

## Sea Limited

# 4Q: Strong numbers, surprise profit; what next? Watch for sustainability/competition

Reiterate Rating: NEUTRAL | PO: 92.00 USD | Price: 80.06 USD

## 4Q: Beat on revenue; turns adj. EBITDA & PAT positive

Sea's reported 4Q numbers beat our as well as Street expectations, with adj. EBITDA as well as PAT turning positive, coming as a positive surprise. While management did not provide FY23 guidance, commentary remained optimistic despite near-term fluctuations and macro uncertainty. We reiterate our Neutral rating on Sea and remain watchful of company's ability to maintain revenue growth with profitability. With a higher take-rate and lower S&M, we see declining GMV in the near term and risks of competitors, such as TikTok, capitalizing. After a good 4Q, we note that the company has set a high benchmark to beat. Post 4Q, we roll forward our valuations to 2024 and increase the multiple for the e-com business to 0.4X EV/GMV from 0.3X earlier (global median is 0.4X), taking our PO to \$92 from \$68. This is mainly due to a better, visible profitability path in Shopee (e-com business vertical). Our gaming financials and other business valuations do not change much, with the majority of the delta in our PO coming from the e-com business. While our revenue numbers are largely unchanged, we increase our EPS estimates for FY23/24E materially to \$2.57/3.13 from -\$0.75/0.92 as we expect positive net income on an annual basis to be sustained.

## Key drivers: Take-rate/AOV sustainable; S&M volatile

**1)** We expect the gaming business' near-term outlook to be subdued as we expect MAU/DAU to be under pressure. 4Q numbers had a one-off related to League of Legends discontinuation; this did not impact EBITDA. **2)** In e-com, we expect higher AOV and better take-rates to be sustainable. We note that in 4Q, GMV mix was more in favor of Brazil, leading to better take-rate (Brazil has c. 20% take-rate versus c. 8% for SE Asia), and AOVs increased both in SE Asia and Brazil (possibly led by discontinuation of some low-AOV products). **3)** We expect that Shopee's EBITDA margin may fluctuate in the near term as S&M costs may increase if Shopee re-invests in the right opportunities. We also expect HQ costs to remain at reasonable levels (slight decline yoy). The biggest contribution to HQ costs are R&D-related costs, which are unlikely to grow in the near term. We believe that the key area for investment for Shopee is to improve logistics in Brazil. **4)** Investments in digi-banks may not be high, as we note that Indonesia is seeing healthy uptake and Singapore is a relatively small market.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
Net Income (Adjusted - mn)	(2,010)	(1,399)	1,433	1,746	2,034
EPS	(3.96)	(2.97)	2.57	3.13	3.65
EPS Change (YoY)	-16.7%	24.9%	NM	21.9%	16.5%
Dividend / Share	0	0	0	0	0
Free Cash Flow / Share	(0.759)	(3.12)	0.079	1.95	3.54
<b>Valuation (Dec)</b>					
P/E	NM	NM	31.19x	25.59x	21.96x
Dividend Yield	0%	0%	0%	0%	0%
EV / EBITDA*	NM	NM	21.88x	18.29x	14.21x
Free Cash Flow Yield*	-0.881%	-3.78%	0.098%	2.43%	4.42%

\* For full definitions of *IQmethod*<sup>SM</sup> measures, see page 10.

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**Refer to important disclosures on page 12 to 14. Analyst Certification on page 8. Price Objective Basis/Risk on page 8.**

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Timestamp: 08 March 2023 10:26AM EST

08 March 2023

## Equity

### Key Changes

(US\$)	Previous	Current
Price Obj.	68.00	92.00
2023E EPS	-0.75	2.57
2024E EPS	0.92	3.13
2025E EPS	NA	3.65

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## Stock Data

Price	80.06 USD
Price Objective	92.00 USD
Date Established	8-Mar-2023
Investment Opinion	C-2-9
52-Week Range	40.67 USD-136.43 USD
Mrkt Val / Shares Out (mn)	44,683 USD / 558.1
Average Daily Value (mn)	463.88 USD
Free Float	11.0%
BofA Ticker / Exchange	SE / NYS
Bloomberg / Reuters	SE US / SE.N
ROE (2023E)	22.3%
Net Dbt to Eqty (Dec-2022A)	-27.12%

Adj. EBITDA: after allocation of HQ costs

AOV: average order value

c.: circa

Contribution margin: adj EBITDA pre HQ costs

DAU: daily active users

digi-bank: digital bank

e-com: e-commerce

GMV: Gross Merchandise Value

HQ: Headquarters

SE Asia: Southeast AsiaKPIs: Key

Performance Indicators

MAU: monthly active users

PAT: profit after tax

QAU: Quarterly Active Users R&D:

Research & Development

S&M: Sales & marketing

SE Asia: Southeast Asia

TPV: Total Processing Volume

# iQprofile<sup>SM</sup> Sea Limited

Key Income Statement Data (Dec)	2021A	2022A	2023E	2024E	2025E
(US\$ Millions)					
Sales	9,955	12,450	13,888	16,490	20,319
Gross Profit	3,764	4,989	6,430	7,513	9,272
Sell General & Admin Expense	(4,803)	(5,025)	(4,283)	(4,986)	(5,737)
Operating Profit	(1,583)	(1,133)	1,416	1,759	2,394
Net Interest & Other Income	(132)	(322)	180	190	201
Associates	0	0	0	0	0
Pretax Income	(1,715)	(1,454)	1,596	1,949	2,595
Tax (expense) / Benefit	(333)	(168)	(179)	(219)	(577)
Net Income (Adjusted)	(2,010)	(1,399)	1,433	1,746	2,034
Average Fully Diluted Shares Outstanding	518	542	558	558	558

## Key Cash Flow Statement Data

Net Income	(2,053)	(1,611)	1,433	1,746	2,034
Depreciation & Amortization	278	454	459	484	493
Change in Working Capital	(787)	(1,083)	(1,738)	(827)	(1,020)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	2,771	1,185	462	366	1,112
Cash Flow from Operations	209	(1,056)	616	1,770	2,620
Capital Expenditure	(602)	(635)	(572)	(684)	(646)
(Acquisition) / Disposal of Investments	(500)	0	0	0	0
Other Cash Inflow / (Outflow)	(2,665)	(1,794)	117	128	139
Cash Flow from Investing	(3,767)	(2,429)	(455)	(556)	(506)
Shares Issue / (Repurchase)	3,498	0	0	0	0
Cost of Dividends Paid	0	0	0	0	0
Cash Flow from Financing	7,402	400	50	50	50
Free Cash Flow	(394)	(1,691)	44	1,086	1,974
Net Debt	(4,994)	(1,576)	(1,737)	(2,950)	(5,064)
Change in Net Debt	(920)	3,418	(161)	(1,214)	(2,113)

## Key Balance Sheet Data

Property, Plant & Equipment	1,680	2,346	1,333	1,554	1,671
Other Non-Current Assets	1,941	1,969	2,348	1,895	1,930
Trade Receivables	NA	NA	NA	NA	NA
Cash & Equivalents	9,248	6,030	6,241	7,504	9,668
Other Current Assets	5,888	6,658	6,988	8,310	10,256
Total Assets	18,756	17,003	16,909	19,263	23,524
Long-Term Debt	3,967	4,096	4,146	4,196	4,246
Other Non-Current Liabilities	188	191	1	70	1,041
Short-Term Debt	286	358	358	358	358
Other Current Liabilities	6,890	6,577	5,169	5,665	6,591
Total Liabilities	11,332	11,222	9,674	10,289	12,236
Total Equity	7,424	5,811	7,236	8,974	11,289
Total Equity & Liabilities	18,756	17,033	16,909	19,263	23,524

## iQmethod<sup>SM</sup> - Bus Performance\*

Return On Capital Employed	-15.7%	-8.2%	13.1%	13.9%	13.4%
Return On Equity	-37.3%	-21.3%	22.3%	21.8%	20.2%
Operating Margin	-15.9%	-9.1%	10.2%	10.7%	11.8%
EBITDA Margin	-13.1%	-5.5%	13.5%	13.6%	14.2%

## iQmethod<sup>SM</sup> - Quality of Earnings\*

Cash Realization Ratio	NM	NM	0.4x	1.0x	1.3x
Asset Replacement Ratio	2.2x	1.4x	1.2x	1.4x	1.3x
Tax Rate (Reported)	NM	NM	11.2%	11.2%	22.2%
Net Debt-to-Equity Ratio	-67.3%	-27.1%	-24.0%	-32.9%	-44.9%
Interest Cover	-11.4x	-7.3x	30.1x	37.0x	49.8x

## Key Metrics

\* For full definitions of iQmethod<sup>SM</sup> measures, see page 10.

## Company Sector

Internet/e-Commerce

## Company Description

Sea Limited is a mobile and PC gaming platform and developer (Garena) and an e-commerce marketplace operator (Shopee) in ASEAN and Taiwan. It recently expanded its e-commerce business into Brazil and Mexico, while its first self-developed game, "Free Fire," has a global user base. Sea also runs a digital payments platform supporting the two businesses (SeaMoney). Sea Ltd is headquartered in Singapore and was founded in 2009.

## Investment Rationale

We have a Neutral rating on Sea Limited. In our view, it is best positioned in our coverage to ride the e-commerce boom in Southeast Asia given its increasingly dominant online marketplace (Shopee), while its expansion into LatAm offers further substantial growth upside potential in LT. However, we see growth slowdown and expect lower GMV growth on e-com and continued slow down of Free Fire/overhang from lack of a new game. TikTok also poses a competitive intensity risk in the region on e-com

## Stock Data

Price to Book Value

6.3x

# Sea 4Q results: Surprise profit

## Exhibit 1: Sea 4Q results variance analysis

All-around beat

Sea Ltd - consolidated financials							
\$mn	4Q21A	3Q22A	4Q22E	4Q22A	YoY	QoQ	A vs E
Digital entertainment	1,415.0	892.9	813.9	948.9	-33%	6%	17%
E-commerce	1,595.1	1,920.1	2,049.7	2,102.7	32%	10%	3%
Digital financial services & others	212.0	342.9	412.0	400.0	89%	17%	-3%
<b>Total Revenues</b>	<b>3,222.1</b>	<b>3,156.0</b>	<b>3,275.7</b>	<b>3,451.6</b>	<b>7%</b>	<b>9%</b>	<b>5%</b>
<b>Cost of sales</b>	<b>(1,911.4)</b>	<b>(1,928.2)</b>	<b>(1,934.4)</b>	<b>(1,754.3)</b>	<b>-8%</b>	<b>-9%</b>	<b>-9%</b>
Digital entertainment	(374.8)	(264.8)	(260.5)	(242.5)	-35%	-8%	-7%
E-commerce & others	(1,536.6)	(1,663.4)	(1,674.0)	(1,511.8)	-2%	-9%	-10%
<b>Gross profit</b>	<b>1,310.7</b>	<b>1,227.7</b>	<b>1,341.2</b>	<b>1,697.3</b>	<b>29%</b>	<b>38%</b>	<b>27%</b>
Digital entertainment	1,040.3	628.0	553.5	706.4	-32%	12%	28%
E-commerce & others	270.5	599.7	787.8	990.9	266%	65%	26%
Sales & marketing expense	(1,219.9)	(816.7)	(696.5)	(473.6)	-61%	-42%	-32%
G&A expense (incl depreciation)	(318.6)	(551.7)	(552.0)	(527.4)	66%	-4%	-4%
R&D expense	(286.6)	(421.0)	(420.7)	(244.2)	-15%	-42%	-42%
Impairment of Goodwill	0.0	0.0	0.0	(177.7)	NM	NM	NM
Other operating income	72.3	66.0	78.7	68.5	-5%	4%	-13%
<b>Adj. Operating income/ (loss)</b>	<b>(442.1)</b>	<b>(495.6)</b>	<b>(249.4)</b>	<b>520.5</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
Operating margin	-14%	-16%	-8%	10%	NM	NM	NM
Interest income	10.9	31.3	31.3	54.3	397%	73%	73%
Interest expense	(52.3)	(11.6)	(11.4)	188.9	NM	NM	NM
Investment gain / (net)	(18.9)	(25.3)	(25.3)	(123.0)	NM	NM	NM
Forex exchange gain /(loss)	(10.7)	(3.7)	5.7	(85.2)	NM	NM	NM
<b>Profit/ (loss) before taxes</b>	<b>(513.1)</b>	<b>(504.8)</b>	<b>(249.1)</b>	<b>377.8</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
Taxes & minorities	(103.2)	(64.5)	(59.5)	45.0	NM	NM	NM
<b>Net loss</b>	<b>(616.3)</b>	<b>(569.3)</b>	<b>(308.7)</b>	<b>422.8</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
Non-controlling interests	(1.3)	4.0	3.0	4.0	NM	NM	NM
<b>Net loss to shareholders</b>	<b>(617.6)</b>	<b>(565.3)</b>	<b>(305.6)</b>	<b>426.8</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
<b>Adj. Net loss to shareholders</b>	<b>(617.6)</b>	<b>(565.3)</b>	<b>(305.6)</b>	<b>604.5</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
<b>Adjusted EBITDA</b>	<b>(492.1)</b>	<b>(357.7)</b>	<b>(136.9)</b>	<b>495.7</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
Digital entertainment	602.6	289.9	268.7	258.2	-57%	-11%	-4%
E-commerce	(877.7)	(495.7)	(315.6)	196.1	NM	NM	NM
Digital financial services & others	(217.0)	(151.8)	(90.0)	41.4	NM	NM	NM
Key Performance Indicators							
Operating Metrics	4Q21A	3Q22A	4Q22E	4Q22A	YoY	QoQ	A vs E
<b>Gaming</b>							
Quarterly active users (m)	654.0	568.2	540.1	486	-26%	-15%	-10%
Quarterly paying users (m)	77.2	51.5	48.5	44	-44%	-15%	-10%
as % of active users	12%	9%	9%	9%	-24%	-1%	0%
Avg Revenue per user (US\$)	1.7	1.2	1.2	1.1	-32%	-4%	-3%
Avg Revenue per paying user (US\$)	14.0	12.9	12.9	12.5	-11%	-3%	-3%
<b>E-commerce</b>							
Gross GMV (US\$m)	18,200.0	19,100.0	19,480.8	18,000	-1%	-6%	-8%
Gross orders (m)	2,000.0	2,000.0	2,145.7	1,700	-15%	-15%	-21%
GMV/order (US\$m)	9.1	9.6	9.1	10.6	16%	11%	17%
Take-rate	8.8%	10.1%	10.5%	11.7%	33%	16%	11%

Source: BofA Global Research estimates, company report

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**Results highlights:**

4Q revenues beat BofAe by 5%, while gross profit was 27% higher than expected. Adj. EBITDA came in at \$496mn profit, while adj. PAT came in at \$605mn. In Asia markets, the company recorded positive adj. EBITDA of \$320mn in 4Q (3Q: \$217mn loss). In other markets, adj. EBITDA loss decreased by 50%+ qoq to \$124mn. Brazil showed strong improvements in unit economics, with contribution margin loss per order down 54% qoq to 47 cents. Overall adj. PAT in 4Q came in at \$604.5mn profit (versus \$565.3mn loss in 3Q).

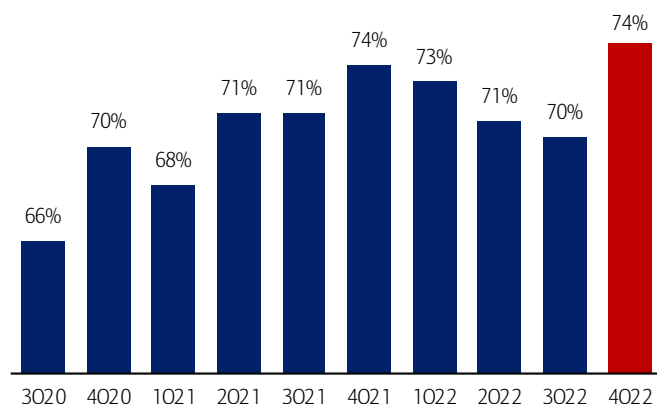
4Q PAT was negatively impacted by a \$178mn impairment of goodwill related to certain historical investments for Garena and positively impacted by a \$199.7mn net gain on debt extinguishment, c. \$130mn in reversal of previous accruals for certain expenses.

**4Q conference call takeaways**

- Shopee's adj. EBITDA turned positive in 4Q, with improvements achieved in core marketplace revenue and operating costs (34% qoq lower S&M expense) being key factors. All Asian markets for Shopee were adj. EBITDA positive in 4Q.
- Driving meaningful improvements in logistics costs to the ecosystem will remain an important area of focus going forward, per management. Lowering the cost to serve should be key to long-term growth by unlocking large, underserved user segments across markets.
- For Garena, management's focus is to continue to stabilize the user base and provide a better experience to users in core games and continue to improve profit margin.
- Shopee managed to increase take-rates and deeper monetization across various types of revenue, including core marketplace revenue (relatively high margin), as well as other revenue, with sellers investing more in the platform.

**Exhibit 2: Gross margins – digital entertainment**

Qoq improvement in 4Q22

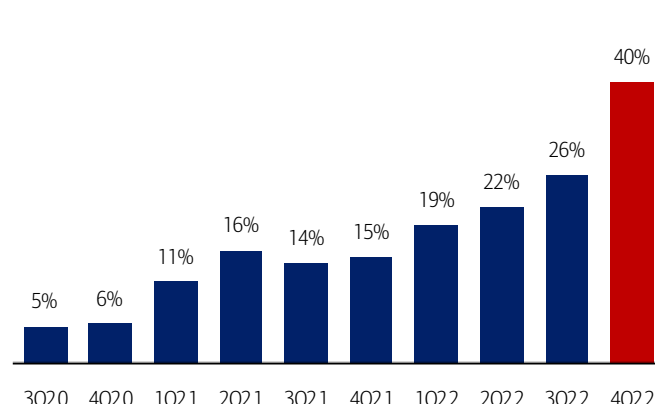


Source: Company report

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**Exhibit 3: Gross margins – e-com & Others**

Healthy improvement



Source: Company report

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- For Brazil, Shopee managed to make significant gains in efficiency of operations, and management sees room for take-rate expansion. Improvements were seen in logistics cost reduction to serve more under-addressed segments' profitability.
- Per management, for DFS business, growth is not a KPI for the teams; it is more focused towards quality of the loan book and profitability of business.
- Total sales and marketing expenses decreased by 61.2% to \$473.6 mn in 4Q22 versus \$1.2 bn in 4Q21 (-60.5% yoy for Garena, -54.9% yoy for Shopee and -86.9% yoy for DFS).
- Shopee revenue in 4Q included c. \$1.8bn of core marketplace revenue, mainly consisting of transaction-based fees/advertising revenue and therefore offering

higher margins. Value-added service revenue, mainly consisting of revenues related to logistics services, was \$0.7bn, and GAAP product revenue was \$0.3bn.

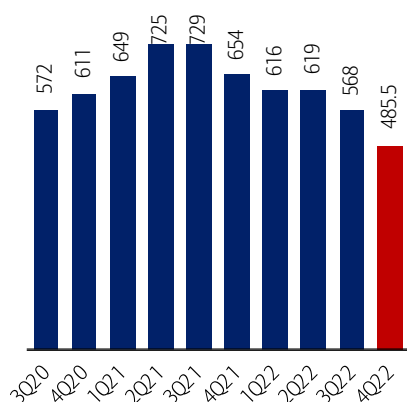
- Non-performing loans past due by 90+ days as a percent of total gross loans receivable declined from <4% in 3Q to <2%. This was mainly due to shortening of loan write-off period in a certain market from 180 days to 120 days in 4Q. Without this change in write-off period, the ratio would be about 5%.
- Provision for credit losses increased to \$175.1 mn in 4Q22 from \$34.5 mn in 4Q21, primarily driven by growth in loan book.
- Going ahead, management highlighted moving to annual disclosures of GMV and orders operating metrics versus quarterly disclosures.

## Gaming

Garena saw its active users decline qoq to 485.5mn, missing our estimates by 10%, while paying users declined 15% qoq to 43.6mn. 4Q adjusted revenues declined 18% qoq, while adjusted EBITDA declined 11% qoq. Average revenue per user declined 4% qoq, and average revenue per paying user was \$12.5 (-3% qoq).

**Exhibit 4: Quarterly active users (mn)**

Continued to decline qoq

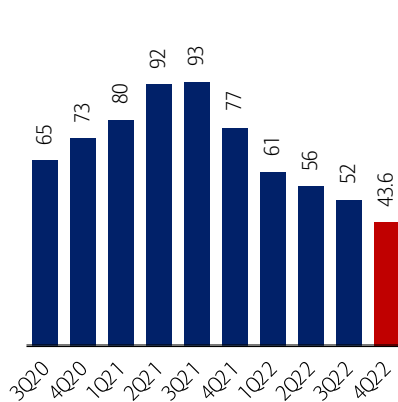


Source: Company report

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**Exhibit 5: Quarterly paying users (mn)**

Continued to decline qoq

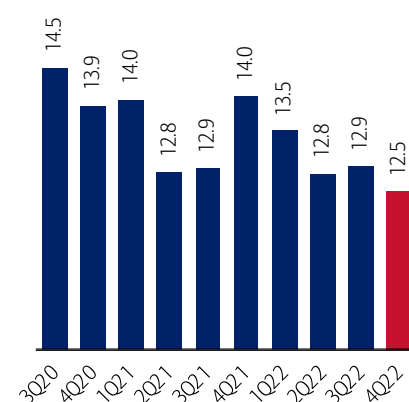


Source: Company report

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**Exhibit 6: Average revenue/paying user (US\$)**

Slight de-growth sequentially



Source: Company report

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## Shopee

Shopee reported a 6% qoq decline in GMV to \$18bn, missing our estimate by 8%. Gross orders declined 15% qoq at 1.7bn orders (-21% versus our estimate). 4Q take-rate (excluding product) was 10% versus 8.4% in 3Q. Adjusted EBITDA profits came in at \$196mn in 4Q (versus a loss of \$496mn in 3Q).

**Exhibit 7: E-com revenue split**

Marketplace and product revenue mix

	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22
Gross GMV	11,900	12,600	15,000	16,800	18,200	17,400	19,000	19,100	18,000
Total e-com revenue	842	922	1,155	1,450	1,595	1,517	1,749	1,920	2,103
Adjusted marketplace revenue (excluding product revenue)	638	716	905	1,200	1,300	1,300	1,500	1,600	1,800
Product revenue	215	206	251	250	295	217	249	320	303
e-com revenue as % of GMV	7.1%	7.3%	7.7%	8.6%	8.8%	8.7%	9.2%	10.1%	11.7%
Adjusted marketplace revenue (excluding product revenue) (% of GMV)	5.4%	5.7%	6.0%	7.1%	7.1%	7.5%	7.9%	8.4%	10.0%
Product revenue (% of GMV)	1.8%	1.6%	1.7%	1.5%	1.6%	1.2%	1.3%	1.7%	1.7%

Source: Company report

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**Exhibit 8: Adjusted EBITDA loss per order**

On an improving trajectory

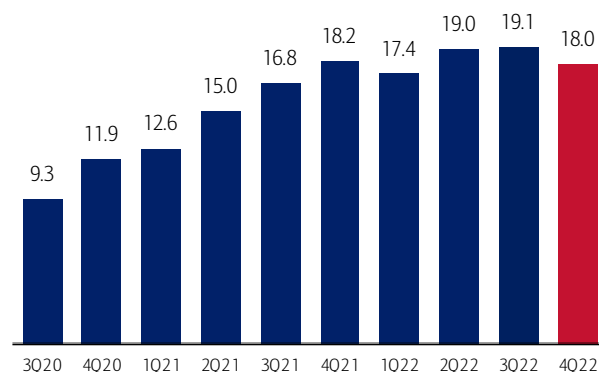
Adj EBITDA loss / order pre HQ costs	1Q22	2Q22	3Q22	4Q22
<b>Brazil (US\$)</b>	1.52	1.42	1.03	0.47
% yoy	-45%	-49%	-49%	-77%

Source: Company report

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**Exhibit 9: Shopee GMV (\$bn)**

Slightly lower qoq

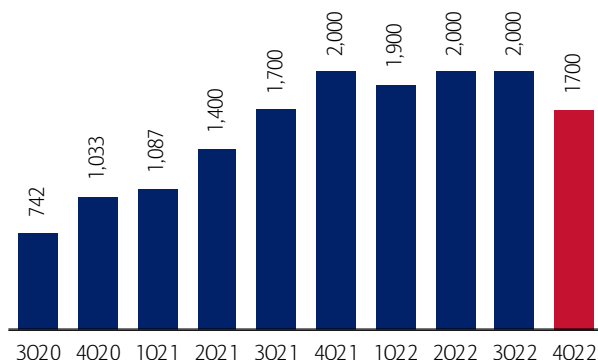


Source: Company report

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**Exhibit 10: Gross orders (mn)**

Lower yoy &amp; qoq

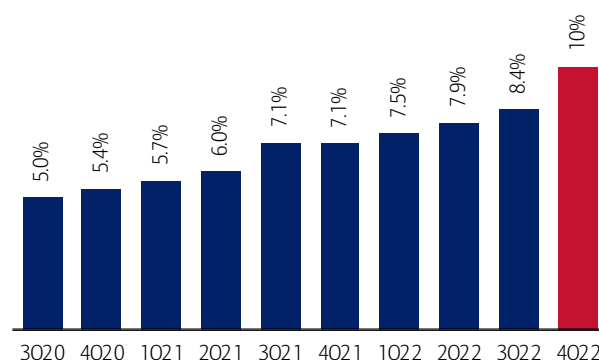


Source: Company report

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**Exhibit 11: Shopee take-rate (excluding product)**

Increase seen qoq to 10%



Source: Company report

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**DFS**

GAAP revenue was \$380.2mn (+92.5% yoy), and adj. EBITDA profits were \$75.6mn (versus a loss of \$67.7mn in 3Q22). Total loans receivable was \$2.1bn, net of allowance for credit losses of \$238.8mn. Non-performing loans due >90 days were less than 2% (versus less than 4% in 3QFY22) of total gross loans receivable.

**Exhibit 12: Sea's sum-of-the-parts valuation**

PO at \$92

	USD mn	EV Multiple	Valuation USD mn	Valuation per share
<b>Digital entertainment</b>				
Reported EBITDA - 2024E	1,651	5.5 x	9,082	16
Cash EBITDA - 2024E	1,151	5.5 x	6,332	11
<b>Average valuation</b>	1,401	5.5 x	7,707	<b>14</b>
<b>E-commerce</b>				
		<b>EV/GMV</b>		
Shopee GMV - 2024E	88,559	0.4 x	35,424	<b>63</b>
<b>SeaMoney and others</b>				
		<b>P/IC</b>		
Digital banking - invested capital	1,128	1.00 x	1,128	<b>2</b>
TPV of SeaMoney - 2024E	85,733	0.05 x	4,287	<b>8</b>
Sea Capital - invested capital	1,000	1.20 x	1,200	<b>2</b>
<b>Group enterprise value</b>			<b>49,745</b>	<b>89</b>
add: net cash			1,950	<b>3</b>
deduct: MI and other adjustments			(79)	<b>0</b>
<b>SOTP equity value</b>			<b>51,616</b>	<b>92</b>
No. shares outstanding (mn)	558			

Source: BofA Global Research Estimates

BofA GLOBAL RESEARCH

## Price objective basis & risk

### Sea Limited (SE)

Our PO of USD92 is based on a sum-of-the-parts valuation. We value Garena's gaming business at USD14 per share or 5.5x 2024E EV/EBITDA, which is at a discount to global peers.

The Shopee business is valued at USD63 per share based on 0.4x 2024E EV/GMV (vs 0.3x 2023E EV/GMV earlier) and in our view fairly reflects Shopee's rapid growth, increasingly dominant position in one of the fastest-growing e-commerce regions in the world and optionality in Latin America.

We value its Digital Banking unit at 1x EV/IC (USD2/share) given growth optionality, its SeaMoney digital payments business at 0.05x EV/TPV for 2024E (USD8/share), and Sea Capital PE fund at 1.2x EV/IC (USD2/share).

Upside: 1) faster-than-expected revenue growth with profitability, 2) good traction of more self-developed games

Downside: 1) continued higher losses, 2) higher competition in SE Asia e-com markets, leading to slowing revenue growth.

## Analyst Certification

I, Sachin Salgaonkar, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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#### APR - Internet, Media and Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	Agora	API	API US	Daley Li, CFA
	AiHuiShou	RERE	RERE US	Joyce Ju
	Alibaba Group	BABA	BABA US	Joyce Ju
	Alibaba Group	BABAF	9988 HK	Joyce Ju
	Alibaba Health	ALBHF	241 HK	Miranda Zhuang, CFA
	Baidu.com	BIDU	BIDU US	Miranda Zhuang, CFA
	Baidu.com	BAIDF	9888 HK	Miranda Zhuang, CFA
	Chinasoft International	CFTLF	354 HK	Paul Dewberry
	Cloud Music	XWJF	9899 HK	Lei Zhang
	Dada Nexus	DADA	DADA US	Lei Zhang
	DBAPPSecurity	XDBAF	688023 CH	Daley Li, CFA
	Dingdong	DDL	DDL US	Joyce Ju
	East Money	XEQTF	300059 CH	Eddie Leung
	Glodon Company	XGCOF	002410 CH	Daley Li, CFA
	Grab Holdings	GRAB	GRAB US	Sachin Salgaonkar
	Hello Group	MOMO	MOMO US	Lei Zhang
	iQIYI	IQ	IQ US	Lei Zhang
	JD Health	JDHIF	6618 HK	Miranda Zhuang, CFA
	JD.com	JD	JD US	Joyce Ju
	JD.com	JDCMF	9618 HK	Joyce Ju
	JYP Entertainment	ALNNF	035900 KS	Susie Lee
	Kingdee International Software	KGDEF	268 HK	Daley Li, CFA
	Kuaishou	KUASF	1024 HK	Lei Zhang
	Makemytrip Limited	MMYT	MMYT US	Sachin Salgaonkar
	Meituan	MPNGF	3690 HK	Lei Zhang
	Naver Corporation	NHNCF	035420 KS	Susie Lee
	NCSoft	NCSCF	036570 KS	Susie Lee
	NetEase	NETTF	9999 HK	Lei Zhang
	NetEase, Inc	NTES	NTES US	Lei Zhang
	Nine Entertainment Company	NNMTF	NEC AU	Ware Kuo
	Nykaa	XQQGF	NYKAA IN	Sachin Salgaonkar
	PB Fintech	XPFXF	POLICYBZ IN	Sachin Salgaonkar
	Pinduoduo Inc.	PDD	PDD US	Joyce Ju
	PT Bukalapak.com	BKLPF	BUKA IJ	Sachin Salgaonkar
	PVR Ltd.	PVRLF	PVRL IN	Sachin Salgaonkar
	Qi An Xin	XQTFD	688561 CH	Daley Li, CFA
	REA Group	RPGRF	REA AU	Ware Kuo
	Seek Limited	SKLTF	SEK AU	Ware Kuo
	Tencent Holdings	TCTZF	700 HK	Miranda Zhuang, CFA
	Tencent Music	TME	TME US	Lei Zhang
	Tencent Music	XWFWF	1698 HK	Lei Zhang
	ThunderSoft	XSTS	300496 CH	Daley Li, CFA
	Trip.com Group	TCOM	TCOM US	Joyce Ju
	Trip.com Group	TRPCF	9961 HK	Joyce Ju
	Vipshop Holdings	VIPS	VIPS US	Joyce Ju
	Weibo Corporation	WB	WB US	Miranda Zhuang, CFA
	Weibo Corporation	WEIBF	9898 HK	Miranda Zhuang, CFA
	YG Entertainment	XYEIF	122870 KS	Susie Lee
	Yonyou Network	XYNIF	600588 CH	Daley Li, CFA
	YY	YY	YY US	Lei Zhang
<b>NEUTRAL</b>				
	AfreecaTV	WNTHF	067160 KS	Susie Lee
	Autohome	ATHM	ATHM US	Miranda Zhuang, CFA
	Autohome	XXYZF	2518 HK	Miranda Zhuang, CFA
	Baozun	BZUN	BZUN US	Joyce Ju
	Bilibili	BILI	BILI US	Lei Zhang
	Bilibili	BLBLF	9626 HK	Lei Zhang
	Carsales	CSSSF	CARAU	Ware Kuo
	Coupang	CPNG	CPNG US	Susie Lee
	Delhivery	XDVL	DELHIVER IN	Sachin Salgaonkar



## APR - Internet, Media and Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Huya	HUYA	HUYA US	Lei Zhang
	HYBE	XBGOF	352820 KS	Susie Lee
	Kakao Corp.	DAUCF	035720 KS	Susie Lee
	KE Holdings	BEKE	BEKE US	Miranda Zhuang, CFA
	KE Holdings	XSQRF	2423 HK	Miranda Zhuang, CFA
	Krafton	XKINF	259960 KS	Susie Lee
	NavInfo	XWLHF	002405 CH	Daley Li, CFA
	Paytm	XUXBF	PAYTM IN	Sachin Salgaonkar
	Plan B Media PCL	XMKTF	PLANB TB	Thititthep Nophaket
	PropertyGuru	PGRU	PGRU US	Sachin Salgaonkar
	Sea Limited	SE	SE US	Sachin Salgaonkar
	Seven West Media	WANHF	SWM AU	Ware Kuo
	The ONE Enterprise	XUJCF	ONEE TB	Thititthep Nophaket
	VGI Public Company Limited	XZQHF	VGI TB	Thititthep Nophaket
	WiseTech Global Limited	WTCHF	WTC AU	Ware Kuo
	XD Inc.	XDNCF	2400 HK	Lei Zhang
	Zomato Limited	XMWRF	ZOMATO IN	Sachin Salgaonkar

## UNDERPERFORM

	Altium Limited	ALMFF	ALU AU	Ware Kuo
	Appen Ltd	APPEF	APX AU	Ware Kuo
	BEC World	XBJHF	BEC TB	Thititthep Nophaket
	CJ ENM	CJHOF	035760 KS	Susie Lee
	Com2uS Corp	XOYAF	078340 KS	Jeehoon Jeong, CFA
	Douyu	DOYU	DOYU US	Lei Zhang
	Indiamart. InterneSh Limited	XEITF	INMART IN	Sachin Salgaonkar
	Info Edge	IFOEF	INFOE IN	Sachin Salgaonkar
	Kakao Games	XKKGf	293490 KS	Susie Lee
	Ming Yuan Cloud	XWTAF	909 HK	Daley Li, CFA
	Netmarble	XLGHF	251270 KS	Susie Lee
	Pearl Abyss Corp	XEPAF	263750 KS	Susie Lee
	Ping An Healthcare and Technology	PANHF	1833 HK	Miranda Zhuang, CFA
	Technology One Limited	THNOF	TNE AU	Ware Kuo
	Weimob	WEMXF	2013 HK	Daley Li, CFA
	Xero Limited	XROLF	XRO AU	Ware Kuo
	Zip Co Limited	ZIZTF	ZIP AU	Ware Kuo

Method <sup>SM</sup> Measures Definitions

## Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

## Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

## Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

## Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

## Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash &amp; Equivalents

EBIT

## Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

## Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

## Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

## Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

Valuation Toolkit

Numerator

Denominator

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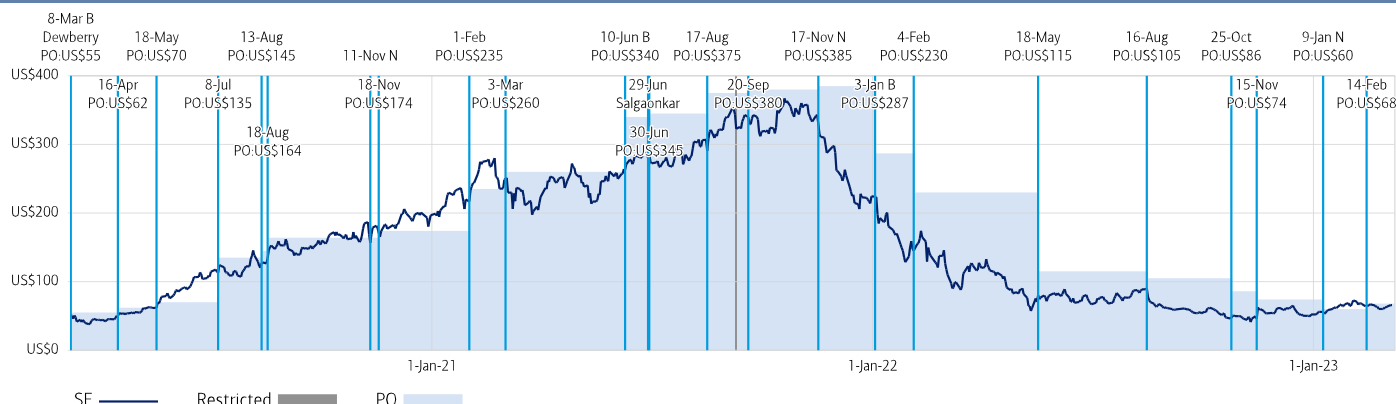
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B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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### Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2022)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	216	50.35%	Buy	113	52.31%
Hold	119	27.74%	Hold	58	48.74%
Sell	94	21.91%	Sell	31	32.98%

### Equity Investment Rating Distribution: Global Group (as of 31 Dec 2022)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1853	52.58%	Buy	1040	56.13%
Hold	840	23.84%	Hold	493	58.69%
Sell	831	23.58%	Sell	404	48.62%

<sup>R1</sup> Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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