



**sea**  
connecting the dots

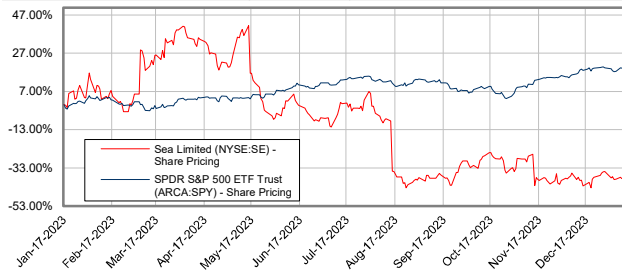
**Sea Ltd. (NYSE:SE)**  
**BUY: US\$51.88 (+34.42%)**

Chong Shao Xuan Jerome – Analyst

Date: 1<sup>st</sup> December 2023

Basic Information	
Bloomberg Ticker	NYSE : SE
GICS Sector	Communication Services
GICS Sub - Industry	Home Entertainment
Last Closed Price	US\$38.60
12M Target Price	US\$51.34
Potential Upside	33.00%

### 1Y Price vs S&P 500 (Rebased)



### Company Description

Sea Limited is a leading global consumer internet company founded in Singapore in 2009. The company operates 3 core businesses across digital entertainment, e-commerce, and digital payments and financial services, known as Garena, Shopee, and SeaMoney, respectively. Operating markets are EMs, particularly in Southeast-Asia and Latin America regions.

### Key Financials

Market Cap	US\$ 20.75b
Basic Shares O/S	521m
Free Float	11.22%
52-Wk Low-High	US\$ 34.9 -USD\$ 88.84
Fiscal Year End	31-Dec-2023

(USD\$ M)	FY19A	FY20A	FY21E	FY22E
Revenue	2,175	4,376	9,955	12,450
Gr Rate (%)	163	101	128	25
Gross Profit	605	1,349	3,896	5,185
Margin (%)	28	31	39	42
Operating	(891)	(1,303)	(1,583)	(1,488)
Margin (%)	(41)	(30)	(16)	(12)
D/E	3.5	2.1	1.5	2.0

### Key Executives

Forrest Li	Chief Executive Officer
Tony Hou	Chief Financial Officer
Gang Ye	Chief Operating Officer
Feng Zhimin	Group President
Chen Jingye	Chief Product Officer
Yanjun Wang	Chief Corporate Officer
Feng Zhao	President of Garena

I am initiating coverage of **Sea Limited (NYSE: SE)** with a **BUY** rating and a **\$51.34** 12M target price as at the date of coverage, representing an upside potential of **+33.00%**. The implied share price was derived using the Discounted Cash Flow (DCF) approach utilizing the Perpetuity Growth Method for a 5-Year forecast period.

### Investment Thesis

**Theme 1 - Strong Recovery Play, Undervalued Growth prospects:**

Former Wallstreet darling now **90%** off its highs of US\$366.99, is poised for a great comeback story as management fixes focus on stable profitability and stricter cost management.

**Theme 2 - Overlooked Prospects, Future of SeaMoney:**

SeaMoney recently blew analysts estimates away with reported figures with a **+37%** YoY increase in top-line to over **US\$ 446.2m** as of the latest quarter Q323. This makes up for almost **14%** of the company's revenue and with recent developments in primary markets of SEA and EMs, this could arguably be Sea's most attractive business unit in years to come.

**Theme 3 - Low Leverage and Strong Stance against Gearing:**

Sea's long-term solvency is one of the bright spots within their balance sheets, with low leverage ratios along with its strong stance in recent years against taking on long-term debt should look to bolster its financial standing.

### Investment Risks

- **Tiktok Shop Indonesia merger with GoTo's Tokopedia:** The merger would mean a combined market share of **40%** in the Indonesian E-commerce Landscape. This could pose to be a major headwind in Shopee's effort to establish itself as the dominant market leader in Indonesia.
- **Garena's Lack of Visibility, Strong Games Pipeline:** Garena's lack of sticky gaming titles has been an evident worry in recent years leading to struggles in keeping up with rivals in Riot and Epic Games.
- **Unrestrained Financial Outlay, Unclear Pathway to Sustainable Profitability:** Sea turned profitable for the first time in Q422 before posting a net loss again in Q323, raising concerns about sustainable profitability.

### Catalysts

- India's Reversal on Free-Fire Ban to Boost Top-Line
- Bright Spots in Vietnam and Brazil Markets with Secular Multi-Year Growth Tailwinds
- Fintech's Exponential Growth Set to Benefit SeaMoney

**Figure 1: Overview of Sea’s Business Segments**



Source: Company Investor Presentation

**Figure 2: Key Features of Business Units**

Feature	Garena	Shopee	Seamoney
<b>Primary Business</b>	Online Games Development & publishing	E-commerce platform	Digital Payments, Financing & Digital Banking
<b>Key Products &amp; Services</b>	Free Fire, League of Legends, Call of Duty: Mobile	Consumer Products	ShopeePay, Shopee Partner, SPayLater, Maribank & Seabank
<b>Target Markets</b>	SEA, LatAM	SEA, LatAM, Taiwan	SEA
<b>Strengths</b>	Strong brand awareness and recognition, Trending games & Esports expertise	User-friendly interface, wide range of products and instantaneous shipping	Competitive Rates, Strong Integration with Shopee

## Company Overview

Sea Limited is made up of 3 main business segments being Garena’s digital entertainment platform (alongside related eSports operations), Shopee’s e-commerce platform, and SeaMoney’s digital financial services. This can be observed in Figure 1. The key features of each business unit can be seen in Figure 2.

### Garena – Digital Entertainment

Garena is Sea Limited's digital entertainment arm, offering a variety of online gaming services. Garena's portfolio includes popular games like Free Fire, League of Legends, and Call of Duty: Mobile. The company also hosts esports events and tournaments, and it has a strong presence in Southeast Asia and Latin America. Back in 2022, Garena had to temporarily halt its operations of Free-fire apps in India due to a regulatory ban however, the Indian regulator recently lifted that ban.

### Shopee – E-commerce

Shopee is a 3P market-place, operating a B2C/C2C hybrid commerce model. It provides a user-friendly marketplace for buying and selling a wide range of products, including electronics, fashion, beauty products, and more. Shopee has become a leading online shopping destination in the regions it serves, offering various features such as secure payment options in ShopeePay, a user-friendly interface, and a robust logistics network for efficient product delivery.

### SeaMoney – Digital Financial Services

SeaMoney is the financial services arm of Sea Limited, focusing on digital financial solutions. It offers a range of services, including digital payments, financing solutions, and most recently digital banking arm Maribank & SeaBank. SeaMoney aims to enhance financial inclusion in Sea’s primary markets by providing users with convenient and accessible financial tools. Through SeaMoney, users can make online transactions, manage their finances, and access various digital financial services.

## Industry Outlook

Here, we look to the 3 main industries being Digital Entertainment, E-commerce and lastly Digital Finance Services.

### 1) Digital Entertainment

#### Gaming Leads Digital Entertainment, Set for Rapid Expansion

COVID-19 pandemic spurred growth within media and technology sectors, with Gaming outperforming other segments within the Digital Entertainment market, with an respectable 8% growth rate to reach USD 198 billion valuation [ in comparison to TV's 1% decline to USD 408 billion ]. In 2022, we approached the endemic phase which meant the end of pandemic shutdowns. This was coupled with Apple's privacy changes affecting mobile gaming advertisements revenues. Growth slowed with market share falling to USD 184.40 billion as mobile gaming accounted for 50% of total revenue. This was of little significance to Garena which prides itself with mainly producing Computer Games.

The industry is set for a strong rebound in the midterm as games become more embedded in everyday life. [ Figure 3 ] The Games Market is poised to experience significant growth with revenues expected to reach a staggering USD 406.2 billion by 2023 and anticipates an appalling compound annual growth rate (CAGR) of 90.6% as such a market volume of USD 626.8 billion by 2028. Within SEA, China is the greatest revenue generator, estimated to bring in USD 112 billion alone in 2023. Furthermore, the number of gamers is projected to soar to 4.4 billion users by 2028 with current user penetration anticipated to be 48.9% in 2023 and gradually increase to 55.5% by 2028. These robust numbers showcases the immense potential and growth prospects of the Games Market in the near future.

#### Rise of E-sports and Game Streaming

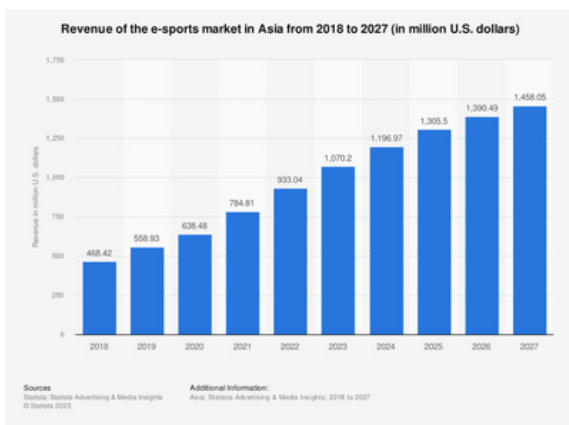
The revenue of the e-sports market in SEA is forecasted to continuously increase between 2023 and 2027 by USD 387.90 million (+36.25 %). [ Figure 4 ] After the ninth consecutive increasing year, revenue is estimated to reach USD 1.5 billion, peaking in 2027. It is projected to do USD 1.07 billion this year and USD 1.46 billion in 2027, presenting a CAGR of 12.02% over 10 years. This is further substantiated by the market share of games revenue worldwide where APAC region takes up almost half of the entire Global Games Market and is projected for rapid growth due to China's boom within the Gaming sector. Garena, being a major player in the gaming industry, can benefit from the growth of esports, leading to increased player engagement, higher user acquisition and potential monetization through E-sports-related content and events.

Figure 3: Global Players by Region in 2023



Source: Newzoo, 2023

Figure 4: E-sports market in APAC region 2018-2027



Source: Statista, 2023

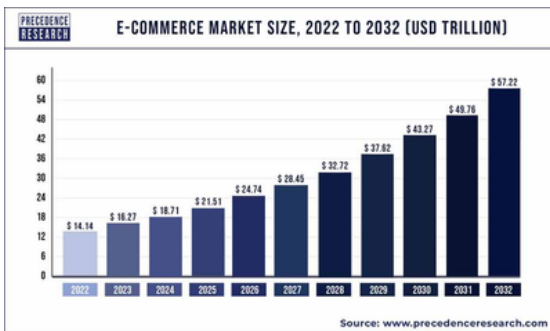
Figure 5: Garena's Free-Fire



E-sports viewership drives game popularity especially for Garena's top hits such as Free-Fire [ Figure 5 ] and Call of Duty. As these E-sports tournaments attract greater viewership, interest in playing these titles will also surge, leading to increased user engagement and monetization. Game Streaming, through platforms like Twitch and YouTube Gaming, has become a dominant force. Influential streamers and content creators can significantly impact game sales and popularize specific titles. This has led to a shift in marketing strategies, with companies investing in partnerships with popular streamers such as Fortnite employing the same tactic with Ninja. It amplifies exposure with popular streamers which by showcasing Garena's game on platforms such as Twitch, allows it to expand their reach and attract a new pool of gamers. The APAC region is one of the fastest growing markets in the world and the increased audience that E-sports and Game Streaming are bringing will only further spur growth within revenue streams such as game sales, in-game purchases and advertising.

2) E-commerce

Figure 6: E-commerce Global Market Share



Source: Precedence Research

Outlook for APAC retail market remains upbeat

The global retail E-commerce market is projected to grow from USD 16.27 trillion in 2022 to USD 57.22 trillion in 2032 [ Figure 6 ], expanding at a CAGR of 15%. This growth is unlikely to be impeded in future years due to consumers' increasing dependency on virtual platforms due to the convenience and accessibility it brings about. APAC is expected to dominate the market over the forecasted period. The market growth in the region is attributed to the growing urbanization and increasing investment in network infrastructure especially in the countries like India, China and Japan. For instance, as per United Nations Human Settlements Program, in APAC, urbanization is still a defining megatrend. Asia is home to more than 2.2 billion people or 54% of the world's metropolitan population. APAC accounted for 57.4% of the global E-commerce market in 2019, with China being the leading market – China currently has more than 800 million internet users that contribute to its global market share of over 50%.

Figure 7: E-commerce expected to rise at 11% CAGR over FY23F-25F



Source: Google, Temasek and Bain, DBS Bank

Figure 8: On-demand sector expected to rise at 9% CAGR over FY23F-25F



Source: Google, Temasek and Bain, DBS Bank

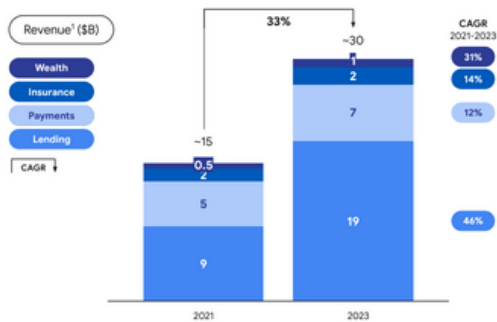
Exponential Growth potential for E-commerce vs On-demand in SEA

The E-commerce penetration in SEA stands at only 23% in 2023, significantly lower than China's 46%, indicating a substantial scope for expansion and growth within the SEA region. Euromonitor predicts that by 2025, SEA's E-commerce penetration will rise to 27%, while the US and China are expected to reach 28% and 49%, respectively, showcasing a need for SEA penetration to grow faster. Recently released Google, Temasek & Bain report projects gross merchandise value (GMV) CAGR of 11% for ASEAN e-commerce vs 9% CAGR for on-demand over 2023-2025 [ Figure 7 & 8 ].



**Figure 9: Revenue Streams within Digital Financial Services Sector**

Lending is the single biggest driver of DFS revenue

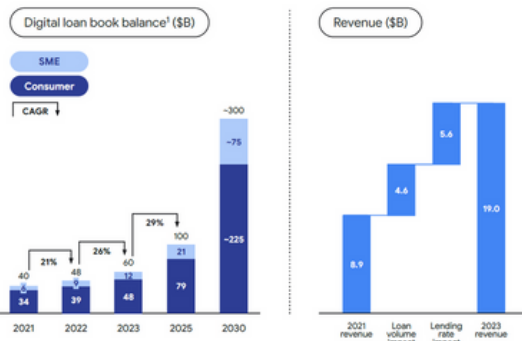


Notes: (1) Revenue is measured using different metrics for each DFS sector: Lending: average effective interest rates plus servicing fees; Payment: merchant fees (based on merchant discount rates); Insurance: annual premium equivalent for life insurance and gross written premium for non-life insurance; Wealth: annual management fees and platform fees.  
Source: Bain analysis

Source: Google, Temasek and Bain

**Figure 10: Digital Loan Book Balance**

Digital loans grew rapidly despite the sharp increase in lending rates



Source: Google, Temasek and Bain

Furthermore, E-commerce market share is >6x the size of on-demand sector in ASEAN. Many new players from China are also capitalizing on cross-border trade to rely on cheap products in China to gain market share from price-sensitive ASEAN customers.

The On-demand sector is poised for greater operational headwinds. Businesses face additional regulatory challenges such as compliance with low wage regulations for ride-hailing and food delivery riders. For example, in Singapore, full-time motorcycle delivery drivers are entitled to a minimum monthly gross wage of SGD \$1,750 from 1st March 2023, SGD \$1,970 from 1st July 2023, and SGD \$2,190 from 1st July 2025. In addition, there are varying delivery expectations. On-demand customers expect immediate deliveries, unlike e-commerce customers who are accustomed to longer delivery times. These further substantiates the switch for businesses and consumers alike to e-commerce sites.

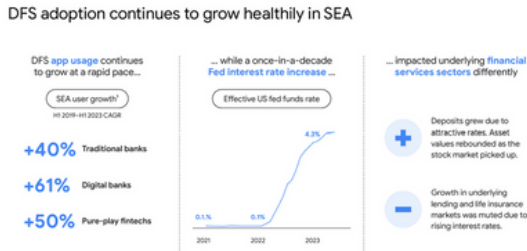
### 3) Digital Finance Services

#### Disruption of Digital Lending following COVID 19

The COVID-19 pandemic had a significant impact on the digital lending market. With lockdowns and social distancing measures in place, traditional lending processes were disrupted, leading to a surge in demand for online financial services. Digital lending platforms experienced a rapid increase in user adoption as individuals and businesses sought quick and convenient access to funds. The pandemic further accelerated the shift towards digital lending, prompting greater innovation and investment in the sector. However, the economic uncertainties caused by the pandemic also introduced challenges such as increased default rates and a need for enhanced risk assessment models. Overall, COVID-19 acted as a catalyst for the growth and transformation of the digital lending market.

The global digital lending market was valued at USD 48 billion in 2022 and grew at CAGR of 26% to USD 60 billion and is projected to reach over USD 300 billion by 2032. In the annual e-Conomy SEA report published by Google, Temasek and Bain in 2023, digital lending alone made out 46% of the entire DFS sector further highlighting the COVID 19 Pandemic disruption. [ Figure 9 & 10 ] Furthermore, Digital Lending is poised to see out tremendous growth despite the high interest rate environment with non-performing loans (NPLs) under control as major fintech powers focus on credit management capabilities. In years to come, Digital lending is projected to be the single largest driver to DFS revenue with elevated lending rates and consumer demand fueling the surge in gross revenue. Singapore is expected to be the leading digital lending market in SEA in 2023 through 2030, with Indonesia being the largest digital payments market.

**Figure 11: DFS Adoption**

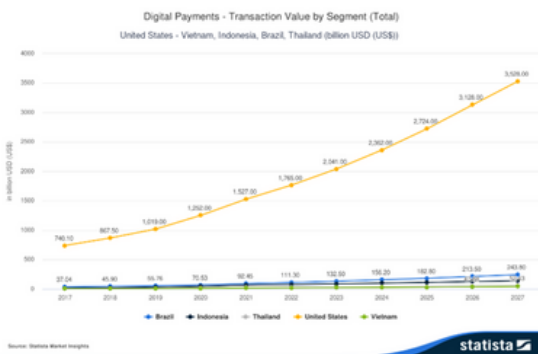


Source: Google, Temasek and Bain

**Figure 12: Driving Forces of Digital Lending**

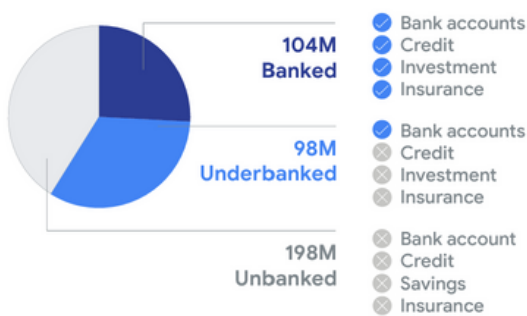


**Figure 13: Transaction Value by Digital Payments**



Source: Statista, 2023

**Figure 14: Over 74% Consumers remains Unbanked or Underbanked**  
SEA adult population



Source: Google, Temasek and Bain

The digital lending market has witnessed significant growth in recent years, driven by advancements in technology, changing consumer behavior, and increasing demand for convenient and accessible financial solutions. Moreover, the market has seen a surge in online lending platforms, peer-to-peer lending, and mobile lending apps, offering borrowers quick and hassle-free access to loans with minimal documentation requirements. With the rise of big data analytics, artificial intelligence, and blockchain technology, digital lending has become more efficient in assessing credit risk, reducing fraud, and streamlining loan approval processes. Furthermore, the integration of blockchain technology into digital lending has the potential to revolutionize the market by offering decentralized, transparent, and secure lending solutions. In addition, smart contracts, powered by blockchain, can automate loan origination, repayment, and asset-backed securities, improving efficiency, reducing fraud, and lowering costs. Hence, the digital lending market size is poised for continued growth in the future, driven by technology innovation, changing consumer preferences, and expanding market opportunities. The rise in Digital Lending is mainly driven by the following factors:

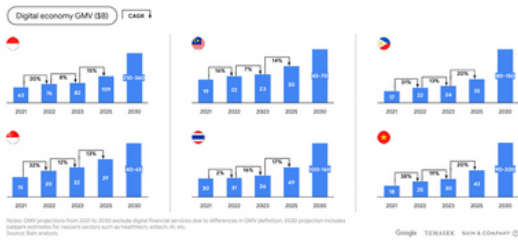
1. Proliferation of Smartphones
2. Growing Popularity of Online & Digital Banking
3. Rapidly changing consumer behavior
4. Regulatory challenges
5. Cybersecurity risks
6. High prevalence of advanced and innovative technologies

**Low adoption of cashless payments within Emerging Markets**

In countries such as Indonesia, Vietnam and Thailand, fiat currency has been the preferred mode of payment. Compared to developed economies, EMs are lagged in terms of cashless payment adoption. As for matured markets, we can look towards the likes of US where the contrasting transaction value is evident against the Sea's primary markets [ Figure 13 ] where US are doing almost USD 2,041 billion just in 2023 and projected to bring in over USD 3,258 billion. Meanwhile, within Sea's markets, Brazil is the closest comparison by a mile, bringing in USD 132.50 billion, followed by Indonesia of USD 87.60 billion, Thailand of USD 32.13 billion and finally Vietnam, the least at USD 23.86 billion. SEA has a large number of unbanked individuals who are more than keen to embark on an alternative payments journey, given the lack of banking penetration in the region. According to e-Conomy, much of the population in Southeast Asia remains unbanked, with about 198 million people unbanked [ Figure 14 ] as of 2021. This is an extremely high figure, indicating the low penetration of basic financial services in Southeast Asia as compared to other regions.

**Figure 15: SEA Digital Economy GMV Outlook**

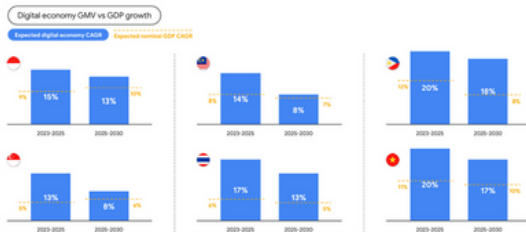
GMV will continue its upward trajectory through the rest of the decade



Source: Google, Temasek and Bain

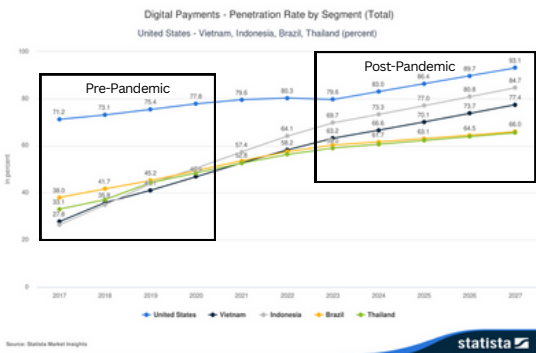
**Figure 16: GMV vs GDP**

The digital economy will continue to be a major growth driver in SEA



Source: Google, Temasek and Bain

**Figure 17: Penetration Rate of Digital Payments**



Source: Statista, Digital Payments in SEA

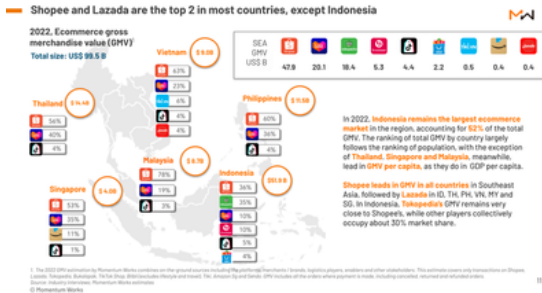
In the backdrop of such a landscape, the presence of digitally powered alternative payment systems is enabling Southeast Asians to enjoy the perks of banking services without having to access traditional structures. The growing payments ecosystem encourages financial inclusion while also accelerating economic growth and development. Some headwinds include the lack of awareness and trust towards digital payment options, as well as the limited infrastructure in EMs such as stable internet connectivity and POS terminals, required to support the use of cashless payments.

With that being said, the rapid increase in smartphone adoption in EMs signify the gradual transition towards a new technological age. [ Figure 15 & 16 ] This also allows for easier accessibility to cashless payment methods. The development of mobile payment platforms such as ShopeePay and Shopee Partner will also allow for greater access and convenience for people to transact without bank accounts. Furthermore, many governments within EMs are promoting the use of cashless payments with financial inclusion initiatives being rolled out as well as the development of national payment systems.

**COVID-19 pandemic has accelerated the adoption of cashless payments.**

Used for fast, frequent, and low amount transactions, contactless methods enable payment by simply tapping or hovering over payment or POS terminals. Contactless methods limit physical contact with people and devices, facilitating social distancing and avoiding the handling of cash, shared POS terminals or pens/styluses. During the pandemic, they were an attractive option, complying with safety guidelines issued by global and national health organizations. The pandemic, by far, has provided the biggest thrust to the digital payments ecosystem in the Southeast Asian region. It also helped overcome the fear of virus transmission which many raised concerns around the hygiene of fiat currency. As businesses went digital, people shopped online and completed financial transactions with mere clicks on their smartphones or computers. COVID-19 pandemic has accelerated the adoption of cashless payments. Penetration rate levels pre-pandemic were averaging mid 30% ranges in 2017 however as we look to the end of 2023, Sea’s primary markets are in the high 60% ranges and can be seen bridging the deviation with US [ Figure 17 ].

**Figure 18: Shopee’s Primary Markets GMV Market Share**



Source: Momentum Works, 2022

**Figure 19: Porter’s Five Forces**



## Porter’s Five Forces

### Intensity of Competitive Rivalry - High

#### 1. Parabolic Growth within Industries

The intense rivalry among existing competitors shapes the dynamic and fierce competitive landscape for Sea Limited. This is mainly due to the highly competitive sectors that the company operates in being: E-commerce, Digital Entertainment and Digital Financial Services. Sea limited faces intense competition from major players of the host countries such as Tokopedia, holding almost 35% of Indonesia’s market share just shy of Shopee’s 36%. [ Figure 18 ] The industries’ exponential potential and growth has also seen a multitude of new entrants vying for a piece of the pie.

#### 2. Global Players

Lazada is one of the company largest competitors within SEA, not mentioning e-commerce large-caps in Alibaba and Amazon. These e-commerce heavyweights have the capability and might to expand into the SEA market, posing significant threat to Sea’s position as the market leader, given the competitors established and renowned reputation in its operating countries. In the gaming industry, Garena faces intense threat from Tencent and in the form of financial services, similar providers include GrabPay, Alipay and WeChat Pay.

#### 3. Market Saturation

Market saturation is also a factor whereby matured markets could lead to intensified competition, which could result in aggressive marketing strategies and price wars in a bid to differentiate themselves and capture market share. This could potentially eat into margins and ultimately affect the bottom-line.

#### Bargaining Power of Consumers - Moderate

In the e-commerce and financing services segment, consumers are likely to have greater bargaining power seeing as there is high substitutability with various similar platforms offering identical services. However, in the gaming realm, consumers might not be entitled to the same influence with sticky hits such as Free-Fire being exclusive only to Garena’s platform. With that being said, it is important to note the ringfencing efforts by Sea with consumers being drawn in by the effortless integration, making it a moderate impact to Sea.



### **Bargaining Power of Suppliers - Moderate**

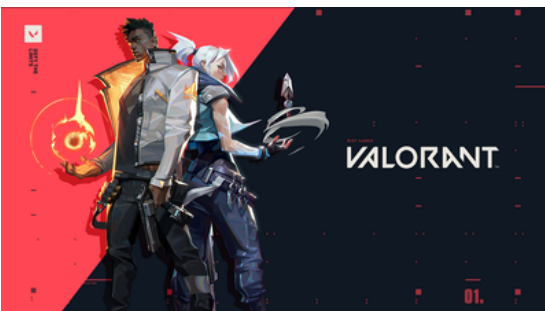
Shopee's business model is highly dependent on suppliers such as Third-Party Logistics (3PLs) and merchants listing their products on the marketplace. This is especially so in newly expanded markets such as India and Brazil. In Singapore alone, Shopee offers free registration in a bid to entice merchants. However, in the form of Garena and SeaMoney, there is close to zero supply chain risk seeing as products and services are all managed in house. With the combination of both, the bargaining power of suppliers is seen as a moderate impact.

**Figure 20: Activision's Call of Duty**



*Source: NotebookCheck, 2022*

**Figure 21: Riot Games' Valorant**



*Source: Sports Business Journal, 2020*

### **Threat of Substitution - Moderate**

In the E-commerce segment, Shopee is seen as the market leader capturing the largest market share. Given its dominant position and growing customer base, it is unlikely that Shopee will be displaced anytime soon. However, Garena is facing intense threat from game developer Activision and Riot Games which as of late, has produced hit titles that has gained traction among the PC gaming industry.

### **Threat of New Entrants – Moderate**

Sea Limited operates in highly capital-intrusive industries such as E-commerce, Digital Entertainment and Digital Financial Services. As such, there is a significant barrier to entry for potential new entrants with a large scale of operations and complex infrastructure to put in place. Being an established market dominant force, Sea Limited is able to benefit from significant economies of sales allowing it to operate more cost efficiently and effectively which might not be the same case for new entrants, who will struggle to cope with initial overheads and rising costs.

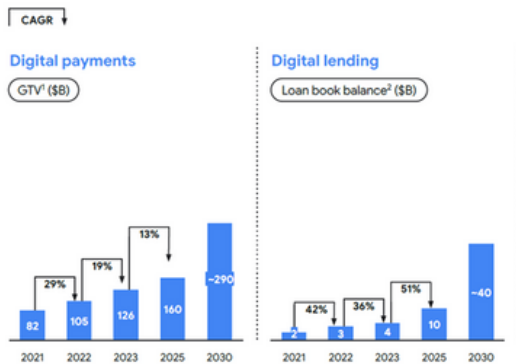
In the case of Tiktok Shop, the company successfully managed to overcome the above stated challenges and established itself as a dominant force within SEA e-commerce. This was not short of challenges, with them experiencing difficulties with regulatory barriers as seen in Indonesia, where the company failed to comply with local regulatory requirements.

Figure 22: Garena's Free-Fire



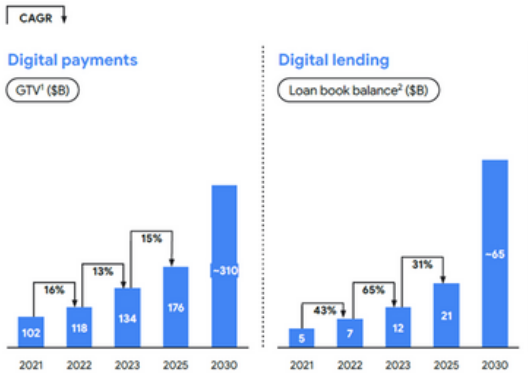
Source: Sports Tiger, 2023

Figure 23: Growth in Vietnam's DFS Avenues



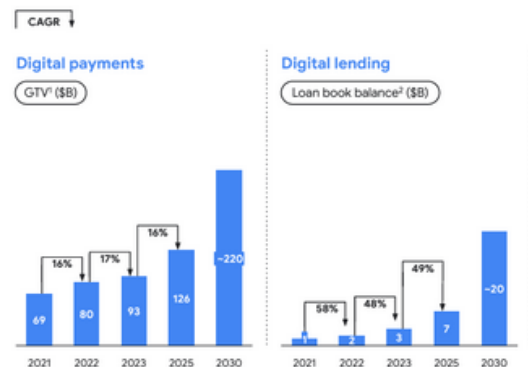
Source: Google, Temasek and Bain

Figure 24: Growth in Thailand's DFS Avenues



Source: Google, Temasek and Bain

Figure 25: Growth in Philippines's DFS Avenues



Source: Google, Temasek and Bain

## Catalysts

### 1. India's Reversal on Free-Fire Ban to Boost Top-Line

India was poised to be one of Garena's most promising market given its massive population of over 1.40 billion however in early 2022, the Indian government had issued a ban on Free-fire apps as part of a broader ban on Chinese apps. A year later, India has since shifted its stance and Garena announced in August this year that Free-fire would return to the Indian market. This re-entry into the Indian market could prove vital for its margins given the immense potential due to its huge gaming committee, with the game being the most downloaded mobile game globally in Q323. Additionally, with new hits such as Arena of Valor and Call of Duty Mobile, these titles could steer its recovery. Key metrics to look out for include a stabilizing QAU and MAU along with growth in bookings and ARPU.

### 2. Bright Spots in Vietnam & Brazil Markets with Secular Multi-year Growth Tailwinds

In the company latest earnings call, management pointed out that e-commerce penetration is still relatively low in Sea's key markets, namely Brazil which is largely seen as Latin America's most resilient economy. As of the most recent quarter, growth metrics along with user economics figures were robust with Shopee already achieving sufficient scale and cost efficiency to sustain profitability. The company also mentioned that it will look to invest in growth while driving improvements in operational efficiency, with logistics taking the forefront. This is seen in Shopee's acquisition of Blu, a credit arm backed by Brazil's Warburg Pincus in a bid to offer credit directly to customers living in LatAM's largest economy. Additionally, Shopee being the market leader within the e-commerce space in Vietnam makes it well positioned to capitalize on strong CAGR figures with a 13% and 51% CAGR growth from 2023 to 2025 for Digital Payments and Digital Lending avenues respectively. [ Figure 23 ] Thailand and Philippines are also dynamic markets within SEA, posting robust growth figures.[ Figure 24 & 25 ]

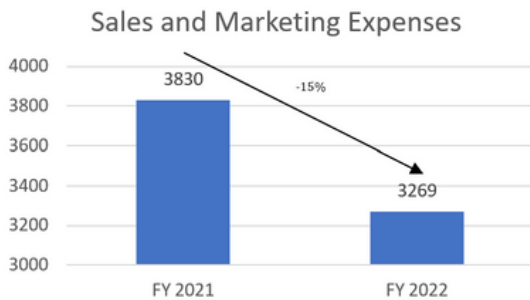
### 3. Fintech's Exponential Growth Set to Benefit SeaMoney

Fintech is poised to grow at a rapid pace following the disruption of traditional banking methods. SeaMoney has since become one of Sea's core businesses contributing heavily towards both top and bottom-line. The financial services business also reported strong numbers in the latest quarter with revenue of USD 446.20 million, up 36.5% YOY. EBITDA was posed a solid turnaround from a USD 67.60 million loss in the prior year to a profit of USD 165.70 million as of Q323. A key metric providing guidance over future growth prospects would be the Gross Loans Receivable, which was up over 5.3% YOY to USD 2.40 billion.

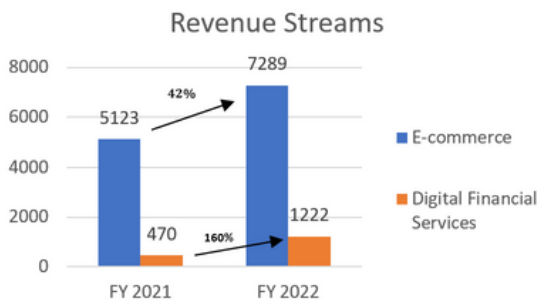
**Figure 26: SE is trading at 90% off its highs**



**Figure 27: YoY % change in Sales and Marketing Expenses**



**Figure 28: YoY % change in Revenue Streams**



## Investment Thesis

### 1. Strong Recovery Play, Undervalued Growth Prospects

Based on valuations forecasted, I believe that the decline in Sea’s stock price has plateaued and with stable profitability on the horizon, this could prove to be SE’s largest tailwind going into FY 2024.

#### Beaten-Down Stock Pricing in Near-Term Cash Burns

From its 2021 high of 366.99 USD, the stock has since fallen off a cliff, down over 90% from the highs [ Figure 26 ] with concerns over poor management of cash flows along with exorbitant amounts spend on marketing expenses in a bid to acquire and retain market share with the E-commerce industry.

Contrary to market sentiment, I believe SE’s stock is poised for a strong comeback story with robust numbers being posted in recent quarters. FY 2022 demonstrated strong operational fundamentals and exemplified management’s commitment to cost-cutting strategies with a steep decline in Sales and Marketing Expenditure, the company’s largest expense account. In 2022, Sales and Marketing expenses saw a YoY drop of over 15% [ Figure 27 ], representing over USD 561 million in cost-savings. Additionally, Cost of Goods Sold and Digital Entertainment Cost of Service also saw noteworthy cuts after years of continuous large increments. However, this cost-cutting strategy has not impacted top-line growth in the least. Revenue saw a 25% YoY increase and E-commerce and Digital Finance segments showing growth of 42% and 160% respectively. [ Figure 28 ] These strong figures demonstrate SE’s ability to replicate monumental growth despite tightening cash flows. As the company’s focus begins to shift from growth to cost management, I expect it to yet again be an attractive investment for investors seeking to capitalize on the potential recovery play, with substantial upside.

#### Attractive Valuation, Undervalued Intrinsic Valuation

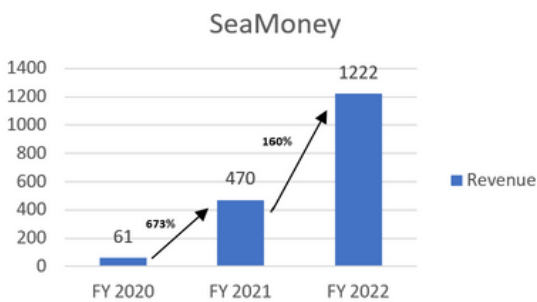
I believe that the current market valuation of the stock does not fairly reflect its intrinsic value. I refer to my base case derived implied share price of 51.34 USD computed using the DCF Valuation where I had taken into account conservative estimates to project future revenue streams. For E-commerce, my estimated growth rates with regards to Average Order Value and Total Number of Orders led to diminishing returns in overall Gross Merchandise Value (GMV). In Digital Finance, I had factored in a constant take rate of 60% over the forecasted period even though historically SeaMoney’s take rate has been increasing exponentially from FY 2020 onwards.

As Shopee and SeaMoney continues its penetration into SEA and LatAM markets, I expect lower operating overheads as well as greater top-line growth. I also believe that Shopee’s and SeaMoney’s ability to scale and comparative advantage over its peers in presiding countries are not reflected in its current market valuation.

## 2. Overlooked Prospects, Future of SeaMoney

### Strong Figures & Catalyst of COVID 19

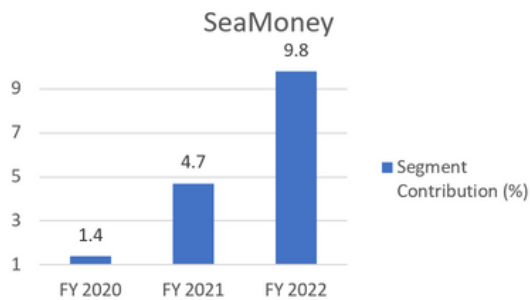
**Figure 29: SeaMoney’s Top-Line Exponential Growth**



SeaMoney is arguably Sea’s most attractive business unit in the years to come. SeaMoney is a mobile wallet for payment transfers, loans, and other banking features. SeaMoney’s revenue is derived from earning fees from mobile wallet services and payment processing services and commissions from third-party financial institutions which offer financial products or lend to consumers on our platform.

Spanning from FY2020-2022, SeaMoney’s top-line grew at a 3-year CAGR of 465% and 160% YoY in just FY 2022 alone, to USD 1.222 billion [ Figure 29 ] in spite of the turbulent macro environment with sky-high interest rates. This huge upswing led to a spike in segment contribution to revenue, more than doubling from 4.7% in FY 2021 to 9.8% in FY 2022. [ Figure 30 ] The exponential growth can be largely attributed to the transformation of traditional banking services to digital finance following the COVID 19 Pandemic. The COVID-19 pandemic has undeniably been the most significant catalyst for the rapid expansion and adoption of the digital payments ecosystem, introduced as the viable solution to limit physical contact as well as the handling of fiat money.

**Figure 30: SeaMoney’s Segment Contribution**

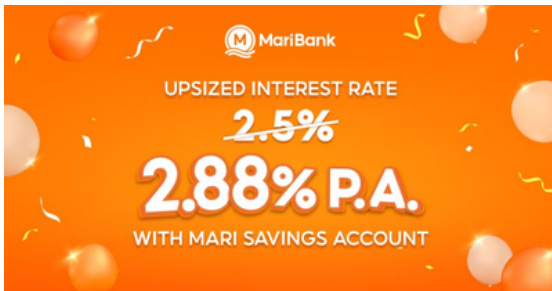


### Penetration of Digitalisation within EMs and SEA

Following the pandemic, there is a immense market opportunity to capitalize on the digitalization of payments and banking systems in SEA as well as EMs such as Brazil and India. It is expected that a new era of digitalization will be ushered in within EMs , indicating a gradual uptick in smartphone adoption. ShopeePay and Shopee Partner will be well-positioned to benefit from this, given their exposure and expansion into EMs.

It is worth noting that at present only a limited segment of Sea’s primary market enjoys access to essential financial services, thus opening the door for an expansion of digital financial offerings in the area. I believe that Sea can exploit the scarcely penetrated market and establish a foothold within SEA and EMs thus allowing them to gain comparative advantage over its peers.

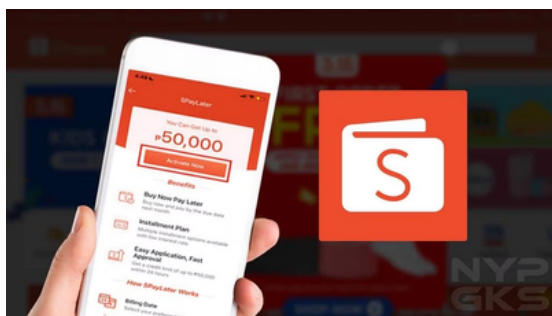
**Figure 31: MariBank’s Competitive Interest Rates**



**Figure 32: ShopeePay**



**Figure 33: Shopee Buy Now Pay Later (BNPL)**



**Synergy of SeaMoney and Shopee**

As SEA intensifies its investments in e-commerce, it positions itself at the forefront of a burgeoning market, tapping into new customer segments and enhancing its digital financial services. This strategic pivot, while potentially impacting earnings and share prices in the near term, is a calculated move to capitalize on the rising tide of digital globalization and the evolving digital landscape. With digital and social media marketing offering avenues for lower costs and increased sales, and the digital finance sector facing a transformative period, Sea’s focus on these areas signals its commitment to long-term growth and market dominance.

The company’s approach reflects a broader industry trend where digitalization and emerging technologies are reshaping business environments, creating new opportunities for growth and stability in the dynamic digital economy. The launch of ShopeePay vouchers and Shopee Coins on the platform has significantly boosted ShopeePay’s traction in Singapore. Additionally, Maribank, a Sea Group-owned digital bank recently secured a full digital banking license and offers Singapore highest savings account interest rate of 2.88% as part of lower costs and overheads. [ Figure 31 ] It is estimated that customer acquisition cost are seven times lower than that of traditional banks.

Late this year, the bank also launched an instant cash-out investment account in collaboration with Lion Global Investors. This provides much sought-after liquidity among investors who detest lock-up periods. Sea has strategically integrated ShopeePay into its E-commerce platform, allowing users the ease of transacting through the Shopee App without having to switch to a third-party payment provider which significantly reduces the rate of transaction abandonment. I also anticipate Sea to replicate this strategy across its other financial services, such as Buy Now Pay Later (BNPL) [ Figure 33 ] and Digital Lending. These services align seamlessly with Sea’s pre-existing e-commerce and gaming operations in the region.

**3. Low Leverage and Strong Stance Against Gearing**

It can be said that Sea’s long-term solvency is one of the bright spots within their balance sheets, with low leverage ratios all lesser than 1. D/E ratio came in at 0.77 and Debt-to-Capital coming in at 0.43. As of the latest quarter, figures dipped even further to 0.70 and 0.41 respectively, highlighting Sea’s consistent commitment to maintaining low gearing levels.



Furthermore, Sea has strayed away from long-term debt since 2020 and I expect the short-term outlook to remain consistent as the company looks to strengthen their financial position.

### Revolving Credit Facility

In recent years, Sea sustained a line of credit through means of a Credit Revolver which is bound to propel Sea forward by enhancing its financial flexibility and operational capability. This type of credit arrangement allows Sea Limited to have immediate access to cash, which is vital for covering operational costs, investing in new projects, or managing unexpected expenses. It provides a buffer against credit cycle volatility and the risk of credit losses, which is particularly important for Sea Limited's banking and consumer and merchant credit businesses.

The availability of a revolving credit line also helps Sea Limited mitigate risks associated with its diverse business operations. With significant cash reserves on its balance sheet, such as the USD 7.70 billion reported earlier, and a stable revenue stream from its various business units, Sea Limited can strategically use the credit revolver to sustain and expand its business without excessively relying on its cash reserve. Moreover, the flexibility of revolving credit, comes with favorable terms as compared to traditional loans, allowing Sea Limited to manage its finances more effectively and respond quickly to market opportunities or challenges, thus supporting its continued growth and market expansion.

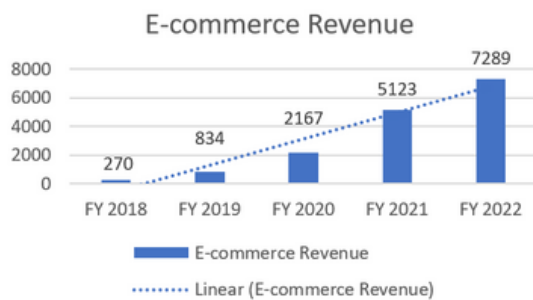
Figure 34: Functions of a Credit Revolver



Figure 35: Revenue Growth



Figure 36: E-commerce Growth



### Financial Analysis

#### Robust Top Line Growth Fueled by Exponential Industry Growth

Sea's historical financial trends showcase robust growth with uncapped potential top-line growth, propelled by the exponential expansion in the Digital Finance and E-commerce sectors in past years as well as years to come. From 2019-2021, Sea posted triple digit revenue growth YOY with a CAGR of 131% [ Figure 35 ] with the COVID 19 Pandemic greatly boosting GMV and orders. In Q4 2022, SeaMoney netted USD 2.10 billion with a 92% YoY top-line growth, showcasing its untapped potential. E-commerce remains a bright spot within Sea, averaging a 5-year CAGR of 137% for top-line gains YoY. [ Figure 36 ] I expect e-commerce to continue being Sea's core business segment for the years to come given its dominance and market leading position and will continue to be well-positioned to capture market share within EMs such as Brazil. SeaMoney continues to ride the wave of Digital Finance disruption and its expansion into untapped markets provides fertile ground. As global markets continue to digitalize at an accelerating pace in Digital Payments services, SeaMoney stands at the cusp of leveraging this transformation leading to market dominance in the years to come.

Figure 37: Sea Limited Gross Margins



Figure 38: Asset Turnover Ratio

Efficiency	2018A	2019A	2020A	2021A	2022A
Asset Turnover Ratio	0.38	0.42	0.42	0.53	0.73

Figure 39: Implied Share Price

DCF Computation	
Perpetuity Growth Method	
Sum of PV of FCFF	\$ 4,330.57
Terminal Growth Rate	2.24%
Terminal Value	\$ 32,017.58
PV of Terminal Value	\$ 22,165.64
<b>Enterprise Value</b>	<b>\$ 26,496.21</b>
Less: Debt	\$ 4,095.57
Add: Cash	\$ 6,029.86
<b>Implied Equity Value</b>	<b>\$ 28,430.50</b>
Number of Outstanding Shares	554
<b>Implied Equity Value Per Share</b>	<b>\$ 51.34</b>
Current Share Price	\$ 38.60 As of 8/1/2024
Potential Upside	<b>33.00%</b>

### Strengthening Profit Margins

Profitability is undoubtedly the greatest area of concern for Sea Limited however the company has embarked on a ruthless cost-cutting drive which included layoffs and reduction in operational expenses which is seen in the decline of Sales and Marketing Expenses as of FY22. Sea's sound and healthy Gross Margins is seen in the continued YoY growth from 28% in 2019 to 42% in 2022 [ Figure 37 ] and is projected to demonstrate further growth in the forthcoming years as the company turns to prudent financial management. I believe that a more balanced approach between growth and profitability is on the horizon as the company sets into a maturing phase with a optimal balance between aggressive expansion and cost management being critical to long-term profitability.

### Efficient Operational Excellence and Optimizing Leverage

Sea Limited's operational efficiency has undergone significant evolution, reflecting both its growth trajectory and strategic focus. The company's asset turnover has been rising over the past 5 years to 0.73 in 2022 [ Figure 38 ], suggesting excellent asset efficiency in generating revenue. Efficiency is also demonstrated in Sea's management of its receivables whereby the company is able to readily collect loans receivables and its conservative approach to extending credit lines. Together, these figures demonstrate Sea's adeptness in resource utilization and its commendable financial efficiency. As Sea inches towards stable profitability, I expect the company to strengthen its financial standing by reducing leverage. This is demonstrated in the declining Debt to Equity Ratio from 2018-2022 along with management's utilization of a Revolving Credit Facility instead of issuing convertible notes. This move will strengthen shareholder returns by reducing the dilution of shares. I have hence forecast Debt to Equity Ratios to fall further in the coming years.

### Valuation

I reiterate my **BUY** recommendation for SE with a target price of **USD 51.34**, presenting a **33.00 %** upside potential based on the closing price of **USD 38.60** on **08/01/2024**. This was derived using a Discounted Cash Flow (DCF) valuation, incorporating the Perpetuity Growth method.

### Revenue Forecasting

Revenue was first broken down to reflect the main business segments namely being Digital Entertainment, E-commerce, Digital Finance and lastly Other Services. A bottom-up approach was then applied for the first 3 segments and for Other Services, constant growth was assumed due to its immaterial sum.

### Shopee

E-commerce revenue was projected according to the number of transactions per active buyer where revenue was first broken down into First and Third-party revenue with GMV being utilized as the relevant metric. GMV was calculated by multiplying Total Number of Orders against Average Order Value. Orders were forecasted to grow at a decelerating rate to reflect the cooling environment from the COVID 19 Pandemic E-commerce frenzy, following the reopening of brick-and-mortar retail outlets. As Sea's ventures into EMs in LatAM, I expect Average Order Value to continue decreasing at 5% yearly.

Figure 40: Counter-Strike 2



Figure 41: Dota 2



### Garena

To forecast Garena's in-game purchases, I utilized QAU and QPU figures provided by the management. I expect Garena's QAU to continue trending downwards due to the lack of sticky gaming titles along with the drop in bookings YoY. From there, I derived QPU to be a % of QAU and afterwards determining ARPPU by dividing Revenue by QPU ( multiplied by 4 to reflect an entire year ).

It is worth noting that QAU and hence QPU took a huge hit with the Indian Government issuing a user ban on Garena's biggest Hit Free-Fire. With that being said, I do expect QPU to gradually pick up following the recent unban announced by the Indian Government alongside Garena's capability in monetizing their platform as shown in previous years. ARPPU is also slated to increase at a conservative estimate of 6%, with it diminishing gradually over the years. This is in line with expectations that the gaming committee will turn to trending hits such as Counter-Strike 2 and Dota 2.

### SeaMoney

Sea's Digital Financial Services arm, SeaMoney mainly derives revenue from granting loans to consumers on the platform, from which interest and fees are earned. As such, we look towards Loan Receivables net of Credit Losses and after determining the Take Rate, forecast the future year's revenue.

After posting over 160% YoY growth in top-line, I expect SeaMoney to extract more realistic figures with the expected rate cuts in the coming year to be taken into account. I also forecast a huge uptick in consumer and commercial loan receivables given the launch of Maribank in Singapore along with the partnership of SeaMoney with Ceuana Lhuillier, Philippines' leading microfinance services provider.

### Cost of Revenue

Cost of Revenue is broken down into the 3 main cost-segments, Digital Entertainment, E-commerce and Cost of Goods Sold. I expected Garena to incur more cost as they look to reestablish themselves at the forefront of the gaming industry while looking to develop and publish original titles. E-commerce is also anticipated to see increments as it seeks to stay ahead of rising competition and new entrants. Lastly, Cost of Goods Sold will be expected to grow in conformity with top-line, noting a gradual downtrend.

### DCF Valuation

I adopted a 5-year DCF model to recognize SE's upside potential due to its strategic geographical position and significant comparative advantage over its peers. A 2.24% terminal growth rate to derive SE's implied share price and well as to ensure conservatism. A 2.24% terminal growth rate was computed by dissecting total revenue split in accordance with SE's main geographical segments Southeast-Asia, Latin America, Rest of Asia and Rest of World. From there, a weighted perpetual growth rate was calculated using the market risk premiums of each geographical segment.

Figure 42: Terminal Growth Rate

Sea Limited (NYSE: SE)				
DCF Computation				
	Southeast-Asia	Latin America	Rest of Asia	Rest of World
Total Revenue for FY 22	8,321	2,044	1,727	357
Revenue per geographical segment	26.4%	24.4%	21.6%	2.6%
% of Revenue in Respective Segment	2.6%	2.3%	2%	2%
Market Risk Premium (per last year 2021)				
Weighted Risk Based on Market Risk Premiums				

Figure 43: Country Risk Premium

Sea Limited (NYSE: SE)	
Country Risk Premium	
Geographical segment	Country Risk Premium
<b>1. Southeast-Asia</b>	
Indonesia	2.70%
Malaysia	1.70%
Philippines	2.70%
Singapore	0.00%
Thailand	2.34%
Vietnam	4.40%
<b>Avg</b>	<b>2.34%</b>
<b>2. Latin America</b>	
Argentina	17.50%
Brazil	4.40%
Chile	1.34%
Colombia	2.70%
Mexico	2.70%
<b>Avg</b>	<b>5.70%</b>
<b>3. Rest of Asia</b>	
Taiwan	0.88%
<b>4. Rest of the World</b>	
Spain	2.34%
Poland	1.34%
<b>Avg</b>	<b>1.79%</b>
<b>Country Risk Premium</b>	<b>2.69%</b>

### Discount Rate (WACC)

I computed a WACC of 9.69%. The Cost of Equity was determined using the Capital Asset Pricing Model (CAPM). Cost of Equity was calculated by multiplying the re-levered Beta with the Equity Risk Premium (ERP) and Country Risk Premium (CRP) and lastly adding it to the Risk-free Rate. Risk-free rate was 4.04% as of the US 10Y Treasury bill. Unlevered Beta was computed by utilizing the average of the Beta of SE's peers and re-levered using the Hamada Equation. ERP was taken at 4.60% based on Damodaran's research, seeing as the security was listed in the US market.

Figure 44: WACC Computation

WACC Computation		
<b>Capital Structure</b>		
Market Cap	21,018	Market Value of 20/1/2024
Book Value of Debt	4,130	
Enterprise Value	16,888	
% of Debt	24.2%	
% of Equity	75.8%	
<b>Beta</b>		
Stocks Correlate		
Company Name	Ticker	Unlevered Beta (2012)
Netflix Inc	NFLX	1.14
Amazon.com Inc	AMZN	1.04
Alibaba Group Holding Limited	ALIB	0.80
Microsoft Corporation	MSFT	1.00
Google	GOOG	0.78
<b>Average</b>	<b>0.95</b>	
<b>Cost of Equity</b>		
Risk Free Rate	4.04%	US 10Y Treasury
Unlevered Beta from Peers	0.95	Average Unlevered Beta of Company
Country Risk Premium	2.69%	Country Risk Premium
Equity Risk Premium	4.60%	Equity Risk Premium
Country Risk Premium	2.69%	Country Risk Premium
<b>Cost of Equity</b>	<b>11.33%</b>	<b>Cost of Equity</b>
<b>Cost of Debt</b>		
Pre-tax Cost of Debt	11.33%	Management's Tax Policy in Accordance to Singapore Corporate Tax Rate
After Tax Cost of Debt	9.69%	
<b>Weighted Average Cost of Capital</b>	<b>9.69%</b>	

Given SE's geographically diversified revenue portfolio across key markets, I used a weighted country risk premium, blended according to SE's main markets within the Southeast-Asia, Latin America, Rest of Asia and Rest of the World geographical segments. The cost of equity was calculated to be 11.33% with a pre-tax cost of debt of 1.11% which was computed by dividing interest expense by convertible debt.

To derive the after-tax cost of debt, I multiplied the pre-tax cost of debt by 1 minus the Corporate Tax Rate, in which I utilized the Singapore Corporate Tax Rate of 17% as stated under the company's tax policies.

Using SE's market D/E ratio of 0.19, I arrived at a WACC of 9.69%.

Figure 45: Sensitivity Analysis

WACC	Terminal Growth Rate				
	1.24%	1.74%	2.24%	2.74%	3.24%
51.34	52.26	55.44	59.11	63.39	68.46
8.69%	49.06	51.79	54.93	58.54	62.77
9.19%	46.25	48.63	51.33	54.42	57.99
9.69%	43.78	45.87	48.22	50.88	53.93
10.19%	41.60	43.44	45.50	47.81	50.44
10.69%					

### Scenario Analysis

I performed a sensitivity analysis by varying our WACC and Terminal Growth Rate. This allows for greater accuracy in my derivation of the implied share price. I reiterate my BUY recommendation is maintained as it can be observed that even at a lower perpetual growth and a higher discount rate still represents an ample upside.

### Investment Risks

#### 1. Tiktok Shop Indonesia merger with GoTo's Tokopedia

In late September 2023, the Indonesian government issued a ban on social E-commerce platform TikTok Shop citing protection of offline merchants and marketplaces as one of the many reasons behind the move. Unexpectedly, Tiktok Shop relaunched itself back into the Indonesian market by forming a strategic partnership with Local Internet Giant GoTo on 10th December 2023, in a bid to drive long-term growth for Indonesia's micro small medium enterprises (MSME) sector as well as the country's digital economy.

As part of the agreement, GoTo's E-commerce subsidiary Tokopedia and TikTok Shop will be combined under the existing PT Tokopedia entity, with Tiktok holding a controlling stake. It requires Tokopedia to spend USD 340 million to buy exclusive rights to own and operate TikTok Shop's Indonesian business with TikTok in turn, having to spend USD 840 million to buy 75% of Tokopedia's shares forming a joint venture. The deal which is targeted for completion by Q124 is estimated by Bloomberg Intelligence to raise TikTok's gross merchandise value by over 15%.

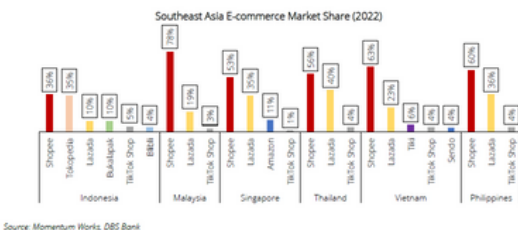
The merger of TikTok and Tokopedia is expected to capture about 40% of the Indonesian e-commerce market share. Research from Momentum Works found that Tokopedia and TikTok would jointly command a 40% market share of Indonesia's ecommerce landscape. [ Figure 47 ] This surpasses the 36% share that Sea Group's Shopee holds in the country. This news comes as a blow to Shopee, which I had expected to be the frontrunner in capturing the existing 5% market share of TikTok following the ban.

During the period when TikTok Shop's operations in Indonesia were banned, Shopee temporarily captured a portion of its transaction volume. However, according to a November report by UBS, Shopee only managed to recapture about 30% of the total transaction volume, with the remaining 70% lost. This seems to indicate that TikTok's business model has a certain irreplaceability. Research from PYMNTS Intelligence and Amazon Web Services also further proven this with its research titled "Tracking the Digital Payment Takeover: Monetizing Social Media".

Figure 46: Tiktok Shop Indonesia's Merger with Tokopedia



Figure 47: SEA E-commerce Market Share 2022



Source: Momentum Works, DBS Bank



**Figure 48: SEA E-commerce Market Share 2022**

TABLE 1:  
The most commonly used social media platforms in the U.S.  
Share of consumers using select social networks to browse and purchase products in the last 30 days

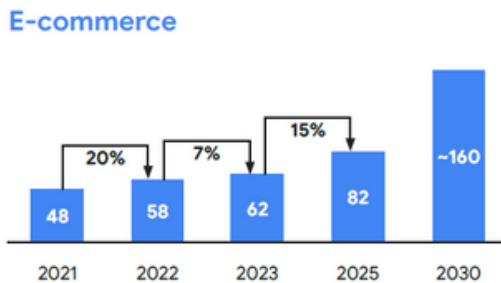
	Facebook	Instagram	YouTube	TikTok	Twitter	Snapchat	Pinterest
• Browsed for products	16.7%	11.7%	8.5%	7.3%	4.7%	4.0%	4.5%
• Searched for reviews	5.8%	5.6%	6.5%	5.2%	2.9%	3.0%	2.3%
• Purchased products	7.3%	4.6%	3.4%	2.6%	2.0%	1%	1%
• TOTAL	29.8%	21.9%	18.4%	15.0%	9.7%	8.1%	7.9%

Source: PYMNTS  
Tracking the Digital Payments Takeover: Monetizing Social Media, July 2023  
N = 2,876; Whole sample, fielded May 5, 2023 - May 16, 2023

Source: PYMNTS, AWS

The study found that 68% of Gen Z consumers searched for products on social media, and 22% ultimately completed a purchase, 40% of the generation also prefer using Instagram or TikTok to explore brands. The study also stated that Tiktok came in third, just behind Facebook and Instagram in having the highest conversion rates of all social medial platforms. [ Figure 48] We are hence witnessing a shift in consumer preferences with younger audiences preferring Social Media platforms to browse and purchase products. With this venture in place, I expect Sea’s entire ecosystem to face insurmountable challenges following the merger of two e-commerce powerhouses providing greater operational efficiency across various areas such as shopping, logistics, payments and more.

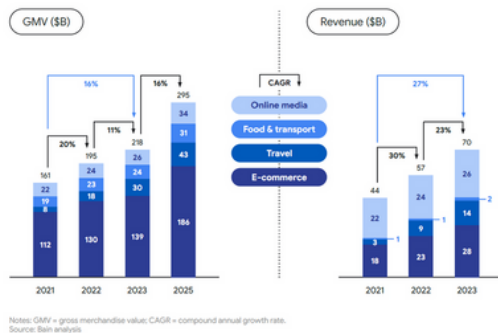
**Figure 49: Indonesia’s E-commerce Outlook**



Source: Google, Temasek and Bain

This move will also establish a strong e-commerce presence in Southeast Asia’s largest economy. Meanwhile, online retailing in Indonesia has soared in recent years with the value of E-commerce sales increasing six-fold between 2018 to 2023 and is expected to hit 689 trillion Indonesian Rupiah, according to the country’s central bank. According to the e-Conomy SEA 2023 report by Google, Temasek Holdings and Bain & Co, Indonesia’s E-commerce industry is set for rapid growth, estimating valuation of USD 62 billion in 2023 and USD 160 billion by 2030. [ Figure 49 ] E-commerce remains on track this year, increasing 22% in revenue year on year to hit USD 28 billion. Gross merchandise value (GMV) in the sector is projected to climb to USD 139 billion in 2023, before hitting USD 186 billion in 2025 on a 16% growth rate.

**Figure 50: SEA’s GMV and Revenue Outlook**



Source: Google, Temasek and Bain

**2. Garena’s Lack of Visibility, Strong Games Pipeline**

With the re-launch of Free-Fire in the huge Indian gaming market, it has since been the most downloaded mobile game globally in Q323. However, it remains to be seen if Garena will be able to replicate that success in other top hits to rival competitors in Riot Games and Epic Games with successes in Valorant. Since Free Fire, the company has struggled to develop a game to take the gaming industry by storm. This is depicted in the company’s bookings which saw a YOY drop of 38% in Q323, falling for 6 straight quarters before finally rising minimally in Q323. Garena’s decline is noteworthy seeing as the business once accounted for a substantial portion of revenue for the group but now makes up less than a fifth.

As we enter the endemic phase with lockdowns ending, revenues are now normalizing and have since dropped quarter after quarter since 2022. It is crucial for management to release games with sticky titles and a longer longevity as investors will be looking to that as a key determinant of the division’s growth and prospering metrics. However, the company has chosen to place emphasis on it’s core offering, Free-Fire by making improvements to user engagement while reducing its development pipeline to control costs.

Figure 51: Teamfight Tactics



Figure 52: League of Legends



Figure 53: Net Profit / (Loss) Q4 22 vs Q3 23

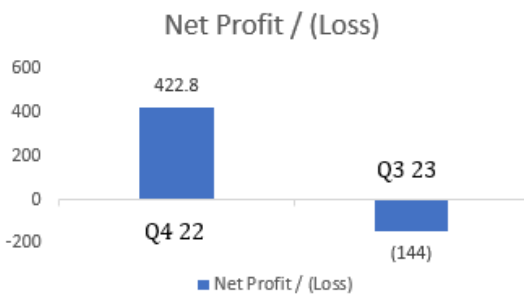


Figure 54: Shopee Xpress Circular Packaging Program 2.0



The game is however not short of problems, with many longtime players expressing dissatisfaction with the current state of the games with issues such as hacking being persistent. It is also worth noting that last November, Garena lost the rights to publish League of Legends and Teamfight Tactics in SEA to Riot Games, who decided to self-publish its title in the region. Although the company did not disclose the impact of the loss of these rights on the top line, it is evident that declining numbers cannot be solely attributed to Free-Fire alone.

### 3. Unrestrained Financial Outlay, Unclear Pathway to Sustainable Profitability

After posting positive net income for the first time in Q4 22, Sea Limited announced an unexpected net loss of USD 144 million in Q3 23 despite an increased top line. [ Figure 53 ] This brings about the question of sustainable profitability. The management attributed the net loss to investments in building its e-commerce content ecosystem, especially in live-streaming. Flagging consumption and intensifying competition from Alibaba (Lazada) and TikTok in its key markets. I expect competition to stiffen further as TikTok continues its expansion into SEA markets and Lazada mounting a comeback with the recent fresh capital injection from Alibaba of USD 634 million. Pinduoduo’s E-commerce affiliate TEMU entered SEA first via the Philippines on Aug 26, then Malaysia on Sep 8. This adds another competitor into the ever-competitive scene that incumbents Shopee must square off against.

To fend off new entrants, Shopee invested heavily on advertising costs with Sea’s marketing costs surging 12.4% YOY. Shopee alone saw sales and marketing expenses soar by almost 50% YoY for Q323 from USD 575 million to USD 861 million. This could prove to work against Sea, with the move possibly eroding margins and triggering a price war with e-commerce heavyweights Alibaba and TikTok.

## ESG

### 1. Environmental

In July 2023, Shopee launched the Shopee Xpress Circular Packaging Program 2.0 in Taiwan for the second year running. This was aimed at reducing over 2.4 million kilograms of carbon emissions by year end. In 2020, this program successfully helped reduce over 600,000 kilograms of carbon emissions within a year and with the latest edition featuring a larger variety of products eligible for the program, it is estimated to help reduce the use of over 400,000 cardboard boxes. Shopee takes charge of handling the logistics, recycling, and sanitization of recyclable packaging. The program also incentivizes sellers through additional subsidies to promote the adoption of sustainable packaging solutions, including box rentals and related expenses.

Leveraging data from past operations, Shopee is crafting a variety of box sizes tailored to meet the diverse needs of seller products.

Furthermore, Shopee has implemented a self-return option for recyclable packaging at over 100 of its automated parcel collection points throughout Taiwan. This initiative enhances consumer access to the program, facilitating their engagement in eco-friendly practices. Through these efforts, Shopee is actively contributing to the advancement of Taiwan's online retail sector towards a more ecologically responsible direction.

**Figure 55: Shopee Bayanihan Agapay Albay**



**Figure 56: Shopee Bayanihan Sorsogon Initiative**



**Figure 57: Ton Vinh Nong San Viet**



## 2. Social

Shopee Philippines partnered with the Office of Second Albay District Representative Cong. Joey Sarte Salceda to distribute ₱1,000,000 worth of rice aid to over 20,000 individuals impacted by the ongoing unrest of the Mayon Volcano. The rice aid provided sustenance to those temporarily displaced in Ligao, Guinobatan, Camalig, Daraga, Tabaco, Malilipot, and Santo Domingo—making it one of the most extensive relief initiatives for Mayon evacuees to date. Over the years, Shopee has expanded its umbrella CSR program Shopee Bayanihan to support disadvantaged communities. This program also enables users to express their solidarity towards the victims of other calamities, echoing the company's commitment to nurturing a sense of shared compassion and goodwill in times of vulnerability.

Another initiative by Shopee Bayanihan saw them partnering with the Philippine Coast Guard Station Sorsogon to deliver aid to fishing communities in Sorsogon. Noche Buena food packages were provided to over 400 families from coastal communities in Sorsogon. Shopee volunteers and Coast Guard Sorsogon representatives worked together in distributing the donations and providing hot meals for the families.

## 3. Governance

This aspect saw Shopee empowering local communities where they partnered with FoodMap to launch 'Ton Vinh Nong San Viet' - an initiative to empower local farmers from various provinces across Vietnam to build sustainable businesses and contribute to the development of the local economy. It aims create an ecosystem that supports farmers to preserve perennial native plants, improve production processes to meet VietGAP standards and bring Vietnamese agricultural products closer to users online. Under this project, Shopee Xpress will also play a pivotal role in the transportation of agricultural products, maintaining freshness of products.

**List of Appendices**

<b>Appendix Title</b>	<b>Page</b>
Appendix A - <a href="#">Financial Analysis</a>	22
Appendix B - <a href="#">Pro-Forma Income Statement</a>	23
Appendix C - <a href="#">Pro-Forma Balance Sheet</a>	24
Appendix D - <a href="#">Pro-Forma Cash Flow Statement</a>	25
Appendix E - <a href="#">Revenue Build &amp; Income Statement Forecast</a>	26
Appendix F - <a href="#">Supporting Schedules</a>	30
Appendix G - <a href="#">Terminal Growth Rate &amp; Country Risk Premium Computation</a>	34
Appendix H - <a href="#">Weighted Average Cost of Capital (WACC) Computation</a>	35
Appendix I - <a href="#">Discounted Cash Flow (DCF) Valuation</a>	36

## Appendix A - Financial Analysis

For Year Ended 31 December <i>All figures expressed in (SGDm) unless stated otherwise</i>	Sea Limited (NYSE: SE)					Forecasted				
	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>YoY Revenue Growth by Segments</b>										
Digital Entertainment	463	1,136	2,016	4,320	3,877	4,295	4,712	5,124	5,467	5,778
E-commerce	270	834	2,167	5,123	7,289	8,422	9,547	10,416	11,175	12,235
Digital Finance Services	12	9	61	470	1,222	1,652	2,225	3,108	4,494	6,497
Other Services	84	196	132	42	62	74	89	107	128	154
<b>Total Revenue</b>	<b>827</b>	<b>2,175</b>	<b>4,376</b>	<b>9,955</b>	<b>12,450</b>	<b>14,443</b>	<b>16,573</b>	<b>18,755</b>	<b>21,264</b>	<b>24,664</b>
YOY Growth (%)		163%	101%	128%	25%	16%	15%	13%	13%	16%
<b>Profitability</b>										
Gross Margin %	2%	28%	31%	39%	42%	40%	41%	42%	43%	45%
EBITDA Margin %	-120%	-41%	-30%	-16%	-12%	-7%	-4%	-1%	0%	1%
EBIT Margin %	-110%	-35%	-26%	-13%	-9%	-3%	2%	6%	8%	10%
Net Income Margin %	-116%	-67%	-37%	-21%	-13%	-7%	-3%	0%	2%	4%
Return on Assets	-44%	-28%	-15%	-11%	-10%	-6%	-3%	0%	3%	5%
Return on Equity	401%	-125%	-47%	-28%	-28%	-17%	-8%	0%	7%	11%
Return on Invested Capital	-34%	-12%	-9%	-6%	-5%	-2%	2%	5%	9%	11%
<b>Liquidity</b>										
Current Ratio	1.44	1.87	1.93	2.11	1.83	1.75	1.64	1.44	1.22	1.38
Quick Ratio	1.41	1.86	1.91	2.09	1.81	1.73	1.61	1.41	1.19	1.35
Cash Ratio	0.85	1.32	1.33	1.29	0.87	0.74	0.49	0.24	0.01	0.14
<b>Leverage</b>										
Debt to Equity Ratio	(10.15)	3.46	2.06	1.53	1.93	1.87	1.82	1.55	1.12	0.96
Debt to EBITDA Ratio	(2.46)	(4.55)	(5.40)	(7.16)	(7.52)	(10.45)	(16.11)	(38.69)	224.62	27.24
<b>Efficiency</b>										
Asset Turnover Ratio	0.38	0.42	0.42	0.53	0.73	0.86	1.00	1.13	1.27	1.24
Receivables Turnover Ratio	8.46	7.64	7.96	13.25	18.95	28.53	32.55	32.34	32.32	32.67
Inventory Turnover Ratio	(2.62)	(3.51)	(6.37)	(5.52)	(4.37)	(3.92)	(3.41)	(3.31)	(3.28)	(3.42)
Payables Turnover Ratio	(2.65)	(2.13)	(3.04)	(2.99)	(2.10)	(1.91)	(1.84)	(1.78)	(1.77)	(1.84)
<b>Coverage</b>										
Interest Coverage Ratio	31.59	18.49	10.52	11.57	32.77	1.66	1.39	0.68	(0.19)	-
Operating Cash Flow Margin (%)	(1.05)	(0.40)	(0.20)	(0.09)	(0.07)	(0.06)	(0.05)	(0.05)	(0.04)	(0.04)
<b>DuPont Analysis</b>										
Net Income Margin %	-116%	-67%	-37%	-21%	-13%	-7%	-3%	0%	2%	4%
Asset Turnover Ratio	0.38	0.42	0.42	0.53	0.73	0.86	1.00	1.13	1.27	1.24
Equity Multiplier	(9.01)	4.50	3.09	2.54	2.97	2.91	2.87	2.58	2.15	1.98
Earnings per Share	(2.83)	(3.17)	(3.30)	(3.72)	(2.98)	(1.83)	(0.85)	0.05	0.93	1.94



## Appendix B – Pro-Forma Income Statement

Sea Limited (NYSE: SE)										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)										
Income Statement	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Revenue</b>										
Service Revenue										
- Digital Entertainment	463	1,136	2,016	4,320	3,877	4,295	4,712	5,124	5,467	5,778
- E-commerce	270	834	2,167	5,123	7,289	8,422	9,547	10,416	11,175	12,235
- Digital Finance Services	12	9	61	470	1,222	1,652	2,225	3,108	4,494	6,497
- Other Services	84	196	132	42	62	74	89	107	128	154
<b>Total Revenue</b>	<b>827</b>	<b>2,175</b>	<b>4,376</b>	<b>9,955</b>	<b>12,450</b>	<b>14,443</b>	<b>16,573</b>	<b>18,755</b>	<b>21,264</b>	<b>24,664</b>
<i>Growth (%)</i>		163.0%	101.2%	127.5%	25.1%	16.0%	14.8%	13.2%	13.4%	16.0%
<b>Cost of Revenue</b>										
Cost of Goods Sold	(99)	(227)	(581)	(1,004)	(993)	(1,083)	(1,210)	(1,313)	(1,446)	(1,677)
Cost of Service										
- Digital Entertainment	(267)	(436)	(702)	(1,230)	(1,077)	(1,288)	(1,414)	(1,537)	(1,640)	(1,733)
- E-commerce and other services	(446)	(908)	(1,744)	(3,826)	(5,194)	(6,316)	(7,212)	(8,052)	(9,004)	(10,068)
<b>Total Cost of Revenue</b>	<b>(812)</b>	<b>(1,570)</b>	<b>(3,027)</b>	<b>(6,059)</b>	<b>(7,264)</b>	<b>(8,688)</b>	<b>(9,836)</b>	<b>(10,902)</b>	<b>(12,090)</b>	<b>(13,479)</b>
<b>Gross Profit</b>	<b>15</b>	<b>605</b>	<b>1,349</b>	<b>3,896</b>	<b>5,185</b>	<b>5,755</b>	<b>6,737</b>	<b>7,852</b>	<b>9,173</b>	<b>11,185</b>
<b>Operating Expenses</b>				(561)	15%					
Other Operating Income	10	16	190	288	279	289	298	300	319	370
Sales and Marketing Expenses	(705)	(970)	(1,831)	(3,830)	(3,269)	(3,020)	(2,994)	(2,889)	(2,908)	(3,189)
SG&A Expenses	(241)	(386)	(600)	(988)	(1,438)	(1,878)	(2,155)	(2,438)	(2,764)	(3,206)
Provision for Credit Losses	-	-	(58)	(117)	(514)	(602)	(731)	(1,023)	(1,442)	(2,089)
R&D Expenses	(68)	(157)	(354)	(832)	(1,377)	(1,589)	(1,823)	(2,063)	(2,339)	(2,713)
Impairment of Goodwill	-	-	-	-	(355)	-	-	-	-	-
<b>Total Operating Expenses</b>	<b>(1,004)</b>	<b>(1,496)</b>	<b>(2,652)</b>	<b>(5,479)</b>	<b>(6,673)</b>	<b>(6,799)</b>	<b>(7,404)</b>	<b>(8,114)</b>	<b>(9,134)</b>	<b>(10,828)</b>
<b>EBITDA</b>	<b>(989)</b>	<b>(891)</b>	<b>(1,303)</b>	<b>(1,583)</b>	<b>(1,487)</b>	<b>(1,045)</b>	<b>(666)</b>	<b>(262)</b>	<b>39</b>	<b>357</b>
<b>Depreciation and Amortization</b>										
Depreciation	(79)	(122)	(181)	(279)	(428)	(584)	(790)	(1,023)	(1,288)	(1,594)
Amortisation	-	-	-	-	-	(92)	(178)	(290)	(434)	(608)
<b>Non-Operating Income (Loss)</b>										
Interest Income	12	34	25	36	116	260	381	488	595	740
Interest Expense	(31)	(48)	(124)	(137)	(45)	(630)	(479)	(385)	(210)	-
Gain / (Loss) on Investment	9	12	(18)	(44)	(207)	-	-	-	-	-
Net (Loss) Gain on Debt Extinguishment	-	-	(24)	(2)	200	200	200	200	200	200
Changes in Fair Value of Convertible Notes	41	(473)	0	-	-	-	-	-	-	-
Foreign Exchange Gain / (Loss)	5	(2)	(39)	14	(76)	(19)	(19)	(19)	(19)	(19)
<b>EBT</b>	<b>(954)</b>	<b>(1,369)</b>	<b>(1,483)</b>	<b>(1,715)</b>	<b>(1,500)</b>	<b>(1,234)</b>	<b>(583)</b>	<b>22</b>	<b>606</b>	<b>1,278</b>
Income Tax Expense	(4)	(86)	(142)	(333)	(168)	210	99	(4)	(103)	(217)
Share of results of equity investees	(3)	(3)	1	5	11	11	11	11	11	11
<b>Net Income</b>	<b>(961)</b>	<b>(1,458)</b>	<b>(1,624)</b>	<b>(2,043)</b>	<b>(1,658)</b>	<b>(1,013)</b>	<b>(473)</b>	<b>29</b>	<b>514</b>	<b>1,072</b>
Net Profit / (Loss) attributable to non-controlling interests	(0)	(5)	6	(4)	6	1	1	1	1	1
<b>Net Income attributable to Sea Limited's Ordinary Shareh</b>	<b>(961)</b>	<b>(1,463)</b>	<b>(1,618)</b>	<b>(2,047)</b>	<b>(1,651)</b>	<b>(1,012)</b>	<b>(472)</b>	<b>30</b>	<b>515</b>	<b>1,073</b>

## Appendix C – Pro-Forma Balance Sheet

For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)										
Balance Sheet	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Total Assets</b>										
<b>Current Assets</b>										
Cash and cash equivalents	1,003	3,119	6,167	9,248	6,030	4,842	3,142	1,668	90	1,130
Restricted Cash	254	435	859	1,552	1,550	1,550	1,550	1,550	1,550	1,550
Accounts Receivable, Net	98	187	363	388	269	237	272	308	350	405
Prepaid Expenses and Other Assets	312	535	1,054	1,402	1,799	2,022	2,320	2,626	2,977	3,453
Loans Receivables	-	-	286	1,501	2,054	1,834	2,105	2,382	2,701	3,132
Inventories, Net	38	27	64	117	110	167	188	209	232	258
Short-term investments	1	102	126	911	864	852	978	1,107	1,255	1,455
Amounts Due from Related Parties	5	5	19	16	13	9	10	11	12	13
<b>Total Current Assets</b>	<b>1,711</b>	<b>4,410</b>	<b>8,939</b>	<b>15,135</b>	<b>12,688</b>	<b>11,512</b>	<b>10,564</b>	<b>9,859</b>	<b>9,165</b>	<b>11,397</b>
<b>Non-Current Assets</b>										
Property, Plant and Equipment, Net	192	319	386	1,030	1,388	1,670	1,874	1,976	1,964	1,850
Operating Lease Right-Of-Use Assets, Net	-	183	235	650	958	1,011	1,160	1,313	1,488	1,726
Intangible Assets, Net	13	15	40	53	65	100	193	314	471	659
Long-term Investments	111	114	190	1,053	1,254	1,257	1,442	1,632	1,850	2,146
Prepaid Expenses and Other Assets	69	66	205	125	136	159	182	206	234	271
Loans Receivables	-	-	117	29	22	29	33	38	43	49
Restricted Cash	2	17	27	39	18	18	18	18	18	18
Deferred Tax Assets	63	70	100	104	245	1,011	1,160	1,313	1,488	1,726
Goodwill	31	31	216	540	230	-	-	-	-	-
<b>Total Non-Current Assets</b>	<b>482</b>	<b>814</b>	<b>1,517</b>	<b>3,621</b>	<b>4,315</b>	<b>5,254</b>	<b>6,062</b>	<b>6,809</b>	<b>7,556</b>	<b>8,446</b>
<b>Total Assets</b>	<b>2,193</b>	<b>5,224</b>	<b>10,456</b>	<b>18,756</b>	<b>17,003</b>	<b>16,766</b>	<b>16,626</b>	<b>16,668</b>	<b>16,721</b>	<b>19,843</b>
<b>Total Liabilities</b>										
<b>Current Liabilities</b>										
Accounts Payable	37	69	122	214	259	309	349	388	431	480
Accrued Expenses and Other Payables	637	981	2,033	1,520	1,397	1,738	1,180	1,090	1,209	1,348
Deposits Payable	-	-	-	466	1,316	1,121	1,269	1,406	1,560	1,739
Advances from Customers	29	65	161	1,790	1,862	1,998	2,262	2,508	2,781	3,100
Amounts Due to Related Parties	46	35	43	75	0	113	128	142	157	175
Short-term Borrowings (Revolver)	1	1	-	100	88	-	-	-	-	-
Operating Lease Liabilities (Current Portion)	-	56	75	186	270	-	-	-	-	-
Deferred Revenue	427	1,098	2,150	2,644	1,535	1,444	1,326	1,313	1,276	1,233
Convertible Notes	-	29	-	-	31	-	-	-	-	-
Income Tax Payable	10	27	52	181	177	(160)	(87)	3	97	205
<b>Total Current Liabilities</b>	<b>1,186</b>	<b>2,362</b>	<b>4,636</b>	<b>7,176</b>	<b>6,936</b>	<b>6,563</b>	<b>6,427</b>	<b>6,850</b>	<b>7,510</b>	<b>8,280</b>
<b>Non-Current Liabilities</b>										
Accrued Expenses and Other Payables	8	26	36	76	87	113	128	142	157	175
Long-term Borrowings	1	0	-	-	-	-	-	-	-	-
Operating Lease Liabilities	-	144	178	491	757	836	915	994	1,073	1,152
Deferred Revenue	171	161	343	105	64	72	83	94	106	123
Convertible Notes	1,062	1,356	1,840	3,476	3,339	3,339	3,187	2,042	-	-
Deferred Tax Liabilities	1	1	2	7	10	(4)	(2)	0	2	4
Unrecognised Tax Benefits	3	1	0	0	0	-	-	-	-	-
<b>Total Non-Current Liabilities</b>	<b>1,246</b>	<b>1,689</b>	<b>2,399</b>	<b>4,155</b>	<b>4,256</b>	<b>4,356</b>	<b>4,311</b>	<b>3,272</b>	<b>1,338</b>	<b>1,454</b>
<b>Total Liabilities</b>	<b>2,432</b>	<b>4,052</b>	<b>7,035</b>	<b>11,332</b>	<b>11,192</b>	<b>10,919</b>	<b>10,738</b>	<b>10,122</b>	<b>8,848</b>	<b>9,734</b>
<b>Shareholders' Equity</b>										
Additional Paid-in Capital	1,809	4,687	8,527	14,622	14,560	15,608	16,121	16,748	17,561	18,724
Other Comprehensive Income	15	5	5	(29)	(111)	(111)	(111)	(111)	(111)	(111)
Statutory Reserves	-	-	2	6	12	12	12	12	12	12
Retained Earnings	(2,068)	(3,531)	(5,151)	(7,201)	(8,746)	(9,757)	(10,229)	(10,199)	(9,684)	(8,611)
<b>Total Common Equity</b>	<b>(243)</b>	<b>1,162</b>	<b>3,383</b>	<b>7,398</b>	<b>5,715</b>	<b>5,752</b>	<b>5,793</b>	<b>6,451</b>	<b>7,778</b>	<b>10,014</b>
Minority Interest	4	10	37	26	95	95	95	95	95	95
<b>Total Shareholders' Equity</b>	<b>(240)</b>	<b>1,172</b>	<b>3,420</b>	<b>7,424</b>	<b>5,811</b>	<b>5,847</b>	<b>5,888</b>	<b>6,546</b>	<b>7,873</b>	<b>10,110</b>
<b>Total Liabilities and Shareholders' Equity</b>	<b>2,192</b>	<b>5,224</b>	<b>10,455</b>	<b>18,756</b>	<b>17,003</b>	<b>16,766</b>	<b>16,626</b>	<b>16,668</b>	<b>16,721</b>	<b>19,843</b>
	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

## Appendix D – Pro-Forma Cash Flow Statement

For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)										
Cash Flow Statement	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Cash Flows from Operating Activities</b>										
Net Income						(1,013)	(473)	29	514	1,072
Add: Depreciation of PPE						584	790	1,023	1,288	1,594
Add: Amortization of Intangible Assets						92	178	290	434	608
<b>Changes in Net Working Capital:</b>										
Inventories						(57)	(21)	(21)	(23)	(27)
Accounts Receivables						31	(34)	(37)	(41)	(56)
Loans Receivables						212	(275)	(281)	(324)	(439)
Prepaid Expenses and Other Assets						(247)	(322)	(329)	(379)	(513)
Amounts due from related Parties						5	(1)	(1)	(1)	(1)
Deposits Payable						(196)	148	138	153	179
Income Tax Payable						(337)	73	91	94	108
Accounts Payable						51	40	39	42	49
Accrued Expenses and Other Payables						367	(542)	(76)	134	157
Advances from Customers						136	264	245	273	319
Deferred Revenue						(82)	(108)	(2)	(24)	(26)
Income Tax Payable						(337)	73	91	94	108
Amounts due to related parties						113	15	14	15	18
<b>Net Cash provided by Operating Activities</b>						<b>(677)</b>	<b>(195)</b>	<b>1,212</b>	<b>2,249</b>	<b>3,151</b>
<b>Cash Flows from Investing Activities</b>										
Capital Expenditure for PPE						(867)	(994)	(1,125)	(1,276)	(1,480)
Additions of Intangible Assets						(128)	(179)	(232)	(302)	(362)
Deferred Tax Assets						(766)	(143)	(153)	(176)	(238)
<b>Net Cash provided by Investing Activities</b>						<b>(1,760)</b>	<b>(1,322)</b>	<b>(1,510)</b>	<b>(1,753)</b>	<b>(2,080)</b>
<b>Cash Flows from Financing Activities</b>										
Non-Current Lease Liabilities						79	79	79	79	79
Repayment of Borrowings						(380)	(110)	(110)	(110)	(110)
Convertible Notes Due for Repayment						(31)	(151)	(1,145)	(2,042)	-
<b>Net Cash provided by Financing Activities</b>						<b>(332)</b>	<b>(182)</b>	<b>(1,176)</b>	<b>(2,073)</b>	<b>(31)</b>
<b>Net Change in Cash</b>						<b>(186)</b>	<b>2,311</b>	<b>3,483</b>	<b>3,785</b>	<b>(3,228)</b>
Cash, cash equivalents and restricted cash at beginning of year	1,445	1,259	3,571	7,053	10,838	7,610	4,842	3,142	1,668	90
<b>Cash, cash equivalents and restricted cash at end of year</b>	<b>1,259</b>	<b>3,571</b>	<b>7,053</b>	<b>10,838</b>	<b>7,610</b>	<b>4,842</b>	<b>3,142</b>	<b>1,668</b>	<b>90</b>	<b>1,130</b>

## Appendix E – Revenue Build & Income Statement Forecast

Sea Limited (NYSE: SE) Revenue Model										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise state Summary)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Total Revenue</b>	827	2,175	4,376	9,955	12,450	14,443	16,573	18,755	21,264	24,664
<i>Growth (%)</i>		163.0%	101.2%	127.5%	25.1%	16.0%	14.8%	13.2%	13.4%	16.0%
<b>Revenue By Segment</b>										
Digital Entertainment	463	1,136	2,016	4,320	3,877	4,295	4,712	5,124	5,467	5,778
<i>Growth (%)</i>		146%	77%	114%	-10%	11%	10%	9%	7%	6%
E-commerce	270	834	2,167	5,123	7,289	8,422	9,547	10,416	11,175	12,235
<i>Growth (%)</i>		209%	160%	136%	42%	16%	13%	9%	7%	9%
Digital Finance	12	9	61	470	1,222	1,652	2,225	3,108	4,494	6,497
<i>Growth (%)</i>		-20%	561%	673%	160%	35%	35%	40%	45%	45%
Other Services	84	196	132	42	62	74	89	107	128	154
<i>Growth (%)</i>										
<b>Segment Contribution (%)</b>										
Digital Entertainment	55.9%	52.2%	46.1%	43.4%	31.1%	29.7%	28.4%	27.3%	25.7%	23.4%
E-commerce	32.6%	38.4%	49.5%	51.5%	58.5%	58.3%	57.6%	55.5%	52.6%	49.6%
Digital Finance	1.4%	0.4%	1.4%	4.7%	9.8%	11.4%	13.4%	16.6%	21.1%	26.3%
Other Services	10.1%	9.0%	3.0%	0.4%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%
<b>Digital Entertainment Revenue</b>										
<b>Revenue</b>	463	1,136	2,016	4,320	3,877	4,295	4,712	5,124	5,467	5,778
Quarterly Active Users (QAU)	170 <sup>▼</sup>	314	521	689	572	544	516	491	466	443
<i>Growth (%)</i>		85.1%	65.7%	32.2%	-17.0%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
1. Bull Case						13.0%	12.0%	12.0%	11.0%	10.0%
2. Base Case						-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
3. Bear Case						-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
Quarterly Paying Users (QPU)	8 <sup>▼</sup>	27	56	86	53	56	58	60	62	63
<i>% of QAU</i>	4.8%	8.7%	10.7%	12.4%	9.3%	10.2%	11.2%	12.3%	13.2%	14.3%
<i>Growth (%)</i>		232.2%	104.9%	52.9%	-37.9%	10.0%	10.0%	9.0%	8.0%	8.0%
1. Bull Case						15.0%	15.0%	15.0%	15.0%	15.0%
2. Base Case						10.0%	10.0%	9.0%	8.0%	8.0%
3. Bear Case						5.0%	5.0%	4.0%	3.0%	2.0%
Average Revenue Per Paying User (ARPPU)	14	10	9	13	18	19	20	21	22	23
<i>Growth (%)</i>		-26.1%	-13.4%	40.2%	44.5%	6.0%	5.0%	5.0%	4.0%	3.0%
1. Bull Case						10.0%	15.0%	20.0%	25.0%	30.0%
2. Base Case						6.0%	5.0%	5.0%	4.0%	3.0%
3. Bear Case						3.0%	3.0%	2.0%	2.0%	2.0%
<b>E-commerce Revenue</b>										
<b>Revenue</b>	270	834	2,167	5,123	7,289	8,422	9,547	10,416	11,175	12,235
Gross Merchandise Value (GMV)	10,279	17,576	35,356	62,600	73,500	84,220	94,897	104,576	115,440	127,446
<i>Growth (%)</i>		71.0%	101.2%	77.1%	17.4%	14.6%	12.7%	10.2%	10.4%	10.4%
Third-Party Revenue	177	623	1,724	4,072	5,819	6,569	7,364	8,115	8,866	9,686
<i>% of GMV</i>	1.7%	3.5%	4.9%	6.5%	7.9%	8.0%	8.0%	8.0%	8.0%	8.0%
1. Bull Case						10.0%	10.3%	10.6%	11.0%	11.3%
2. Base Case						8.0%	8.0%	8.0%	8.0%	8.0%
3. Bear Case						4.9%	5.2%	5.5%	5.8%	6.1%
First- Party Revenue	93	211	443	1,051	1,470	1,853	2,183	2,301	2,309	2,549
<i>% of GMV</i>	0.9%	1.2%	1.3%	1.7%	2.0%	2.2%	2.3%	2.2%	2.0%	2.0%
1. Bull Case						2.0%	2.0%	2.0%	2.0%	2.0%
2. Base Case						2.2%	2.3%	2.2%	2.0%	2.0%
3. Bear Case						1.0%	1.0%	1.0%	1.0%	1.0%
Total Number of Orders	605	1,212	2,821	6,200	7,600	9,120	10,762	12,483	14,356	16,509
<i>Growth (%)</i>		100.4%	132.8%	119.8%	22.6%	20.0%	18.0%	16.0%	15.0%	15.0%
1. Bull Case						40.0%	40.0%	40.0%	40.0%	40.0%
2. Base Case						20.0%	18.0%	16.0%	15.0%	15.0%
3. Bear Case						10.0%	10.0%	10.0%	10.0%	10.0%

Average Order Value	17	14	12	10	9	9	9	8	8	7
Growth (%)		-14.9%	-13.6%	-19.8%	-4.5%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
1. Bull Case						3.0%	3.0%	5.0%	5.0%	6.0%
2. Base Case						-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
3. Bear Case						-15.0%	-15.0%	-17.0%	-20.0%	-20.0%
1P GMV	93	211	443	1,051	1,470	2,105	2,847	3,137	4,618	6,372
% of GMV	0.9%	1.2%	1.3%	1.7%	2.0%	2.5%	3.0%	3.0%	4.0%	5.0%
1. Bull Case						2.5%	3.0%	3.5%	4.0%	4.2%
2. Base Case						2.5%	3.0%	3.0%	4.0%	5.0%
3. Bear Case						2.0%	2.1%	2.2%	2.4%	2.6%
3P GMV	10,186	17,365	34,913	61,549	72,030	82,114	92,050	101,439	110,822	121,073
% of GMV	99.1%	98.8%	98.7%	98.3%	98.0%	97.5%	97.0%	97.0%	96.0%	95.0%
1. Bull Case						99.1%	99.1%	99.1%	99.1%	99.1%
2. Base Case						97.5%	97.0%	97.0%	96.0%	95.0%
3. Bear Case						93.0%	93.0%	93.0%	93.0%	93.0%
<b>Digital Finance Revenue</b>										
Revenue	12	9	61	470	1,222	1,652	2,225	3,108	4,494	6,497
Take Rate	46.5%	23.3%	15.1%	30.7%	58.9%	60.0%	60.0%	60.0%	60.0%	60.0%
1. Bull Case						70.0%	75.0%	80.0%	83.0%	85.0%
2. Base Case						60.0%	60.0%	60.0%	60.0%	60.0%
3. Bear Case						58.0%	58.0%	55.0%	50.0%	45.0%
Loan Receivables, Net of Credit Losses	25	40	403	1,530	2,075	2,753	3,708	5,180	7,490	10,829
Growth (%)		59.9%	919.0%	279.6%	35.7%	32.6%	34.7%	39.7%	44.6%	44.6%
1. Commercial	12	23	184	107	45	59	80	112	156	219
Growth (%)		90.4%	707.7%	-41.6%	-57.7%	30.0%	35.0%	40.0%	40.0%	40.0%
1. Bull Case						40.0%	45.0%	55.0%	55.0%	60.0%
2. Base Case						30.0%	35.0%	40.0%	40.0%	40.0%
3. Bear Case						10.0%	15.0%	15.0%	15.0%	15.0%
2. Consumer	13	17	260	1,520	2,269	2,949	3,982	5,575	8,083	11,720
Growth (%)		31.4%	1445.7%	485.0%	49.2%	30.0%	35.0%	40.0%	45.0%	45.0%
1. Bull Case						40.0%	45.0%	50.0%	55.0%	60.0%
2. Base Case						30.0%	35.0%	40.0%	45.0%	45.0%
3. Bear Case						10.0%	15.0%	15.0%	15.0%	15.0%
Loan Receivables	25	40	444	1,628	2,314	3,009	4,062	5,686	8,239	11,939
Credit Losses			(40)	(98)	(239)	(256)	(353)	(506)	(750)	(1,110)
% of Loan Receivables			9.1%	6.0%	10.3%	8.5%	8.7%	8.9%	9.1%	9.3%
1. Bull Case						6.0%	6.2%	6.4%	6.6%	6.8%
2. Base Case						8.5%	8.7%	8.9%	9.1%	9.3%
3. Bear Case						10.3%	10.5%	10.7%	10.8%	10.9%
<b>Other Services Revenue</b>										
Revenue	84	196	132	42	62	74	89	107	128	154
Growth (%)		134.5%	-32.7%	-67.8%	46.0%	20.0%	20.0%	20.0%	20.0%	20.0%
1. Bull Case						30.0%	30.0%	30.0%	30.0%	30.0%
2. Base Case						20.0%	20.0%	20.0%	20.0%	20.0%
3. Bear Case						10.0%	10.0%	10.0%	10.0%	10.0%

**Sea Limited (NYSE: SE)**  
Expense Model

For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise state Summary)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Total Revenue</b>	827	2,175	4,376	9,955	12,450	14,443	16,573	18,755	21,264	24,664
<b>Digital Entertainment Revenue</b>	463	1,136	2,016	4,320	3,877	4,295	4,712	5,124	5,467	5,778
<b>E-commerce Revenue</b>	270	834	2,167	5,123	7,289	8,422	9,547	10,416	11,175	12,235
<b>Digital Finance Revenue</b>	12	9	61	470	1,222	1,652	2,225	3,108	4,494	6,497
<b>E-commerce GMV</b>	10,279	17,576	35,356	62,600	73,500	84,220	94,897	104,576	115,440	127,446



<b>Cost of Revenue</b>										
<b>Cost of Revenue</b>	(812)	(1,570)	(3,027)	(6,059)	(7,264)	(8,688)	(9,836)	(10,902)	(12,090)	(13,479)
<i>Growth (%)</i>		93.4%	92.7%	100.2%	19.9%	19.6%	13.2%	10.8%	10.9%	11.5%
<b>Cost Segments</b>										
Digital Entertainment	(267)	(436)	(702)	(1,230)	(1,077)	(1,288)	(1,414)	(1,537)	(1,640)	(1,733)
<i>Growth (%)</i>		63.0%	61.1%	75.1%	-12.4%	19.6%	9.7%	8.7%	6.7%	5.7%
<i>% of Digital Entertainment Revenue</i>		38.4%	34.8%	28.5%	27.8%	30.0%	30.0%	30.0%	30.0%	30.0%
1. Bull Case		23.0%	20.0%	18.0%	16.0%	15.0%				
2. Base Case		30.0%	30.0%	30.0%	30.0%	30.0%				
3. Bear Case		31.0%	32.0%	33.0%	34.0%	35.0%				
E-commerce	(446)	(908)	(1,744)	(3,826)	(5,194)	(6,316)	(7,212)	(8,052)	(9,004)	(10,068)
<i>Growth (%)</i>		103.4%	92.1%	119.4%	35.8%	21.6%	14.2%	11.7%	11.8%	11.8%
<i>% of GMV</i>		5.2%	4.9%	6.1%	7.1%	7.5%	7.6%	7.7%	7.8%	7.9%
1. Bull Case		5.8%	5.9%	6.0%	6.1%	6.2%				
2. Base Case		7.5%	7.6%	7.7%	7.8%	7.9%				
3. Bear Case		7.8%	7.9%	8.0%	8.0%	8.0%				
Cost of Goods Sold	(99)	(227)	(581)	(1,004)	(993)	(1,083)	(1,210)	(1,313)	(1,446)	(1,677)
<i>Growth (%)</i>		130.3%	155.8%	72.8%	-1.0%	9.0%	11.7%	8.5%	10.1%	16.0%
<i>% of Total Revenue</i>		11.9%	10.4%	13.3%	10.1%	8.0%	7.5%	7.3%	7.0%	6.8%
1. Bull Case		6.0%	5.5%	5.0%	5.0%	4.5%				
2. Base Case		7.5%	7.3%	7.0%	6.8%	6.8%				
3. Bear Case		10.7%	10.5%	10.3%	10.2%	10.2%				
<b>Operating Expenses</b>										
<b>Other Operating Income</b>	10	16	190	288	279	289	298	300	319	370
<i>Growth (%)</i>		62.2%	1093.5%	51.8%	-3.0%	3.5%	3.3%	0.6%	6.3%	16.0%
<i>% of Total Revenue</i>		1.2%	0.7%	4.3%	2.9%	2.2%	2.0%	1.8%	1.6%	1.5%
1. Bull Case		2.3%	2.3%	2.2%	2.0%	2.0%				
2. Base Case		2.0%	1.8%	1.6%	1.5%	1.5%				
3. Bear Case		1.8%	1.5%	1.3%	1.2%	1.2%				
<b>Sales and Marketing Expenses</b>	(705)	(970)	(1,831)	(3,830)	(3,269)	(3,020)	(2,994)	(2,889)	(2,908)	(3,189)
Digital Entertainment	(68)	(109)	(165)	(357)	(276)	(258)	(236)	(205)	(164)	(144)
<i>Growth (%)</i>		60.3%	51.4%	116.4%	-22.7%	-6.6%	-8.6%	-13.0%	-20.0%	-11.9%
<i>% of Digital Entertainment Revenue</i>		14.7%	9.6%	8.2%	8.3%	7.1%	6.0%	5.0%	4.0%	3.0%
1. Bull Case		4.0%	3.5%	2.5%	2.0%	1.5%				
2. Base Case		6.0%	5.0%	4.0%	3.0%	2.5%				
3. Bear Case		7.0%	6.8%	6.5%	6.0%	5.5%				
E-commerce	(603)	(765)	(1,220)	(2,630)	(2,056)	(1,684)	(1,423)	(1,150)	(1,154)	(1,274)
<i>Growth (%)</i>		26.9%	59.5%	115.6%	-21.8%	-18.1%	-15.5%	-19.2%	0.4%	10.4%
<i>% of GMV</i>		5.9%	4.4%	3.5%	4.2%	2.8%	2.0%	1.5%	1.1%	1.0%
1. Bull Case		1.8%	1.5%	1.0%	0.8%	0.8%				
2. Base Case		2.0%	1.5%	1.1%	1.0%	1.0%				
3. Bear Case		2.6%	2.3%	2.0%	1.7%	1.4%				
Digital Finance			(415)	(743)	(834)	(963)	(1,218)	(1,422)	(1,483)	(1,671)
<i>Growth (%)</i>			93.6%	45.7%	36.0%	15.4%	26.6%	16.7%	4.3%	12.7%
<i>% of Loan Receivables</i>						32.0%	30.0%	25.0%	18.0%	14.0%
1. Bull Case			25.0%	26.0%	20.0%	18.0%				
2. Base Case			32.0%	30.0%	25.0%	18.0%				
3. Bear Case			35.0%	34.0%	30.0%	27.0%				
Other Services	(34)	(96)	(31)	(100)	(103)	(116)	(116)	(113)	(106)	(99)
<i>Growth (%)</i>		180.9%	-67.7%	223.1%	3.5%	11.9%	0.4%	-3.0%	-5.5%	-7.2%
<i>% of Total Revenue</i>		4.1%	4.4%	0.7%	1.0%	0.8%	0.8%	0.7%	0.6%	0.4%
1. Bull Case		0.6%	0.5%	0.4%	0.3%	0.3%				
2. Base Case		0.8%	0.7%	0.6%	0.5%	0.4%				
3. Bear Case		1.0%	0.9%	0.8%	0.7%	0.6%				
<b>Selling, General and Administrative Expenses</b>	(241)	(386)	(600)	(988)	(1,438)	(1,878)	(2,155)	(2,438)	(2,764)	(3,206)
<i>Growth (%)</i>		60.3%	55.4%	64.7%	45.5%	30.6%	14.8%	13.2%	13.4%	16.0%
<i>% of Total Revenue</i>		29.1%	17.7%	13.7%	9.9%	13.5%	13.0%	13.0%	13.0%	13.0%
1. Bull Case		9.0%	8.0%	7.0%	6.0%	5.0%				
2. Base Case		13.0%	13.0%	13.0%	13.0%	13.0%				
3. Bear Case		18.0%	18.0%	18.0%	18.0%	18.0%				
Digital Entertainment ( Based of % Contribution to Revenue )	(135)	(202)	(276)	(429)	(448)	(558)	(613)	(666)	(711)	(751)
E-commerce ( Based of % Contribution to Revenue )	(78)	(148)	(297)	(508)	(842)	(1,095)	(1,241)	(1,354)	(1,453)	(1,591)
Digital Finance ( Based of % Contribution to Revenue )	(3)	(2)	(8)	(47)	(141)	(215)	(289)	(404)	(584)	(845)
Other Services ( Based of % Contribution to Revenue )	(24)	(35)	(18)	(4)	(7)	(10)	(12)	(14)	(17)	(20)

<b>Provision for Credit Losses</b>	-	-	(58)	(117)	(514)	(602)	(731)	(1,023)	(1,442)	(2,089)
<i>% of Loans Receivables</i>			13.0%	7.2%	22.2%	20.0%	18.0%	18.0%	17.5%	17.5%
1. Bull Case						14.0%	14.0%	14.0%	14.0%	14.0%
2. Base Case						20.0%	18.0%	18.0%	17.5%	17.5%
3. Bear Case						25.0%	25.0%	25.0%	25.0%	25.0%
<b>Research and Development Expenses</b>	(68)	(157)	(354)	(832)	(1,377)	(1,589)	(1,823)	(2,063)	(2,339)	(2,713)
<i>Growth (%)</i>		132.0%	125.9%	135.1%	65.5%	15.4%	14.8%	13.2%	13.4%	16.0%
<i>% of Total Revenue</i>	8.2%	7.2%	8.1%	8.4%	11.1%	11.0%	11.0%	11.0%	11.0%	11.0%
1. Bull Case						8.0%	8.5%	9.0%	9.5%	9.5%
2. Base Case						11.0%	11.0%	11.0%	11.0%	11.0%
3. Bear Case						12.0%	12.0%	12.0%	12.0%	12.0%
Digital Entertainment ( Based of % Contribution to Revenue )	(38)	(82)	(163)	(361)	(429)	(472)	(518)	(564)	(601)	(636)
E-commerce ( Based of % Contribution to Revenue )	(22)	(60)	(175)	(428)	(806)	(926)	(1,050)	(1,146)	(1,229)	(1,346)
Digital Finance ( Based of % Contribution to Revenue )	(1)	(1)	(5)	(39)	(135)	(182)	(245)	(342)	(494)	(715)
Other Services ( Based of % Contribution to Revenue )	(7)	(14)	(11)	(4)	(7)	(8)	(10)	(12)	(14)	(17)
<b>Income Tax Expenses</b>										
Pre-Tax Income (Loss)	(954)	(1,369)	(1,483)	(1,715)	(1,500)	(1,234)	(583)	22	606	1,278
<b>Tax Expense</b>	(4)	(86)	(142)	(333)	(168)	210	99	(4)	(103)	(217)
<i>Effective Tax Rate (%)</i>	0.4%	6.3%	9.6%	19.4%	11.2%	17.0%	17.0%	17.0%	17.0%	17.0%
<b>Interest Income</b>										
Interest Income	12	34	25	36	116	260	381	488	595	740
<i>Growth (%)</i>		194.6%	-26.9%	45.5%	220.1%	125.1%	46.6%	27.9%	22.1%	24.3%
<i>% of Total Revenue</i>	1.4%	1.6%	0.6%	0.4%	0.9%	1.8%	2.3%	2.6%	2.8%	3.0%
1. Bull Case						2.0%	2.5%	3.0%	3.5%	4.0%
2. Base Case						1.8%	2.3%	2.6%	2.8%	3.0%
3. Bear Case						0.5%	0.5%	0.5%	0.5%	0.5%

## Appendix F – Supporting Schedules

Sea Limited (NYSE: SE) Working Capital Schedule										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
Summary										
BOP	1/1/2018	1/1/2019	1/1/2020	1/1/2021	1/1/2022	1/1/2023	1/1/2024	1/1/2025	1/1/2026	1/1/2027
EOP	31/12/2018	31/12/2019	31/12/2020	31/12/2021	31/12/2022	31/12/2023	31/12/2024	31/12/2025	31/12/2026	31/12/2027
Days	365	365	366	365	365	365	366	365	365	365
Total Revenue	827	2,175	4,376	9,955	12,450	14,443	16,573	18,755	21,264	24,664
Total Cost of Revenue	(812)	(1,570)	(3,027)	(6,059)	(7,264)	(8,688)	(9,836)	(10,902)	(12,090)	(13,479)
Total Operating Expenses	(1,004)	(1,496)	(2,652)	(5,479)	(6,673)	(6,799)	(7,404)	(8,114)	(9,134)	(10,828)
EBT	(954)	(1,369)	(1,483)	(1,715)	(1,500)	(1,234)	(583)	22	606	1,278
<b>Current Assets</b>										
Accounts Receivables, Net	98	187	363	388	269	237	272	308	350	405
Accounts Receivable Days	43	31	30	14	8	6	6	6	6	6
Prepaid Expenses and Other Assets	312	535	1,054	1,402	1,799	2,022	2,320	2,626	2,977	3,453
% of Total Revenue	37.8%	24.6%	24.1%	14.1%	14.4%	14.0%	14.0%	14.0%	14.0%	14.0%
Loans Receivables, Net	-	-	286	1,501	2,054	1,834	2,105	2,382	2,701	3,132
% of Total Revenue	0.0%	0.0%	6.5%	15.1%	16.5%	12.7%	12.7%	12.7%	12.7%	12.7%
Inventories, Net	38	27	64	117	110	167	188	209	232	258
Inventory Days	17	6	8	7	6	7	7	7	7	7
Short-Term Investments	1	102	126	911	864	852	978	1,107	1,255	1,455
% of Total Revenue	0.1%	4.7%	2.9%	9.2%	6.9%	5.9%	5.9%	5.9%	5.9%	5.9%
Amounts Due from Related Parties	5	5	19	16	13	9	10	11	12	13
% of Cost of Total Revenue	0.6%	0.3%	0.6%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Non-Current Assets</b>										
Long-Term Investments	111	114	190	1,053	1,254	1,257	1,442	1,632	1,850	2,146
% of Total Revenue	13.4%	5.2%	4.4%	10.6%	10.1%	8.7%	8.7%	8.7%	8.7%	8.7%
Prepaid Expenses and Other Assets	69	66	205	125	136	159	182	206	234	271
% of Total Revenue	8.4%	3.0%	4.7%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
Loans Receivables, Net	-	-	117	29	22	29	33	38	43	49
% of Total Revenue	0.0%	0.0%	2.7%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Deferred Tax Assets	69	66	205	125	136	899	906	913	920	928
% of Total Revenue	0.2%	0.2%	0.5%	0.3%	0.3%	2.0%	2.0%	2.0%	2.0%	2.0%
Operating Lease Right-Of-Use Assets, Net	-	183	235	650	958	1,011	1,160	1,313	1,488	1,726
% of Total Revenue	0.0%	8.4%	5.4%	6.5%	7.7%	7.0%	7.0%	7.0%	7.0%	7.0%
<b>Current Liabilities</b>										
Accounts Payables, Net	37	69	122	214	259	309	349	388	431	480
Accounts Payables Days	17	16	15	13	13	13	13	13	13	13
Accrued Expenses and Other Payables	637	981	2,033	1,520	1,397	1,738	1,180	1,090	1,209	1,348
% of Cost of Total Revenue	78.4%	62.5%	67.2%	25.1%	19.2%	20.0%	12.0%	10.0%	10.0%	10.0%
Deposits Payable	-	-	-	466	1,316	1,121	1,269	1,406	1,560	1,739
% of Cost of Total Revenue	0.0%	0.0%	0.0%	7.7%	18.1%	12.9%	12.9%	12.9%	12.9%	12.9%
Advances from Customers	29	65	161	1,790	1,862	1,998	2,262	2,508	2,781	3,100
% of Cost of Total Revenue	3.6%	4.1%	5.3%	29.5%	25.6%	23.0%	23.0%	23.0%	23.0%	23.0%
Amounts Due from Related Parties	46	35	43	75	0	113	128	142	157	175
% of Cost of Total Revenue	5.7%	2.2%	1.4%	1.2%	0.0%	1.3%	1.3%	1.3%	1.3%	1.3%
Deferred Revenue	427	1,098	2,150	2,644	1,535	1,444	1,326	1,313	1,276	1,233
% of Total Revenue	51.6%	50.5%	49.1%	26.6%	12.3%	10.0%	8.0%	7.0%	6.0%	5.0%
Income Tax Payable	10	27	52	181	177	(160)	(87)	3	97	205
% of EBT	1.0%	2.0%	3.5%	10.6%	11.8%	13.0%	15.0%	15.0%	16.0%	16.0%
<b>Non-Current Liabilities</b>										
Accrued Expenses and Other Payables	8	26	36	76	87	113	128	142	157	175
% of Cost of Total Revenue	1.0%	1.6%	1.2%	1.3%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%
Deferred Revenue	171	161	343	105	64	72	83	94	106	123
% of Total Revenue	20.7%	7.4%	7.8%	1.1%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Deferred Tax Liabilities	1	1	2	7	10	(4)	(2)	0	2	4
% of EBT	0.1%	0.1%	0.1%	0.4%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%

Sea Limited (NYSE: SE)										
PPE Schedule										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
Revenue	827	2,175	4,376	9,955	12,450	14,443	16,573	18,755	21,264	24,664
<b>PPE Schedule</b>										
Computers	208.44	339.22	522.11	883.25	1,381.80	1,908.80	2,513.55	3,197.89	3,973.79	4,873.76
Office Equipment, Furniture and Fittings	15.45	24.88	31.61	43.06	62.26	86.01	113.26	144.09	179.05	219.61
Leasehold Improvements	63.78	129.30	162.03	252.78	381.44	526.92	693.86	882.77	1,096.96	1,345.39
Transportation Assets	5.07	14.62	6.18	208.70	123.84	171.06	225.26	286.59	356.13	436.78
Warehouse Equipment	-	3.46	7.30	20.80	36.02	49.76	65.53	83.37	103.60	127.06
Land	-	20.60	22.71	196.42	272.04	375.80	494.86	629.59	782.34	959.52
Building	-	0.81	2.09	1.96	14.70	20.31	26.74	34.02	42.28	51.86
Construction-in-progress	-	-	0.97	22.95	51.58	51.58	51.58	51.58	51.58	51.58
<b>Total PPE, at cost</b>	<b>292.74</b>	<b>532.90</b>	<b>755.01</b>	<b>1,629.91</b>	<b>2,323.68</b>	<b>3,190.24</b>	<b>4,184.63</b>	<b>5,309.90</b>	<b>6,585.73</b>	<b>8,065.55</b>
Less: Accumulated Depreciation	(100.38)	(214.28)	(368.61)	(599.95)	(935.78)	(1,520.17)	(2,310.49)	(3,333.85)	(4,621.43)	(6,215.47)
<b>Net PPE</b>	<b>192.36</b>	<b>318.62</b>	<b>386.40</b>	<b>1,029.96</b>	<b>1,387.90</b>	<b>1,670.07</b>	<b>1,874.13</b>	<b>1,976.05</b>	<b>1,964.30</b>	<b>1,850.08</b>
<b>PPE</b>										
<b>FY2022 PPE:</b>	Value	% of Total PPE	Average Useful Life	% of CAPEX						
Computers	1,381.80	59.47%	4 Years	60.8%						
Office Equipment, Furniture and Fittings	62.26	2.68%	6 Years	2.7%						
Leasehold Improvements	381.44	16.42%	5 Years	16.8%						
Transportation Assets	123.84	5.33%	7 Years	5.5%						
Warehouse Equipment	36.02	1.55%	6 Years	1.6%						
Land	272.04	11.71%	20 Years	12.0%						
Building	14.70	0.63%	13 Years	0.6%						
Construction-in-progress	51.58	2.22%	-	-						
<b>Total PPE</b>	<b>2,323.68</b>									
<b>Capital Expenditure</b>	<b>178</b>	<b>247</b>	<b>357</b>	<b>807</b>	<b>976</b>	<b>867</b>	<b>994</b>	<b>1,125</b>	<b>1,276</b>	<b>1,480</b>
% of Total Revenue	21.6%	11.4%	8.2%	8.1%	7.8%	6.0%	6.0%	6.0%	6.0%	6.0%
<b>Addition of CAPEX</b>										
Computers						527	605	684	776	900
Office Equipment, Furniture and Fittings						24	27	31	35	41
Leasehold Improvements						145	167	189	214	248
Transportation Assets						47	54	61	70	81
Warehouse Equipment						14	16	18	20	23
Land						104	119	135	153	177
Building						6	6	7	8	10
<b>Depreciation</b>										
Existing Depreciation of PPE	54.90	116.78	169.07	260.68	404.93	404.93	404.93	404.93	404.93	404.93
New Depreciation of PPE						179.46	385.39	618.43	882.65	1,189.12
<b>Total Depreciation</b>	<b>54.90</b>	<b>116.78</b>	<b>169.07</b>	<b>260.68</b>	<b>404.93</b>	<b>584.39</b>	<b>790.32</b>	<b>1,023.36</b>	<b>1,287.58</b>	<b>1,594.04</b>
<b>Depreciation of Existing PPE</b>	<b>54.90</b>	<b>116.78</b>	<b>169.07</b>	<b>260.68</b>	<b>404.93</b>	<b>404.93</b>	<b>404.93</b>	<b>404.93</b>	<b>404.93</b>	<b>404.93</b>
<b>Depreciation of New PPE</b>										
<b>Computers</b>										
					FY 2023E	527.01				
					FY 2024E	604.74	131.75	131.75	131.75	131.75
					FY 2025E	684.34	151.19	151.19	151.19	151.19
					FY 2026E	775.91	171.09	171.09	171.09	171.09
					FY 2027E	899.97	193.98	193.98	193.98	193.98
						899.97	224.99	224.99	224.99	224.99
						<b>131.75</b>	<b>282.94</b>	<b>454.02</b>	<b>648.00</b>	<b>872.99</b>
<b>Office Equipment, Furniture and Fittings</b>										
					FY 2023E	23.75				
					FY 2024E	27.25	3.96	3.96	3.96	3.96
					FY 2025E	30.84	4.54	4.54	4.54	4.54
					FY 2026E	34.96	5.14	5.14	5.14	5.14
					FY 2027E	40.55	5.83	5.83	5.83	5.83
						40.55	6.76	6.76	6.76	6.76
						<b>3.96</b>	<b>8.50</b>	<b>13.64</b>	<b>19.47</b>	<b>26.22</b>
<b>Leasehold Improvements</b>										
					FY 2023E	145.48				
					FY 2024E	166.94	29.10	29.10	29.10	29.10
					FY 2025E	188.91	33.39	33.39	33.39	33.39
					FY 2026E	214.19	37.78	37.78	37.78	37.78
					FY 2027E	248.43	42.84	42.84	42.84	42.84
						248.43	49.69	49.69	49.69	49.69
						<b>29.10</b>	<b>62.48</b>	<b>100.27</b>	<b>143.10</b>	<b>192.79</b>
<b>Transportation Assets</b>										
					FY 2023E	47.23				
					FY 2024E	54.20	6.75	6.75	6.75	6.75
					FY 2025E	61.33	7.74	7.74	7.74	7.74
					FY 2026E	69.54	8.76	8.76	8.76	8.76
					FY 2027E	80.65	9.93	9.93	9.93	9.93
						80.65	11.52	11.52	11.52	11.52
						<b>6.75</b>	<b>14.49</b>	<b>23.25</b>	<b>33.18</b>	<b>44.71</b>
<b>Warehouse Equipment</b>										
					FY 2023E	13.74				
					FY 2024E	15.77	2.29	2.29	2.29	2.29
					FY 2025E	17.84	2.63	2.63	2.63	2.63
					FY 2026E	20.23	2.97	2.97	2.97	2.97
					FY 2027E	23.46	3.37	3.37	3.37	3.37
						23.46	3.91	3.91	3.91	3.91
						<b>2.29</b>	<b>4.92</b>	<b>7.89</b>	<b>11.26</b>	<b>15.17</b>

Land							
	FY 2023E	103.75	5.19	5.19	5.19	5.19	5.19
	FY 2024E	119.06		5.95	5.95	5.95	5.95
	FY 2025E	134.73		6.74	6.74	6.74	6.74
	FY 2026E	152.76		7.64	7.64	7.64	7.64
	FY 2027E	177.18		8.86	8.86	8.86	8.86
			<b>5.19</b>	<b>11.14</b>	<b>17.88</b>	<b>25.52</b>	<b>34.37</b>
Building							
	FY 2023E	5.61	0.43	0.43	0.43	0.43	0.43
	FY 2024E	6.43		0.49	0.49	0.49	0.49
	FY 2025E	7.28		0.56	0.56	0.56	0.56
	FY 2026E	8.26		0.64	0.64	0.64	0.64
	FY 2027E	9.58		0.74	0.74	0.74	0.74
			<b>0.43</b>	<b>0.93</b>	<b>1.49</b>	<b>2.12</b>	<b>2.86</b>

Sea Limited (NYSE: SE) Intangible Assets										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
Opening Balance	37	13	15	40	53	65	192.58	371.18	603.34	905.16
(+) Additions	5	7	15	104	91	127.57	178.59	232.17	301.82	362.18
Growth (%)		31.2%	112.5%	612.1%	-12.5%	40.0%	40.0%	30.0%	30.0%	20.0%
Total Intangible Assets before Amortization	43	20	30	144	144	193	371	603	905	1,267
(-) Amortization	(24)	(5)	(12)	(91)	(79)	(92.44)	(178.16)	(289.61)	(434.48)	(608.33)
% of Intangible Assets before Amortization	56.0%	24.5%	39.4%	63.5%	54.7%	48.0%	48.0%	48.0%	48.0%	48.0%
Intangible Asset Ending Balance	19	15	18	53	65	100	193	314	471	659

Sea Limited (NYSE: SE) Debt Schedule										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
Interest Expense						630	479	385	210	-
Cash Flows before Revolving Cash Facility						(677)	(195)	1,212	2,249	3,151
Cash Flows from Operating Activities						(1,760)	(1,322)	(1,510)	(1,753)	(2,080)
Cash Flows from Investing Activities						7,610	4,842	3,142	1,668	90
(+) Beginning Cash Balance						-	-	-	-	-
(+) New Long-Term Borrowings						5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
(-) Target Minimum Cash Balance						-	-	-	-	-
Available Cash before Short-Term Borrowings						174	(1,676)	(2,157)	(2,836)	(3,839)

Convertible Notes Schedule										
Debt	Principle Amount	Year of Maturity	Effective I/R	Valued (FY22)						
<b>2023 Convertible Notes</b>	575									
Equity Component	153									
Liability Component	411	FY2023	9.38%	31						
Debt Issuance Cost	(11)									
Beginning Principal Amount					575	-	-	-	-	-
Principal Repayment					(575)	-	-	-	-	-
Ending Principal Amount						-	-	-	-	-
Interest Payment						27	-	-	-	-
<b>2024 Convertible Notes</b>	1,150									
Equity Component	241									
Liability Component	898	FY 2024	6.03%	151						
Debt Issuance Cost	(12)									
Beginning Principal Amount					1,150	1,150	-	-	-	-
Principal Repayment					-	(1,150)	-	-	-	-
Ending Principal Amount					1,150	1,150	-	-	-	-
Interest Payment						69	69	-	-	-
<b>2025 Convertible Notes</b>	1,150									
Equity Component	285									
Liability Component	857	FY 2025	8.21%	1,145						
Debt Issuance Cost	(9)									
Beginning Principal Amount					1,150	1,150	1,150	-	-	-
Principal Repayment					-	-	(1,150)	-	-	-
Ending Principal Amount					1,150	1,150	-	-	-	-
Interest Payment						94	94	94	-	-
<b>2026 Convertible Notes</b>	2,875									
Equity Component	487									
Liability Component	2,359	FY 2026	4.27%	2,042						
Debt Issuance Cost	(29)									
Beginning Principal Amount					2,875	2,875	2,875	2,875	-	-
Principal Repayment					-	-	-	(2,875)	-	-
Ending Principal Amount					2,875	2,875	2,875	-	-	-
Interest Payment						123	123	123	123	-



<b>Revolving Credit Facility</b>											
Effective Interest Rate:	3.98%										
Beginning Revolver Balance						149	0	0	0	0	
(+) Drawdown						-	-	-	-	-	
(-) Paydown						(149)	-	-	-	-	
Ending Revolver Balance						0	0	0	0	0	
Interest Expense (Revolver)						2.97	0.00	0.00	0.00	0.00	
<b>Short Term Debt</b>											
<b>Current Lease liabilities</b>											
Beginning Balance						270	-	-	-	-	
Additions						-	-	-	-	-	
Repayments						(270)	-	-	-	-	
Ending Balance	-	56	75	186	270	-	-	-	-	-	
<b>Long Term Debt</b>											
<b>Convertible Notes</b>						2023	2024	2025	2026		
Beginning Balance						3,370	3,339	3,187	2,042	-	
Additions						-	-	-	-	-	
Repayments						(31)	(151)	(1,145)	(2,042)	-	
Ending Balance	1,062	1,356	1,840	3,476	3,370	3,339	3,187	2,042	-	-	
Interest Expense (Convertible Notes)						313	192	168	87	-	
<b>Non-Current Lease liabilities</b>											
Beginning Balance						757	836	915	994	1,073	
Additions		144	34	313	266	189	189	189	189	189	
Repayments						(110)	(110)	(110)	(110)	(110)	
Ending Balance	-	144	178	491	757	836	915	994	1,073	1,152	

## Appendix G – Terminal Growth Rate & Country Risk Premium Computation

Sea Limited (NYSE: SE) GDP Computation					
	Southeast-Asia	Latin America	Rest of Asia	Rest of World	Notes
Total Revenue for FY 22		12,450			
Revenue per geographical segment	8,321	2,044	1,727	357	
% of Revenue in Respective Segment	66.84%	16.42%	13.87%	2.87%	
Market Risk Premium [ As of 1st Jan 2024 ]	1.68%	5.76%	1%	1%	Damodaran - Country Risk Premium (GDP weighted)
Weighted TGR Based on Market Risk Premiums		2.24%			

### Sea Limited (NYSE: SE) Country Risk Premium

#### Geographical segment                      Country Risk Premium

##### 1. Southeast-Asia

Indonesia	2.78%
Malaysia	1.75%
Philippines	2.78%
Singapore	0.00%
Thailand	2.34%
Vietnam	4.40%
<b>Avg</b>	<b>2.34%</b>

##### 2. Latin America

Argentina	17.55%
Brazil	4.40%
Chile	1.24%
Colombia	2.78%
Mexico	2.78%
<b>Avg</b>	<b>5.75%</b>

##### 3. Rest of Asia

Taiwan	0.88%
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##### 4. Rest of the World

Spain	2.34%
Poland	1.24%
<b>Avg</b>	<b>1.79%</b>

**Country Risk Premium                      2.69%**

## Appendix H – Weighted Average Cost of Capital (WACC) Computation

Sea Limited (NYSE: SE)						
DCF						
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)	2018A	2019A	2020A	2021A	2022A	2023E 2024E 2025E 2026E 2027E
<b>WACC Computation</b>						
<b>Capital Structure</b>				<b>Notes</b>		
Market Cap				21,800	NASDAQ As of 9/1/2024	
Book Value of Debt				4,096		
Market D/E				0.19		
% of Equity				84.2%		
% of Debt				15.8%		
<b>Beta</b>						
<b>Quick Comps</b>						
<b>Company Name</b>	<b>Ticker</b>			<b>Unlevered Beta (5Y)</b>		
NetEase, Inc	NTES			0.57		
Grab Holdings Limited	GRAB			0.91		
Asphere Innovations Public Company Limited	AS			0.95		
Alibaba	BABA			0.55		
Bilibili Inc	BILI			1.05		
Amazon	AMZN			1.16		
<b>Average</b>				<b>0.865</b>		
<b>Cost of Equity</b>				<b>Notes</b>		
Risk-Free Rate				4.04%	US 10Y Treasury	
Unlevered Beta from Peers				0.865	Average Unlevered Beta of Comps	
Re-levered Beta				1.00	Hamada Equation	
Equity Risk Premium				4.60%	Damodaran	
Country Risk Premium				2.69%	Damodaran	
<b>Cost of Equity</b>				<b>11.33%</b>	<b>CAPM</b>	
<b>Cost of Debt</b>				<b>Notes</b>		
Pre-tax Cost of Debt				1.11%		
Tax Rate				17%	Management's Tax Policy in Accordance to Singapore Corporate Tax Rate	
<b>After-Tax Cost of Debt</b>				<b>0.92%</b>		
<b>Weighted Average Cost of Capital</b>						
<b>WACC</b>				<b>9.69%</b>		

## Appendix I – Discounted Cash Flow (DCF) Valuation

FCFF Computation										
For the Fiscal Period Ending 31/12 (Figures in Millions USD otherwise stated)										
	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E
<b>Revenue</b>	827	2,175	4,376	9,955	12,450	14,443	16,573	18,755	21,264	24,664
<i>Growth (%)</i>		163%	101%	128%	25%	16%	15%	13%	13%	16%
<b>EBITDA</b>	(989)	(891)	(1,303)	(1,583)	(1,487)	(1,045)	(666)	(262)	39	357
<i>Margin (%)</i>	-119.53%	-40.97%	-29.78%	-15.90%	-11.95%	-7.23%	-4.02%	-1.40%	0.19%	1.45%
<b>EBIT</b>	(910)	(770)	(1,123)	(1,304)	(1,059)	(368)	302	1,051	1,761	2,560
<i>Margin (%)</i>	-110.01%	-35.38%	-25.65%	-13.10%	-8.51%	-2.55%	1.82%	5.61%	8.28%	10.38%
<b>Income Tax</b>	(4)	(86)	(142)	(333)	(168)	210	99	(4)	(103)	(217)
<i>Tax Rate (%)</i>	0.4%	6.3%	9.6%	19.4%	11.2%	17.0%	17.0%	17.0%	17.0%	17.0%
<b>NOPAT</b>	(914)	(856)	(1,264)	(1,637)	(1,227)	(158)	401	1,048	1,658	2,342
<i>Margin (%)</i>	-110.51%	-39.33%	-28.89%	-16.44%	-9.86%	-1.10%	2.42%	5.59%	7.80%	9.50%
<b>Add: Depreciation and Amortization</b>	79	122	181	279	428	584	790	1,023	1,288	1,594
<i>% of Revenue</i>	9.52%	5.59%	4.13%	2.80%	3.44%	4.05%	4.77%	5.46%	6.06%	6.46%
<b>Less: Capital Expenditure</b>	(178)	(247)	(357)	(807)	(976)	(867)	(994)	(1,125)	(1,276)	(1,480)
<i>% of Revenue</i>	-21.57%	-11.36%	-8.16%	-8.11%	-7.84%	-6.00%	-6.00%	-6.00%	-6.00%	-6.00%
<b>Less: NWC Changes</b>						(341)	(691)	(131)	13	(124)
<i>% of Revenue</i>										
<b>Unlevered Free-Cash Flow</b>						(781)	(494)	815	1,684	2,333
<b>PV of FCFF</b>										
Valuation Date	9/1/2024									
Fiscal Year End	31/12/2023					31/12/2023	31/12/2024	31/12/2025	31/12/2026	31/12/2027
Period						0.03	0.98	1.98	2.98	3.98
Mid-Year Adjustment						0.01	0.49	0.99	1.49	1.99
UFCF						(781)	(494)	815	1,684	2,333
<b>PV of FCFF (Gordon Growth Method)</b>						(782)	(517)	893	1,932	2,804

DCF Computation	
<b>Perpetuity Growth Method</b>	
Sum of PV of FCFF	\$ 4,330.57
Terminal Growth Rate	2.24%
Terminal Value	\$ 32,017.58
PV of Terminal Value	\$ 22,165.64
<b>Enterprise Value</b>	<b>\$ 26,496.21</b>
Less: Debt	-\$ 4,095.57
Add: Cash	\$ 6,029.86
<b>Implied Equity Value</b>	<b>\$ 28,430.50</b>
Number of Outstanding Shares	554
<b>Implied Equity Value Per Share</b>	<b>\$ 51.34</b>
Current Share Price	\$ 38.60 As of 8/1/2024
Potential Upside	<b>33.00%</b>

Sensitivity Analysis	
Increment for WACC	0.50%
Increment for TGR	0.50%

WACC	Terminal Growth Rate				
	1.24%	1.74%	2.24%	2.74%	3.24%
8.69%	52.26	55.44	59.11	63.39	68.46
9.19%	49.06	51.79	54.93	58.54	62.77
<b>9.69%</b>	46.25	48.63	<b>51.33</b>	54.42	57.99
10.19%	43.78	45.87	48.22	50.88	53.93
10.69%	41.60	43.44	45.50	47.81	50.44

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