surge influenced business in early December, yet with 5% of total admissions attributed to COVID-19 patients, the level was significantly below the third quarter's 13%. HCA currently has 12 new schools in their pipeline, of which about seven have newly opened, and 12 to 18 new schools are expected to open in the next two years, yielding new students to be integrated into HCA's facilities. The five acquired Utah hospitals are now in a regulatory review process. With these new purchases, HCA continues to focus on consolidation and its core networks as same facility admissions and same facility equivalent admissions increased 0.6% and 4.1% respectively this quarter. HCA completed over \$2 billion of share repurchases during the quarter, \$8.2 billion for 2021, and authorized an additional program for up to \$8 billion. HCA has also remained on track to further develop their high margin surgeries. They have continued to expand to operate more ambulatory surgery centers with +2.4% in 2021 and projected +2.1% in 2022. Continued growth in this branch is expected. ROIC remains strong and well above that of its peers at 19.61% in Q4 2021.
Identiv	INVE	We propose a hold on INVE. The thesis is continuing to play out as expected - Identiv has signed several large NFC opportunities in healthcare and cannabis which should easily propel the business to \$200mm in revenue by 2023 (we find sell-side lacking insight in their underwriting; they see \$165mm by 2023). Applying a conservative sales multiple here, which is reflective of the higher gross margin profile Identiv has achieved in NFC, we can easily pencil in 100% upside from here. The opportunity is continuing to develop favorably and we see no reason to exit the investment at this time.

Portfolio Updates Since Nov 2021 Meeting

Company	Ticker	Update
JD.com	JD	We propose to hold JD. Despite stock performance being flat, JD has delivered strong fundamental results and the thesis is playing out. In 3Q21, JD reported adj. net profit of RMB 5 billion, 50% above consensus, and revenue growth of 26%. We continue to see expansion into the lower tier cities, adding 20.3 mn annual active users qoq and 110.6 mn yoy. We believe the company's controlled investment in community group purchase has turned out to be fruitful, as even major competitors in the area have seen widening losses and need for additional financing. We continue to expect the firm to expand into the lower cities in a balanced measure, while gaining share in higher-tier with its classic JD app.
Methode Electronics Inc.	MEI	We propose to hold Methode Electronics. Since the last update, there hasn't been any earnings call or updates on guidance. The automotive industry is still recovering from the pandemic-induced supply chain issues, but disruptions are likely to last, as exemplified by Ford Motors and GM reducing production at several factories in Michigan and Ontario due to the Canadian Trucker protests at the border. However, 2021 marked the increasing shift to SUVs and pickup trucks and surge in electric vehicle sales, as the U.S. government doubled down on EV by announcing its most aggressive fuel economy standards in December (Biden wants to see EV account for 50% of sales by 2030). These trends will continue to be tailwinds in 2022 for Methode Electronics, since EVs present a significant top-line growth opportunity for the automotive supplier. With no fundamental change in the theses, we continue to be confident in MEI's specialized value proposition in niche verticals.
Monster Beverage Corp	MNST	We propose to hold Monster Beverage. Although there hasn't been any earnings calls since the previous board meeting, Monster had entered an agreement to acquire CANarchy Craft Brewery Collective, a craft beer and hard seltzer company for \$330M in cash, adding to Monster's drink portfolio brands including Squatters, which makes Juicy IPA. Since news broke of Monster's acquisition of CANarchy, Monster's stock price had fallen by 12.5%, which can partially be attributed to ongoing supply chain issues and the continuing surge in aluminum prices (reached 13-year high). Additionally, merger talks between Monster and Constellation Brands (STZ) are still underway, with the combined market cap reaching \$90B. This merger would represent a significant bet on alcoholic and CBD-infused drinks, since STZ also holds a 40% stake in Canopy Growth Corp. Nevertheless, with no significant change in our theses, we continue to believe in Monster's strong growth prospects, especially in international markets.
Office Property Income	OPI	We propose holding our position in Office Properties Income Trust (OPI). When we initially proposed it, we had a \$22.21 price target representing a 15.5% upside. Since then, the stock has reached \$24.87, exceeding our original price target. However, we remain confident in our thesis and nothing has fundamentally changed in our long term outlook for OPI group. The first thesis, concerning high quality governmental revenue and low exposure to pandemic induced work from home risks, has continued to benefit OPI in Q3 FY 21. When we initially bought OPI, governmental income comprised 25% of annualized rent income, which is down to 19.7%. However, it continues to comprise the overwhelming majority as the next largest share comes from Alphabet, at 3.6% of annualized rent. For our second thesis, OPI group continues replacing older, high-CapEx assets with newer assets in superior locations and generating higher cash flows. In FY2021, OPI has sold \$227 million of older, high CapEx assets to acquire three office properties for \$577 million. We would like to note that these 3 properties were acquired at an average cap rate of 6.36%, coming close to management's expected goal of 6% when we first proposed the stock. We remain confident in our thesis and would like to hold OPI as it starts to realize the benefits of its capital recycling program.

Portfolio Updates Since Nov 2021 Meeting

Company	Ticker	Update
Palo Alto Networks	PANW	We propose a hold on Palo Alto Networks. The company has continued to have strong growth in its key operating metrics such as RPO and free cash flow. The company will report Q2 earnings on February 22nd, which we expect to continue demonstrating its strong performance. With increasing secular spending growth in information technology systems, we predict that the company to maintain year-over-year revenue growth between 25-30%. As outlined in recent conference presentations hosted by Credit Suisse and Barclays, management is confident in their ability to grow market share while consistently delivering a best-in-class product. We are eagerly awaiting PANW's growth numbers in core segments such as their Next-Generation Firewall Solutions and improvements to free cash flow margin, approaching long-term targets of 35%. We believe that PANW will continue to compound its growth through consistent management and performance.
Points International	PCOM	We propose a hold on Points. Since our previous meeting, PCOM reported preliminary FY21 earnings, which were overwhelmingly positive (revenue and gross profit doubling over last year). Stock is up 10% this past week. There is still runway to deepen relationships with large hospitality services clients, but the momentum this quarter is indicative of the relationships won during COVID. Our initial thesis behind the financial incentives of loyalty programs is playing out as expected and, going forward, we own PCOM for exposure to the rapidly growing loyalty market in a normalized environment.
TransDigm Group	TDG	We propose a hold on TDG. The stock has rallied by LSD-MSD since our most recent purchase. The longer-term outlook is still quite favorable. As OEM's work through their heavily loaded backlogs, we anticipate significant strength in the narrow-body market. As TransDigm continues pushing its products through the OEM funnel, it will be able to reap profits in the long-tailed aftermarket. Recent Omicron scares are proving to be overzealous, as we initially expected, and the business will maintain its growth loop for many years to come. The only optical concern is the leverage profile (~9-10x EBITDA), but we have trust in the management team to right-size the capital structure if need be.
United Rentals	URI	We would like to propose holding our stake in United Rentals (URI) at \$322.83, up 181.1% since inception in March 2019. The position has certainly performed well within its industry, and we are considering possibly trimming or exiting the position during the next oversight cycle. United Rentals currently trades at 13.9x EV/EBITDA. This is overall at a discount to Caterpillar, which trades at 14.9x EV/EBITDA. This is despite the fact that the equipment rental business model is more attractive in the US' current construction economic environment, where economic activity has slowed and construction project volume is down, making it harder to justify a purchase of new construction equipment rather simply rent. Additionally, URI's management has continued their promise to focus on decreasing leverage rather than revert to their historic acquisition heavy strategy. Overall, while the market has certainly realized most of its previous discount, we still believe URI is a position worth holding for the time being. We believe that it should be considered as one of the portfolio's core holdings, especially within the industrial holdings.

Portfolio Updates Since Nov 2021 Meeting

Company	Ticker	Update
Willis Towers Watson PLC	WLTW	<p>We propose to hold our position on Willis Towers Watson. Following the loss of talent in 2021, due to the terminated merger between Aon and Willis Towers Watson, hiring levels have increased and the impacts of previous departures are subsiding, delivering positive margin expansion. The Human Capital & Benefits (HCB) segment had an operating margin of 31.2%, compared to 31.3% for the prior-year Q4. The Investment, Risk & Reinsurance (IRR) segment had an operating margin of 25.3%, compared to 12.5% for the prior-year Q4. WTW's selling of Willis Re in August for \$3.25 billion was finally completed in December. Free cash flow for 2021 was \$1.91 billion, up 23% compared to \$1.55 billion last year. The increase in year-over-year free cash flow was primarily due to the termination income receipt, although this was offset by \$383 million in tax payments related to Willis Re, legal settlement payments for the previous Stanford and Willis Towers Watson merger settlements, and higher incentive compensation. With the operational improvement WTW is witnessing, our thesis, which has an emphasis on a management turnaround as well as operating improvement, remains intact.</p>
ZTO Express	ZTO	<p>We propose a hold on ZTO. The competitive environment has finally turned favorable for rationalized revenue and profit growth. The Chinese government has formally banned predatory pricing; new entrants like J&T can no longer set prices below their unit cost. This, in our view, has put an end to the entry model of burning cash and buying scale, as well as an end to the heated price war in the industry over the past one and a half years. We believe the industry would revert back to the moderate mode of consolidation in 2022, with ASP rising and ZTO gaining market share (~23% EOY).</p>

IV. Sell and Buy Notes

Sell and Hold Note: NYSE: CEG & NASDAQ: EXC

Dear Board of Advisors,

We would like to sell our position in **Constellation Energy Corporation (NYSE: CEG)** but retain our position in **Exelon Corporation (NYSE: EXC)**. We have a combined upside of 31%. We believe that our initial theses have largely played out and that there is more upside to be seen by allocating cash to our latest ideas.

Thesis Point 1: Value creation of regulated business through the spinoff [Partially Realized]

While we did not see a significant immediate value unlock through the spinoff occurring on February 3, 2022, we expect that this value creation was built up over the last several months with Exelon increasing in value by roughly 20%, while peers have remained relatively flat.

Thesis Point 2: Underappreciated fleet of carbon-free generation assets [Realized]

The spin-off appears to be valued correctly among peers. When we pitched this stock, SpinCo was assigned hardly any value. However, we believe SpinCo's is fairly priced right now through comp analysis. SpinCo's upside optionality is based on regulations that are difficult to measure and could occur far in the future. It also looks like they are not pursuing any major growth capex projects in the short to medium time horizon and we have no catalysts in sight.

Thesis Point 3: Regulatory supports provide upside optionality for SpinCo [Partially Realized]

When we initially pitched this stock, we were unsure of the fate of the Byron and Dresden nuclear power plants. However, in September, a \$694 million omnibus package to the two plants was passed to keep the plants operational over the next 5 years and eliminated the bear case for our model. Current nuclear energy talks seem to have stalled in Congress and although statewide regulation could still be beneficial, it is difficult to gauge the time horizon or quantify the estimation of these benefits.

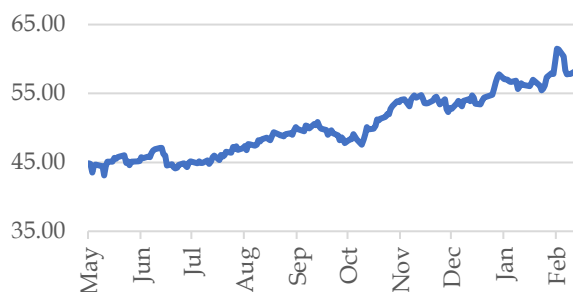
We would like to hold Exelon for the following reasons:

As a 100% pure-play utility, Exelon should trade at a premium to even best-in-class peers like Dominion Energy, Southern Company, and NextEra Energy. Currently, Exelon trades at a slight discount (it used to be very discounted). The spin-off has seemed to place a higher value on SpinCo and less value on the regulated side than initially modeled. Regulatory tailwinds and major grid modernization projects within the Midwest and Northeast should also provide significant upside for Exelon. Exelon remains one of the most operationally and financially sound utilities in the US and ranks in the first quartile in various metrics along with being one of the most highly diversified US utility companies. We are very comfortable holding this stock which provides broad exposure to the US utility industry until we feel pure-play premium is realized.

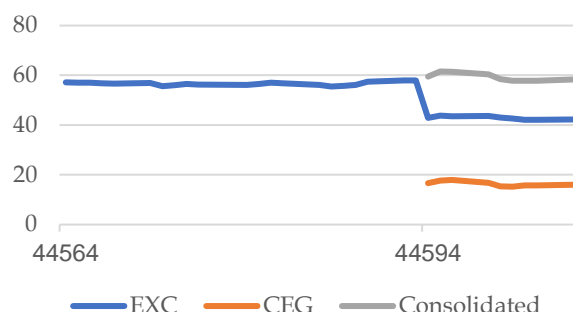
Best,

Rhys

Combined Stock Performance Over Holding Period



Separated Stock Performance Over Last 45 Days



Exelon Comps (Several not listed)

Company	2022 P/E	Allowable ROE %	Net Debt/EBITDA
NYSE: SO	18.4x	9.9%	5.8x
NYSE: D	17.2x	9.8%	7.2x
NYSE: AEE	20.8x	9.4%	5.0x
NYSE: CMS	21.8x	9.4%	5.3x
NYSE: WEC	20.8x	9.8%	5.6x
Median	20.3x	9.5%	5.7x
NASDAQ: EXC	18.6x	10.5%	3.8x

Constellation Energy Comps

Company	2022 EV/EBIT	2022 EBIT %	Sales CAGR (2022-2024)
NYSE: NEP	24.3x	35.1%	13.40%
NYSE: ORA	25.3x	27.4%	-6.55%
NYSE: VST	13.9x	10.0%	-2.24%
NYSE: CWEN	21.7x	33.5%	-2.57%
NYSE: AES	12.8x	25.5%	6.32%
Median	21.0x	24.3%	4.38%
NASDAQ: CEG	13.8x	9.2%	-1.78%

Sell Note: Allison Transmission (NYSE: ALSN)

Dear Board of Advisors,

We propose selling our existing position in Allison Transmission Holdings Inc. We originally bought ALSN in December of 2019 at a price of \$47.72. Our target price at the time was \$63.03. However, since the purchase, the stock has fluctuated greatly and is currently down 18%. At the time of purchase, we believed that Allison was a high-quality company that was protected from the elective vehicle industry trend and was making changes to reduce exposure to the oil industry. However, many of our theses have not come to fruition, and we believe that the money invested in Allison could be used elsewhere.

Electric Vehicle Thesis: At the time of purchase, we held a view that the market was over emphasizing the risk that electric vehicles would have to Allison's manual transmission business. Because Allison has traditionally manufactured transmissions for large industrial and commercial vehicles such as school buses, fire trucks, and large semi-trucks, we thought that the shift to electric vehicles would not have an impact of Allison's core business for many years. While Allison has not yet been largely impacted by the trend in electric vehicles, the effects of EVs on Allison is closer than we thought. Recently, Tesla began mass production of a class 8 electric semi-truck. Additionally, companies such as Amazon have pledged to move all their class 6 delivery trucks to EV in the next few years. These changing trends are impacting market sentiment on the stock, and we now believe that there will be a fundamental degradation of Allison's business in the near future.

Lack of View on Oil: In our original thesis we pointed out that much of Allison's revenue is positively correlated with the oil industry. Our original belief was that Allison would focus more on class 4 and 5 vehicles in order to reduce exposure to the cyclical nature of oil. While they have reduced exposure over the years, they remain highly correlated with oil. This is evident by the recent rise in ALSN from about 32 dollars in mid-October to about 40 dollars as of Feb 15th, 2022. In this same period, oil has reached eight-year highs. Because of our lack of view on oil prices, we believe that now presents a good opportunity to capture the rise in the price of ALSN due to oil.

Better Opportunities Elsewhere: Another reason for our proposed sell is that IAG believes that there are better places to allocate our capital. Taking into assumption, over the next three years, a flatline in revenue growth, an unlevered FCF margin of 22%, an exit P/FCF of 10, and a WACC of 7%, we get an updated price target of approximately \$51. This would represent upside of only about 27%. This low upside along with ALSN's strong correlation to oil make other public equities more appealing. IAG believes that other potential equities provide higher upside with reduced risk.

Overall, because Allison faces increased industry headwinds due to the shift to EVs, is highly affected by oil prices, and has a reduced target upside of approximately 27%, it is best to cut our losses and allocate the capital to potentially more undervalued companies.

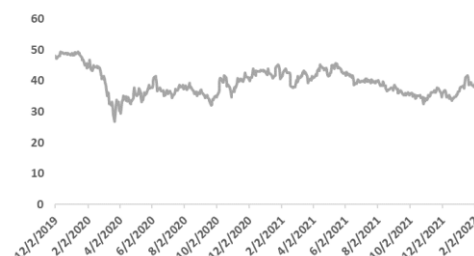
Best,

Nithin Mantena and Mikhail Talib

Stock Overview (LTM Figures)

	At Purchase:	Current:
Share Price:	\$47.72	\$40.36
Market Cap (mm)	5,640.5	4,157.1
P/E	9.48x	11.39x

3-Year Stock Performance



V. New Position Proposal

Sea Limited (NYSE: SE)

Leading emerging market gaming and e-commerce conglomerate trading at a discount

Niranjan Narasimhan

February 17th, 2022

Business Description:

Sea Limited is a Singaporean tech conglomerate that operates in three main spheres – gaming, e-shopping, and mobile payments. The company's gaming segment, Garena, reached notability when it secured a contract with Tencent in 2018 to be their primary video game publisher in Southeast Asia, giving them access to triple A titles like *League of Legends*. Recently, the company has shifted to become a mobile-based video game developer, and found immediate success with their game *Free Fire*, a battle-royale game optimized to run on the less-advanced mobile phones more commonly seen in emerging markets. *Free Fire* was the most downloaded game in the world in 2019 and 2020 and has an active user base of 720 million players, turning Garena into Sea's cash engine and only EBITDA positive segment. Sea pumps the cash generated by Garena into its other two segments, Shopee and SeaMoney. Shopee was launched in 2015 as a mobile-based e-shopping platform. With a combination of heavy discounts, low platform commissions, and free shipping, Shopee has been able to become either the number 1 or 2 platform in every southeast Asian market and has recently expanded to Brazil, India, and Europe. Long-term, Shopee is seen as the main value driver of Sea LTD with potential to become the leading emerging market e-commerce player. SeaMoney is Sea LTD's mobile payments platform that offers financial services to underbanked populations in emerging markets. While only being launched in Q3 2020, Sea's long-term goal here is to increase adoption of digital cashless payment systems and to provide micro loans to consumers and merchants, easing frictions and lowering switching costs for buyers and sellers to embrace e-commerce. In 2020, Garena accounted for 45% of revenues and generated \$1.04B in EBITDA. Shopee accounted for 52% of revenues and lost \$1.18B in EBITDA. SeaMoney accounted for 6% of revenues and lost \$629mm in EBITDA.

Recent Developments – Q3 FY21 Results and Sell-Off:

For Q3 FY21, Sea reported *Free Fire* QAU growth of 0.5%, compared to an average of 9.8% quarterly QAU growth in the previous four quarters. This seemed to fuel the narrative that *Free Fire*'s popularity, and by extension Garena's cash generating ability, had peaked. Second, fears that Tencent had a negative outlook on the company and was trying to exit at an attractive price emerged after they reduced their stake in Sea from 21% to 18%. Third, sentiment on Shopee expansion outside of Southeast Asia, particularly in Brazil, seems to have turned negative as many remain unconvinced that Sea can handle newer logistically challenging environments. Finally, the Indian government banned *Free Fire* on Monday (2/14) along with 53 other Chinese-linked mobile apps. These factors, combined with a general drawback in growth tech stocks caused share prices to fall by over 59% since late October. We believe some of these narratives and concerns are overstated and that the long-term growth strategy is still intact, creating an attractive mispricing and point for us to enter.

Key Ratios and Statistics:

Recommendation	Buy/Long
Price Target	\$224.22
Implied Return	49.9%
Share Price (1/26/2021)	\$149.55
Market Cap	\$89.94B
52-Week Low	\$372.70
52-Week High	\$119.41

Figure 1 – SE Breakdown of Key Segments

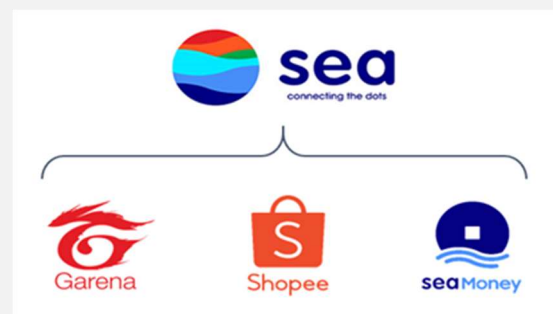
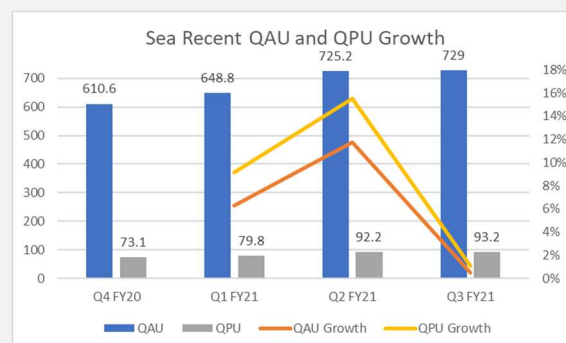


Figure 2 – SE Last 6 Month Stock Performance



Figure 3 – Recent QPU and QAU for Sea



Investment Theses:

- **Garena's ability to generate cash is being undervalued to due to overstated concerns around Tencent's divestment and slowing user growth:** Tencent announced in early January that they were reducing their ownership stake from 21.3% to 18.7%. Investors viewed this as Tencent disliking the prospects of Garena and Sea as a whole, causing the stock to drop 11.4% on that day. However, we view the accompanying reduction in Tencent's voting power to under 10% to be positive for Sea moving forward as they try to expand Shopee into India. Current Indian FDI laws place higher regulatory scrutiny on companies where more than 10% of their voting power belongs to investors from countries that share a land-border with India. Therefore, Tencent reducing its stake in SE along with reducing its voting power should help Sea expand into the Indian market with less scrutiny. Regarding user growth, market expectations pre-sell-off were probably too optimistic. With over 720 million active users (9.5% of the world's population), it is hard to imagine user growth being able to sustain peak covid-lockdown levels. However, we believe the market's view on growth has largely rationalized post-sell off and may even be too bearish, given the possibility that *Free Fire Max*, a higher-end version of the game launched in September, could have potentially cannibalized some of the user base of the original *Free Fire*. With investors now focused on profitability levers rather than user growth, we are confident in Sea's ability to increase paying ratio (QPU/QAU) and ARPU. Currently, *Free Fire*'s core presence in emerging markets means that it is heavily exposed to areas where average gaming spend per user is significantly lower than the global average. With the introduction of *Free Fire Max*, Garena should increase exposure to both developed markets and to wealthier users in emerging markets since the game is targeted towards those with higher end smartphones. This will provide a significant jump in ARPU over the next couple of years while long-term economic development in emerging markets should also naturally bring ARPUs up. Second, Garena is heavily adding to the *Free Fire* user experience via in-game socialization events where players' characters can interact with each other. This will boost spend on customization items such as skins, as now characters will be interacting with each other more outside of the core battle-royale game. Finally, *Free Fire* has introduced weekly and monthly membership passes, that offer users extreme discounts on in-game items for the price of \$1.99 per week or \$9.99 per month. Purchase of these passes will provide *Free Fire* with a greater recurring revenue base. For paying ratio, *Free Fire* is seeing it hover at around 17% in its mature markets (Malaysia, Indonesia) while it sits around 12% for the game. This shows that there is still runway for paying ratio expansion in addition to increasing ARPU.
- **Shopee's 3PL partner model will help them gain market share in Brazil, despite concerns that the country's poor logistics will be too big of a hurdle for Shopee to clear.** Investors remain skeptical of Shopee's ability to compete with MercadoLibre in LATAM, and Brazil in-particular. Brazilian open-sourced logistics remains poor, as MELI in-sourced most of their logistics network over the past several years. Since MELI

Figure 4 – Sea Voting Power Share

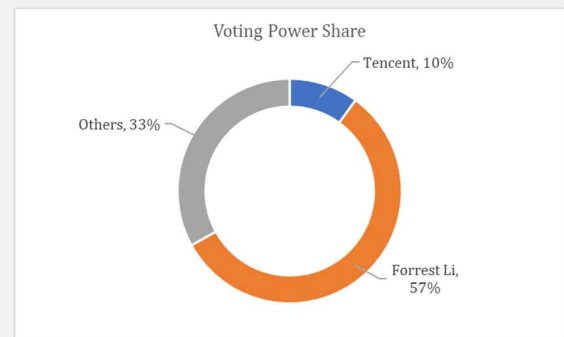


Figure 5 – Free Fire OG vs Free Fire OG + Free Fire Max Downloads

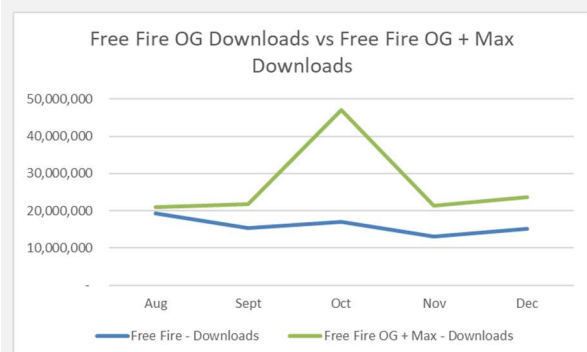


Figure 6 – EM vs DM Gaming ARPUs

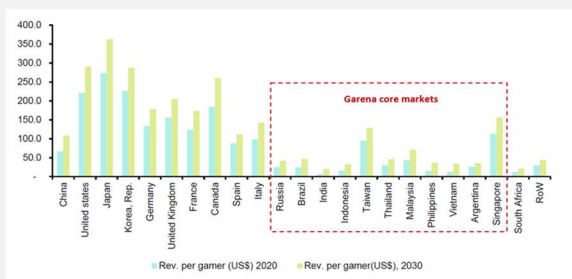


Figure 7 – Free Fire EDM DJ Alok Event



was the only player in LATAM, there was not enough order volume outside of MELI to make LATAM an attractive market for 3PL providers. This is evidenced by the severe advantage in fulfillment times MELI currently has over Shopee in Brazil (1-2 days vs 4-11 days). However, with Shopee now a major player in LATAM, there exists sufficient order volume for 3PLs to now invest in the country. Specifically, Shopee seeks to replicate the strategy it used to tackle logistics in Indonesia. Comprised of hundreds of islands, Indonesia is one of the toughest markets to tackle logistics in, having a higher logistics cost as a percentage of GDP than Brazil (22% vs 11.6%). However, Shopee was able to tackle this market by partnering with J&T. With Shopee filling nearly 40% of J&T's Indonesian volumes at one point, J&T was able to use that money and invest in building out warehouses and increasing network density. As J&T lowered their cost structure, they passed those savings off to Shopee, who then could provide J&T with more order volume as costs to consumers lessened. This mutualistic cycle has allowed Shopee to reduce shipping times by 2-3x in Indonesia over the past couple of years. Further, J&T just raised \$2.5B in a funding round and has committed to use a large portion of that cash to expand into Latin America along with Shopee. For context, MELI's entire capex spend from 2017 to 2020 was \$665.2M. In terms of if the raw order volumes in Brazil generated by Shopee are enough to create a 3PL ecosystem there, we can estimate that Shopee pushes 330mm packages (\$3B USD / \$10 order per package) while MELI shipped 649.2mm items in 2020 (probably less packages since multiple items can be stored in one package). This places Shopee at where MELI was in 2019, when they shipped 306.9 mm items, suggesting that Shopee does indeed provide enough volume for multiple 3PL players to enter the space. With each of these 3PL players competing against each other, Shopee's costs will further fall.

- **While many fear that Shopee is just buying customers via aggressive discounting and low commissions, they have proven in mature markets that their platform is engaging enough to retain customers even when discounts are taken away.** One of the major reasons Shopee has been able to capture market share in several countries so quickly is because of its aggressive discounts & free shipping offered to buyers, and low commissions taken from sellers. This has led many to believe that Shopee is simply buying temporary market share and that once discounts are taken away, customers will churn. However, there is evidence to suggest that Shopee truly offers a differentiated, and more engaging, shopping experience compared to its competitors, which has created a base of sticky customers. This starts with their core business strategy of focusing on long-tailed cheaper items. Whereas competitors like Lazada run higher-tier marketplaces that sell goods such as consumer electronics, Shopee focuses on in-expensive frequently ordered items, like cheap fast fashion and cosmetic items. Keep in mind, with e-commerce penetration so low in these countries (only 8% penetration in Brazil), there is still a relatively high lack of trust in e-commerce as a concept. Users are much more likely to order a cheap \$10 dress rather than spending \$1,000 on a laptop if they have never used e-

Figure 8 – 3PL Impact on Shopee Brazil

	Current	Eventual
Average Basket Size	\$10	\$20
Take Rate	18.0%	15.0%
Revenue	\$1.80	\$3.0
Discount	\$2.50	\$0.00
Logistics Cost	\$4.00	\$2.00
Margin	(\$4.70)	\$1.00

* Margin Table Source -- Hayden Capital

* Estimates Source -- Hayden Capital + My Own

Figure 9 – MELI Annual Capex Spend

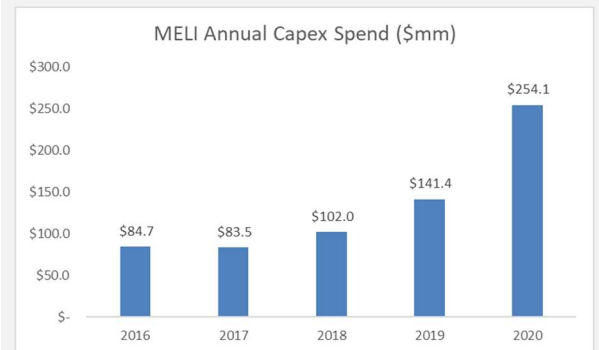


Figure 10 – GMV Split of Shopee vs Competitors

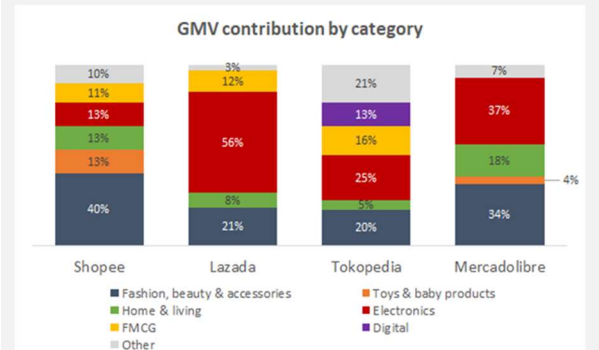


Figure 11 – Shopee vs Lazada User Engagement

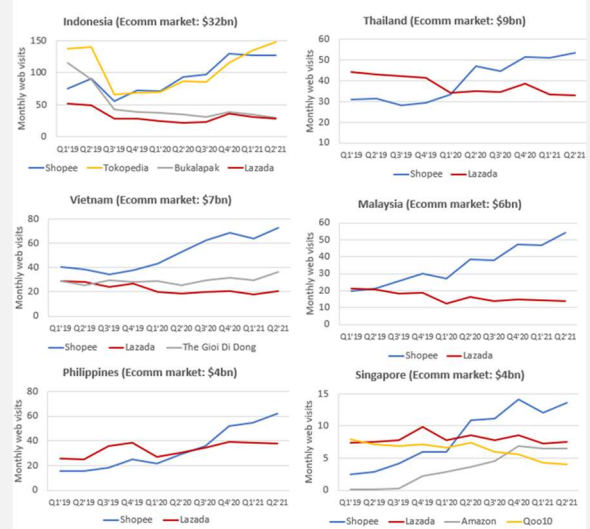
Category	Store	Followers (000s)		Reviews (000s)	
		Shopee	Lazada	Shopee	Lazada
Fashion	Zanzea	65.3	43.4	114.0	26.3
Fashion	Venda	15.3	14.8	12.8	5.3
Fashion	Giordano	20.4	19.7	16.8	5.7
Accessories	Herschel	32.1	26.4	5.9	4.7
Accessories	Fossil	10.1	7.3	2.9	0.5
Accessories	Goldheart	22.7	8.7	2.1	0.7
Beauty	Perfectdiary	45.9	4.9	41.0	5.3
Beauty	Fragrancecart	7.7	5.3	7.7	3.0
Beauty	Jurlique	5.3	9.5	1.1	0.8
Electronics	Samsung	50.3	48.3	NA	NA
Electronics	Sony	5.6	22.0	NA	NA
Electronics	Xiaomi	109.9	62.6	NA	NA
FMCG	Unilever	4.0	17.0	2.4	3.9
FMCG	Colgate	50.0	25.3	54.5	8.0
FMCG	Pampers	12.6	20.8	18.0	7.8

commerce before. Therefore, cheaper items provide a lower friction to new e-commerce users. Second, the fact that these items are consistently re-ordered allows Shopee to build user trust and mindshare over time. An app where a customer purchases an electronic device once every few months is not going to be as prevalent in the customer's mind as one that they use to order their make-up every week. This difference in business model has led to stickier and more engaged customers that stay once discounts are taken away. For instance, despite only having twice the MAU that Lazada has, top merchants and vendors are seeing over 3.5x the reviews left on their products on Shopee. With merchants seeing better results on Shopee, they are drawn to the platform compared to its competitors, which in-turn draws consumers who see that Shopee is providing a greater number of vendors with more SKU diversity, which increases engagement and creates a double-sided networking effect that is hard to break. This creates powerful incentives for both consumers and merchants to stay on the platform, even if aggressive discounts are pulled back. This can be seen in Shopee's most mature markets in Southeast Asia such as Taiwan and Indonesia, where they have nearly doubled commission percentages while increasing their market share leads at the same time. In Indonesia, average order frequencies have increased from 1-2 times per month to 7 times per month. In Brazil, they have increased commissions from 5% to 12% from the first half of 2021 to the second half of 2021 while achieving the higher MAUs than MELI. The ability to increase commissions, cut back discounts, and retain users leads us to believe that fears over long-term customer churn is overstated.

Risks – Expansion into India:

India has historically been a tough market for large e-commerce players to succeed in. Most notably, Amazon has pumped over \$20B into India over the last decade and online retail penetration as a percentage of total retail remains in the single digits. While we believe Shopee's mobile-first social-commerce model better matches how Indian consumers shop vs what Amazon offers, it is still important to note that the India's government favors nationally grown companies to foreign ones. This risk reared its head on Monday (2/14) when India banned *Free Fire* from mobile app stores in the country, causing the stock to fall by as much as 18%. We believe this issue is likely transitory. While being announced for a month and a half now, the Tencent voting share reduction only went into effect on the morning of February 14th during the SE's annual shareholder meeting. Therefore, at the time of the ban, Tencent technically did have more than 10% voting power. Once Sea clarifies its voting structure and shows that Tencent's ownership falls under the FDI laws, the ban should be lifted. If we are wrong and this is indeed a longer term, it is important to note that PUBG faced this same issue in November but was able to re-launch 6-months later. Further, the ban does not impact Garena's top line too heavily, as only 3% of Garena revenues come from India. The more pertinent concern would be if India takes similar action against Shopee. While we do not expect this to happen, it is a risk that we should watch for. Given management's long track record of success in a variety of markets, we don't believe that they would continue to burn cash on India if there was no success being found.

Figure 12 – Shopee SE Asian Market Shares



Comps

Tech Conglomerates	EBITDA Margin	EBIT Margin	NTM EV/Revenue	NTM EV/EBITDA
Alibaba Group Holding Limited (NYSE:BABA)	19.1%	13.1%	2.06x	11.04x
Tencent Holdings Limited (SEHK:700)	33.3%	23.9%	6.11x	17.20x
Mean	26.2%	18.5%	4.09	14.12

Gaming Companies	EBITDA Margin	EBIT Margin	NTM EV/Revenue	NTM EV/EBITDA
Zynga Inc. (NasdaqGS:ZNGA)	27.7%	19.4%	3.40x	14.40x
Electronic Arts Inc. (NasdaqGS:EA)	22.2%	17.5%	4.72x	12.46x
Take-Two Interactive Software, Inc. (NasdaqGS:TTWO)	25.1%	21.8%	4.12x	18.33x
Activision Blizzard, Inc. (NasdaqGS:ATVI)	37.6%	36.2%	6.42x	14.34x
KRAFTON, Inc. (KOSE:A259960)	41.8%	38.4%	3.98x	9.46x
Mean	30.9%	26.6%	4.53	13.80
Median	27.7%	21.8%	4.12	14.34

E-commerce	EBITDA Margin	EBIT Margin	NTM EV/Revenue	NTM EV/EBITDA
StoneCo Ltd. (NasdaqGS:STNE)	27.8%	20.7%	3.31x	7.87x
MercadoLibre, Inc. (NasdaqGS:MELI)	9.1%	6.4%	6.03x	63.25x
JD.com, Inc. (NasdaqGS:JD)	1.1%	0.4%	0.53x	25.64x
Shopify Inc. (NYSE:SHOP)	12.3%	11.0%	18.95x	130.70x
Pinduoduo Inc. (NasdaqGS:PDD)	-1.5%	-2.2%	3.59x	121.56x
Mean	5.4%	4.4%	11.27	126.13
Median	5.1%	3.4%	4.81	92.41

Payments & Digital Banking	EBITDA Margin	EBIT Margin	NTM EV/Revenue	NTM EV/EBITDA
PayPal Holdings, Inc. (NasdaqGS:PYPL)	21.1%	17.4%	6.41x	23.76x
Affirm Holdings, Inc. (NasdaqGS:AFRM)	-41.4%	-51.8%	11.43x	NM
Mean	-10.1%	-17.2%	8.92	23.76

Garena	2018A	2019A	2020A	2021E	2022E	2023E	2024E	2025E
Quarterly Active Users (QAU)	216	355	611	739	776	800	816	832
Growth		64.4%	72.1%	21.0%	5.0%	3.0%	2.0%	2.0%
Base				21.0%	5.0%	3.0%	2.0%	2.0%
Bull				21.0%	8.0%	5.0%	3.0%	2.0%
Bear				21.0%	3.0%	1.0%	1.0%	1.0%
Quarterly Paying Users (QPU)	12	33	73	93	106	116	130	141
% of QAU	5.6%	9.3%	11.9%	12.6%	13.6%	14.5%	16.0%	17.0%
Base				12.6%	13.6%	14.5%	16.0%	17.0%
Bull				12.6%	14.0%	15.5%	17.5%	19.0%
Bear				12.6%	13.0%	13.3%	13.7%	14.0%
Average Revenue Per User (ARPU)	81.0	67.0	57.2	53.2	55.9	58.1	60.4	62.8
Growth		-17.3%	-14.6%	-7.0%	5.0%	4.0%	4.0%	4.0%
Base				-7.0%	5.0%	4.0%	4.0%	4.0%
Bull				-7.0%	7.0%	5.0%	4.0%	4.0%
Bear				-7.0%	3.0%	2.0%	2.0%	2.0%
Bookings (ARPU x Average QPU)	661	1,767	3,186	4,419	5,550	6,434	7,444	8,542
Growth			80.3%	38.7%	25.6%	15.9%	15.7%	14.8%
Changes in Deferred Revenue	199	631	1,170	1,100	1,665	1,930	2,233	2,563
% of Bookings	30.1%	35.7%	36.7%	24.9%	30.0%	30.0%	30.0%	30.0%
Total Revenue (Bookings - Changes in DR)	462	1,136	2,016	3,319	3,885	4,504	5,211	5,979
Growth		145.9%	77.5%	64.6%	17.1%	15.9%	15.7%	14.8%

Shopee	2018A	2019A	2020A	2021E	2022E	2023E	2024E	2025E
Gross Merchandise Volume (GMV)	10,200	17,576	35,400	63,260	88,564	123,989	169,865	229,318
Growth		72.3%	101.4%	78.7%	40.0%	40.0%	37.0%	35.0%
Base				78.7%	40.0%	40.0%	37.0%	35.0%
Bull				78.7%	45.0%	43.0%	39.0%	37.0%
Bear				75.0%	37.0%	30.0%	25.0%	20.0%
Shopee Direct Sales (Sale of Goods)	94	217	582	1,051	1,674	2,483	3,352	4,358
Growth		130.9%	168.2%	80.6%	59.3%	48.3%	35.0%	30.0%
Base				80.6%	59.3%	48.3%	35.0%	30.0%
Bull				80.6%	65.0%	55.0%	37.8%	32.8%
Bear				80.6%	50.0%	40.0%	25.0%	13.0%
3P GMV (GMV - Sale of Goods)	10,106	17,359	34,818	62,209	86,889	121,506	166,513	224,960
Growth		71.8%	100.6%	78.7%	39.7%	39.8%	37.0%	35.1%
3P Marketplace Revenue (3P GMV x Take Rate)	197	731	1710	4,230	7,125	11,786	16,984	23,621
Marketplace Take Rate	1.9%	4.2%	4.9%	6.8%	8.2%	9.7%	10.2%	10.5%
Base				6.8%	8.2%	9.7%	10.2%	10.5%
Bull				6.8%	8.5%	10.0%	10.5%	10.8%
Bear				5.5%	6.5%	6.8%	7.3%	7.5%
Total Revenue (3P Marketplace Revenue + Direct Sales)	291	948	2,292	5,281	8,799	14,269	20,337	27,979
Growth		225.8%	141.8%	130.4%	66.6%	62.2%	42.5%	37.6%

SeaMoney	2018A	2019A	2020A	2021E	2022E	2023E	2024E	2025E
Total Payment Volume (TPV)			7,600	17,480	34,960	48,944	63,627	82,715
Growth				130.0%	100.0%	40.0%	30.0%	30.0%
Base				130.0%	100.0%	40.0%	30.0%	30.0%
Bull				130.0%	100.0%	50.0%	40.0%	40.0%
Bear				130.0%	80.0%	60.0%	40.0%	20.0%
% TPV off Platform			10.0%	15.0%	20.0%	25.0%	30.0%	40.0%
% TPV on Platform			90.0%	85.0%	80.0%	75.0%	70.0%	60.0%
Base				10.0%	15.0%	20.0%	25.0%	30.0%
Bull				10.0%	15.0%	20.0%	30.0%	40.0%
Bear				10.0%	10.0%	10.0%	10.0%	10.0%
TPV off Platform			760	2,622	6,992	12,236	19,088	33,086
TPV on Platform			6,840	14,858	27,968	36,708	44,539	49,629
Off-Platform Revenue			8	26	70	122	191	331
Off-Platform Take Rate			1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Base				1.00%	1.00%	1.00%	1.00%	1.00%
Bull				1.25%	1.25%	1.25%	1.25%	1.25%
Bear				0.75%	0.75%	0.75%	0.75%	0.75%
On-Platform Revenue			51	111	210	275	334	372
On-Platform Take Rate			0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
Base				0.75%	0.75%	0.75%	0.75%	0.75%
Bull				1.00%	1.00%	1.00%	1.00%	1.00%
Bear				0.50%	0.50%	0.50%	0.50%	0.50%
Total Payments Revenue			59	138	280	398	525	703
Growth				133.7%	103.2%	42.2%	32.0%	33.9%
Shopee GMV			35,400	63,260	88,564	123,989	169,865	229,318
TPV off Platform			760	2,622	6,992	12,236	19,088	33,086
Sum			36,160	65,882	95,556	136,225	188,953	262,404
Total Loans Recievable			403	3,294	5,256	8,174	12,282	18,368
% of Sum			1.1%	5.0%	5.5%	6.0%	6.5%	7.0%
Base				5.0%	5.5%	6.0%	6.5%	7.0%
Bull				5.0%	6.5%	7.0%	8.5%	10.0%
Bear				5.0%	5.0%	5.0%	5.0%	5.0%
% of Total Loans on Balance Sheet			90.0%	90.0%	90.0%	75.0%	60.0%	50.0%
% of Total Loans off Balance Sheet			10.0%	10.0%	10.0%	25.0%	40.0%	50.0%
Base				90.0%	90.0%	90.0%	75.0%	60.0%
Bull				90.0%	90.0%	90.0%	75.0%	60.0%
Bear				90.0%	90.0%	90.0%	75.0%	60.0%
Loan Value on Balance Sheet			363	2,965	4,730	6,130	7,369	9,184
Loan Value off Balance Sheet			40	329	526	2,043	4,913	9,184
% Rate on Balance Sheet Loans			20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Base				20.0%	20.0%	20.0%	20.0%	20.0%
Bull				20.0%	20.0%	20.0%	20.0%	20.0%
Bear				20.0%	20.0%	20.0%	20.0%	20.0%
% Rate off Balance Sheet Loans			5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Base				5.0%	5.0%	5.0%	5.0%	5.0%
Bull				5.0%	5.0%	5.0%	5.0%	5.0%
Bear				5.0%	5.0%	5.0%	5.0%	5.0%
Balance Sheet Loan Revenue			73	593	946	1,226	1,474	1,837
Off Balance Sheet Loan Revenue			2	16	26	102	246	459
Total Loans Revenue			75	609	972	1,328	1,719	2,296
Growth				717.2%	59.5%	36.6%	29.5%	33.5%
Total SeaMoney Revenue			133	747	1,252	1,726	2,244	2,999
Growth				459.7%	67.6%	37.9%	30.0%	33.6%

Base Case Valuation

Garena DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	462	1,136	2,016	3,319	3,885	4,504	5,211	5,979
EBIT	69	529	1,017	1,709	2,001	2,454	2,944	3,558
	15.0%	46.6%	50.5%	51.5%	51.5%	54.5%	56.5%	59.5%
NOPAT	55	418	804	1,350	1,581	1,939	2,326	2,811
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	35	18	26	33	39	45	52	60
(-) CAPEX	80.28	111	161	232	272	315	365	419
Total Capex	178	247	357					
% Attributable to Garena	45.0%	45.0%	45.0%					
% of Revenues	17.4%	9.8%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%
(-) Change in NWC		(1)	(1)	(2)	(1)	(1)	(1)	(1)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Garena	(1)	(1)	(3)	(4)	(5)	(6)	(7)	(8)
% Attributable to Garena	40.0%	40.0%	40.0%					
% of Revenues	-0.14%	-0.11%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%
Free Cash Flow				1,153	1,348	1,670	2,014	2,453
WACC				10%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				1,048	1,114	1,254	1,376	1,523

Shopee DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	291	948	2,292	5,281	8,799	14,269	20,337	27,979
EBIT	(872)	(1,019)	(1,318)	(2,671)	(3,268)	(3,459)	(2,224)	819
NOPAT	(689)	(805)	(1,041)	(2,110)	(2,582)	(2,733)	(1,757)	647
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	33	88	136	264	396	571	712	839
(-) CAPEX	71	99	143	158	264	428	610	839
Total Capex	178	247	357					
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	24.5%	10.4%	6.2%	3%	3%	3%	3%	3%
(-) Change in NWC		(1)	(1)	(3)	(4)	(5)	(6)	(8)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Shopee	(1)	(1)	(3)	(5)	(9)	(14)	(20)	(28)
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Free Cash Flow				(2,002)	(2,446)	(2,585)	(1,649)	654
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(1,820)	(2,022)	(1,942)	(1,126)	406

SeaMoney DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenues	-	-	133	747	1,252	1,726	2,244	2,999
EBIT	-	-	(478)	(784)	(1,014)	(984)	(1,077)	(1,170)
NOPAT			(378)	(620)	(801)	(777)	(851)	(924)
Tax Rate			21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	-	-	9	49	81	112	146	195
(-) CAPEX			36	112	125	138	180	180
Total Capex			357					
% Attributable to SeaMoney			10.0%					
% of Revenues			26.8%	15%	10%	8%	8%	6%
(-) Change in NWC			(1)	(6)	(5)	(5)	(5)	(8)
Total NWC			(7)					
NWC Attributable to SeaMoney			(1)	(7)	(13)	(17)	(22)	(30)
% Attributable to SeaMoney			20.0%					
% of Revenues			-1.0%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Free Cash Flow				(677)	(840)	(798)	(880)	(901)
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(615)	(694)	(600)	(601)	(560)

Garena Exit Multiple	Shopee Exit Multiple	Consolidated
EBITDA Multiple	Sales Multiple	Garena Value per Share
Base	Base	Shopee Value per Share
Bull	Bull	Combined Share Price
Bear	Bear	Conglomerate Discount
2025 EBITDA	Implied 2025 EV	Implied Share Price
Implied 2025 EV	PV of 2025 EV	Current Share Price
PV of 2025 EV	PV of FCF	Return
PV of FCF	Cash	
Cash	Debt	
Debt	Market Cap	
Market Cap	Shares Outstanding	
Shares Outstanding	Value Per Share	
Value Per Share		

Bull Case Valuation

Garena DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	462	1,136	2,016	3,319	4,083	5,057	6,115	7,205
EBIT	69	529	1,017	1,709	2,266	3,009	3,699	4,359
	15.0%	46.6%	50.5%	51.5%	55.5%	59.5%	60.5%	60.5%
NOPAT	55	418	804	1,350	1,790	2,377	2,922	3,444
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	35	18	26	33	41	51	61	72
(-) CAPEX	80.28	111	161	232	286	354	428	504
Total Capex	178	247	357					
% Attributable to Garena	45.0%	45.0%	45.0%					
% of Revenues	17.4%	9.8%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%
(-) Change in NWC		(1)	(1)	(2)	(1)	(1)	(1)	(1)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Garena	(1)	(1)	(3)	(4)	(5)	(7)	(8)	(9)
% Attributable to Garena	40.0%	40.0%	40.0%					
% of Revenues	-0.14%	-0.11%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%
Free Cash Flow				1,153	1,546	2,075	2,557	3,013
WACC				10%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				1,048	1,278	1,559	1,746	1,871

Shopee DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	291	948	2,292	5,281	9,384	15,536	22,459	31,365
EBIT	(872)	(1,019)	(1,318)	(2,671)	(2,925)	(2,211)	(172)	4,619
NOPAT	(689)	(805)	(1,041)	(2,110)	(2,311)	(1,746)	(136)	3,649
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	33	88	136	264	422	621	786	941
(-) CAPEX	71	99	143	158	282	466	674	941
Total Capex	178	247	357					
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	24.5%	10.4%	6.2%	3%	3%	3%	3%	3%
(-) Change in NWC		(1)	(1)	(3)	(4)	(6)	(7)	(9)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Shopee	(1)	(1)	(3)	(5)	(9)	(16)	(22)	(31)
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Free Cash Flow				(2,002)	(2,166)	(1,585)	(17)	3,658
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(1,820)	(1,790)	(1,191)	(12)	2,271

SeaMoney DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenues	-	-	152	791	1,554	2,235	3,327	4,921
EBIT	-	-	(459)	(830)	(1,181)	(1,006)	(1,098)	(1,083)
NOPAT			(363)	(656)	(933)	(794)	(867)	(855)
Tax Rate			21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	-	-	9	51	101	145	216	320
(-) CAPEX			36	119	155	179	266	295
Total Capex			357					
% Attributable to SeaMoney			10.0%					
% of Revenues			23.4%	15%	10%	8%	8%	6%
(-) Change in NWC			(1)	(7)	(8)	(7)	(11)	(16)
Total NWC			(7)					
NWC Attributable to SeaMoney			(1)	(8)	(16)	(22)	(33)	(49)
% Attributable to SeaMoney			20.0%					
% of Revenues			-0.9%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Free Cash Flow				(717)	(980)	(821)	(906)	(815)
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(651)	(810)	(617)	(619)	(506)

Garena Exit Multiple	Shopee Exit Multiple	Consolidated
EBITDA Multiple	Sales Multiple	Garena Value per Share
Base	Base	Shopee Value per Share
Bull	Bull	Combined Share Price
Bear	Bear	Conglomerate Discount
2025 EBITDA	Implied 2025 EV	Implied Share Price
Implied 2025 EV	PV of 2025 EV	Current Share Price
PV of 2025 EV	PV of FCF	Return
PV of FCF	Cash	
Cash	Debt	
Debt	Market Cap	
Market Cap	Shares Outstanding	
Shares Outstanding	Value Per Share	
Value Per Share		

Bear Case Valuation

Garena DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	462	1,136	2,016	3,319	3,685	3,937	4,164	4,401
EBIT	69	529	1,017	1,659	1,842	1,969	2,165	2,333
	15.0%	46.6%	50.5%	50.0%	50.0%	50.0%	52.0%	53.0%
NOPAT	55	418	804	1,311	1,456	1,555	1,711	1,843
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	35	18	26	33	37	39	42	44
(-) CAPEX	80.28	111	161	232	258	276	291	308
Total Capex	178	247	357					
% Attributable to Garena	45.0%	45.0%	45.0%					
% of Revenues	17.4%	9.8%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%
(-) Change in NWC		(1)	(1)	(2)	(0)	(0)	(0)	(0)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Garena	(1)	(1)	(3)	(4)	(5)	(5)	(5)	(6)
% Attributable to Garena	40.0%	40.0%	40.0%					
% of Revenues	-0.14%	-0.11%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%
Free Cash Flow				1,114	1,235	1,319	1,461	1,579
WACC				10%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				1,012	1,021	991	998	980

Shopee DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	291	948	2,292	4,401	6,991	9,560	12,626	15,296
EBIT	(872)	(1,019)	(1,318)	(2,289)	(3,260)	(3,890)	(4,643)	(5,128)
NOPAT	(689)	(805)	(1,041)	(1,808)	(2,576)	(3,073)	(3,668)	(4,051)
Tax Rate	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	33	88	136	220	315	382	442	459
(-) CAPEX	71	99	143	132	210	287	379	459
Total Capex	178	247	357					
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	24.5%	10.4%	6.2%	3%	3%	3%	3%	3%
(-) Change in NWC		(1)	(1)	(2)	(3)	(3)	(3)	(3)
Total NWC	(2)	(3)	(7)					
NWC Attributable to Shopee	(1)	(1)	(3)	(4)	(7)	(10)	(13)	(15)
% Attributable to Shopee	40.0%	40.0%	40.0%					
% of Revenues	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Free Cash Flow				(1,719)	(2,468)	(2,975)	(3,602)	(4,048)
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(1,562)	(2,040)	(2,235)	(2,460)	(2,514)

SeaMoney DCF	2018	2019	2020	2021	2022	2023	2024	2025
Revenues	-	-	114	681	979	1,202	1,385	1,531
EBIT	-	-	(497)	(715)	(1,028)	(985)	(859)	(919)
NOPAT			(393)	(565)	(812)	(778)	(678)	(726)
Tax Rate			21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
(+) DA	-	-	9	44	64	78	90	100
(-) CAPEX			36	102	98	96	111	92
Total Capex			357					
% Attributable to SeaMoney			10.0%					
% of Revenues			31.2%	15%	10%	8%	8%	6%
(-) Change in NWC			(1)	(5)	(3)	(2)	(2)	(1)
Total NWC			(7)					
NWC Attributable to SeaMoney			(1)	(7)	(10)	(12)	(14)	(15)
% Attributable to SeaMoney			20.0%					
% of Revenues			-1.1%	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Free Cash Flow				(617)	(844)	(794)	(697)	(717)
WACC				10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Free Cash Flow				(561)	(697)	(597)	(476)	(445)

Garena Exit Multiple	Shopee Exit Multiple	Consolidated
EBITDA Multiple	Sales Multiple	Garena Value per Share
Base	Base	Shopee Value per Share
Bull	Bull	Combined Share Price
Bear	Bear	Conglomerate Discount
2025 EBITDA	Implied 2025 EV	Implied Share Price
Implied 2025 EV	PV of 2025 EV	Current Share Price
PV of 2025 EV	PV of FCF	Return
PV of FCF	Cash	
Cash	Debt	
Debt	Market Cap	
Market Cap	Shares Outstanding	
Shares Outstanding	Value Per Share	
Value Per Share		