A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

Shopify - Equity Research
Staying Ahead of the Market

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A Project carried out on the Master in Finance, under the supervision of:

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Abstract

Equity Research Report – Shopify

In this field lab project, we intended to perform a detailed breakdown of the company with the objective of being able to give out a recommendation on either buying, holding, or selling the security in question. We performed a detailed breakdown of the company’s historical reports as inputs to our model, where along with our research on the e-commerce market worldwide and with the pandemic bolstering it, we were able to build our discounted cash flow model. Additionally, e-commerce is a booming market which is growing year to year and we were able to better understand what drove this market and future prospects regarding its evolution.

Keywords: E-commerce, subscription based model, average revenue per user, valuation, Business-to-Consumer

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Company Overview

Company Description

Shopify is a leading global cloud-based multi-channel e-commerce company based in Ottawa whose main value proposition arises from delivering a platform with reliable tools to start, raise, market, and manage a retail business of any size through a subscription-based software. The company was founded in 2006 as a result from an attempt of its current CEO, Tobias Lutke, to open his online snowboarding equipment store. Due to the lack of reliable e-commerce solutions, the founders built their own store which eventually led to the launch of Shopify in 2006. Today they power more than one million businesses in more than 175 countries across the world, including notorious brands such as Pepsi, Staples, Nestlé, Red bull and are one of the leading e-commerce platform providers in the United States and increasingly fortifying their position in other markets.

Business Segment

As stated by the company, Shopify operates in single and reportable segment, the business to consumer (B2C segment). It is one of three that are considered to compose the e-commerce industry, where the others are Consumer to consumer (C2C) and Business to Business (B2B). As Shopify’s platform is targeted at entrepreneurs, physical stores or established enterprises that intend to leverage multi-channel selling, the complementary solutions and eco-system are aimed at providing the creation of new online stores as well as providing tools to scale the business into higher order volumes.

Business Model

Shopify uses a subscription business model, where the merchants must pay a fixed monthly fee to be able to use the services that Shopify provides. There are a total of five subscription plans available for the merchants differentiated by the solutions provided, payments terms, prices and their plans range from $9 to 2000$. For the small and medium-sized businesses there are three plans available, Basic Shopify, Shopify and Advanced Shopify. The basic Shopify costs 29$ per month and offers the main functionalities, such as the online store, sales channels, staff accounts, basic reports, inventory locations and solutions as Shopify Shipping, Payments and Point-of-Sale software and hardware. The Shopify plan costs 79$ per month and provides lower transaction fees, more staff accounts and more inventory locations compared to the basic plan. Furthermore, it provides reports for the merchants and international pricing and domains. Lastly, the Advanced Shopify plan, allows the merchants to have even lower payment fees, more staff accounts, more inventory locations, and more specialized reports than the previous described plan. Additionally, it provides international pricing per variant and third-party calculated shipping rates. For smaller merchants, already present in any website, Shopify provides the Shopify Lite plan for only 9$ per month which adds buy buttons to any website and the transaction process is carried out by Shopify. The most scalable and premium plan targeted to high-volume merchants is called Shopify Plus where the monthly subscription is approximately 2000$ per month and offers more customization and control, improved multichannel functions and larger automatization abilities.

<table>
<thead>
<tr>
<th>Type of Plan</th>
<th>Monthly Pricing</th>
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<tbody>
<tr>
<td>Shopify Lite</td>
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<tr>
<td>Basic Shopify</td>
<td>$29</td>
</tr>
<tr>
<td>Shopify</td>
<td>$79</td>
</tr>
<tr>
<td>Advanced Shopify</td>
<td>$299</td>
</tr>
<tr>
<td>Shopify Plus</td>
<td>$2000 or variable fee</td>
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Table 1: Shopify pricing plans
Ownership Structure

Shopify’s Class A shares is traded mainly on the New York Stock Exchange with the Ticker of “SHOP”. As of 9th December of 2021, there are a total of 113 607 328 shares with a corresponding market capitalization of 187 378$ millions. Most of the floating shares are owned by institutional holders (80.31%), mainly comprised of Investment Advisory institutions (74.34%). Directors and executive officers own a small fragment of the Class A shares (0.34%), contrasted when comparing to Class B multiple voting shares with a 10-to-1 voting ratio where they own the majority (97.17%) representing 49.82% of the voting power considering all outstanding shares. Currently, most ownership of Class A shares are scattered through institutional investors in the United States (65.92%), Canada (11.43%), and Europe (12.42%) mainly on the United Kingdom.

Board of Directors

Tobias Lutke serves as the current CEO and chairman of the board from Shopify and is one it’s of the co-founders. Previously to 2008, he acted as CTO (Chief Technology Officer, before taking his current role. Amy Shapero was announced as the company’s new CFO in April 2018, and due to her background revolving around positions where she served emerging growth opportunities, it is aligned with the company’s international growth strategy providing important expertise and knowledge to ultimately achieve it.

Stock Performance

Shopify trades under the “SHOP” ticker symbol. The security can be traded on the NYSE (New York Stock Exchange), the largest stock exchange market of the world or on the TSX (Toronto Stock Exchange). The company executed their Initial Public Offering on the April 14, 2015, issuing 7.7 million shares at 17$ each, raising approximately $131 billion. Since the IPO until nowadays, the stock has been facing a continuous uptrend. Indeed, an investment of 100$ at the IPO would worth nearly 8788$ today, representing an overall return of 8788% for the investor. To have some term of comparison, the same time-range return for an investment on the S&P Index would be around 121%. Overall, we can affirm that the “SHOP” security has significantly been beating the market since it started being traded due to the growing market it is inserted.

In March 2020, the stock market experienced a significant crash due to the arrival of the pandemic, affecting the “SHOP” security as well. However, from the end of March onwards, the security prices started to escalate continuously. An investment at the beginning of March 2020 on the “SHOP”, would lead to a return of 217% today. On the other hand, a same time-range investment on the S&P Index would result in a return of only 58%.

From October 2021 onwards, we can see that the Shopify’s stock prices have been trending similarly to AFFIRM ("AFRM") stock returns. This trend is due to the announcement of the firm’s third quarter results where a vast unrealized gain on an equity investment of AFFIRM of about 3.3$ billions was registered. Considering that this is a large portion of income that did not arise from the operative part of the firm’s business, it is sensible to infer that the returns and of Shopify’s shares are directly correlated to the performance of Affirm’s shares.
Strategy

- Partnerships, acquisitions, and investments

Shopify’s software augmentation and integration with their increasingly and innovative offers, is key to developing a competitive advantage on their software as differentiation, convenience and customizability are factors that highly impact the choice of which platform solution to use when starting and scaling an online business. To achieve this advantage, Shopify pursues the creation of strategic partnerships to support their initiatives, acquisitions of companies that can directly contribute to the research and development of their merchant solutions and engaging in equity investments of companies that can accelerate and improve the implementation of complementary services.

Shopify Shipping was implemented 2015 and comes because of partnership deal with UPS and DHL that allows their merchant to perform their own order fulfillment at favorable rates from available shipping partners of Shopify, create their shipping labels, manage, and track their orders directly in the merchant Dashboard. Recently, Shopify announced a collaboration with Facebook, resulting in Facebook Shops, a tool that allows merchants to create freely their online customized storefronts in both Facebook and Instagram, to take advantage of an increasing shift into mobile-first shopping. At the end of 2020, Shopify launched the Tik Tok Channel, collaborated with Tik Tok allowing merchants to create ads directly shown on the user’s feed. In 2020, Walmart and Shopify partnered up to allow merchants to well on Walmart’s website through Walmart Channel. In 2019, Shopify announced the closing of 6 River Systems’ acquisition, a leading provider of warehouse order fulfillment solutions based on machine learning, artificial intelligence and robots, mainly with the objective of being able to more efficiently develop and implement Shopify Fulfillment Network, a solution that offers a dedicated network of centers that ensure more timely deliveries, lower shipping costs and higher automatization improving further efficiency and improving the quality of the merchant’s online sales service.

In the fourth quarter of 2020, Shopify has performed an investment in Affirm, a BNPL (buy now, pay later) industry company, that operates as a financial lender that allows buyers to use pay what they due in instalments at the checkout phase which allows a higher propensity to consume due to easier financing provided. This strategic investment was aligned with the interests of Shopify in the development and allowing a limited number of merchants to access Shop Pay Instalments, providing flexibility and more payment regimens, and further boosting the average cart size of their merchants.

- Organic growth of complementary solutions

Shopify focus on R&D and creation of complementary products to their software allows the company to boost the immersion of their merchants through the growing accessibility of necessary services to operate their stores. This strategic direction is what allows Shopify to focus their future growth not only through increasing their merchant base through allowing higher subscription revenues for the firm but also being able to create value from leveraging their merchants stores into more dynamic, scalable, and profitable stores turning Shopify’s revenue directly correlated with the total business that their merchants can create on their stores.

In 2013, Shopify Payments was launched and has since been one of the main growth factors for the merchant segment, as it allows for merchants to accept all credit cards and manage all the transfers directly through the platform, as opposed to using third-party payment processes.

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**Table 2: Shopify’s acquisitions**

<table>
<thead>
<tr>
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<tr>
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<td>2018</td>
<td>TixTail</td>
</tr>
<tr>
<td>2019</td>
<td>Handshake</td>
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<tr>
<td>2019</td>
<td>6 River Systems</td>
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<td>2021</td>
<td>Primer</td>
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**Table 3: Shopify solutions launch date**

<table>
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<th>Solution</th>
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</thead>
<tbody>
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<td>2013</td>
<td>Shopify Payments</td>
</tr>
<tr>
<td>2015</td>
<td>Shopify Shipping</td>
</tr>
<tr>
<td>2016</td>
<td>Shopify Capital</td>
</tr>
<tr>
<td>2018</td>
<td>New Shopify App store</td>
</tr>
<tr>
<td>2020</td>
<td>Shopify POS</td>
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</tbody>
</table>
providers with more unfavorable interchangeable rates without synchronizing directly to merchant’s workspace. This feature is embedded in all plans, while the respective processing fees that Shopify collect are based in fixed and variable component that differs from each of them. In 2016, Shopify Capital was launched in the United States, and it allowed easy, fast, and convenient access to working capital directly through the platform. In 2018, a new Shopify App Store was redesigned to offer a more personalized selection of apps and themes allowing their merchants to choose them more selectively according to their business segment and needs of their customer base. In 2020, Shopify introduced the new Shopify POS (Point-of-Sales), an app directed not only toward smaller business which operate in a brick-and-mortar system (selling in physical locations) but also towards online shops intending to create a physical store and integrating both parts of their business into a single management app. Recently, Shopify AR was launched which allows their merchants of all sizes to use augmented reality by bringing products into life through 3D models directly in the shop browsers improving the merchant’s stores shopping experience.

### International Expansion

Shopify’s intense growth and visibility mainly is restrained to the United States and Canada market where most of the merchants are located but partly due the solutions offering being mostly available and launched in this geographic area. Additionally, although the total e-commerce is growing intensely at a global perspective, it is expected that emerging markets such as Latin America, Asia pacific and Europe show later surge in the shift to online shopping. Therefore, as the firm has consolidated mainly and is steadily reaching a more mature phase in the United States, a heavier focus on foreign markets is being emphasized as a key aspect to Shopify’s growth. As a result, Shopify has been continuously launching their complementary solutions in other geographic areas to further scale their business internationally. Shopify Payments, the most dominant component of merchant solutions, was firstly launched in 2013 in the United States, but in 2018 was introduced in Germany and Japan, in Netherlands in 2019 and lastly in Belgium and Austria in 2020. Shopify Capital was inserted in the US market in 2016 but has already expanded to Canada and the United Kingdom in 2020. Lastly, Shopify Shipping was launched in 2015 but has already expanded to Canada in 2016, and to Australia and the United Kingdom in 2020.

### Industry Overview

#### Market Analysis

E-commerce is one of the largest growing industries recently, being mainly driven by the exponential development of technology and having an impact in manner people satisfy their needs and adapt their behaviors. These structural influences and continuing innovation lead to a shift and conversion from consumers performing a higher part of their shopping online, pointed at the fact that e-commerce share of total retail sales was of approximately 7.4% in 2015, compared to 18.0% at 2020, eventually continuing the trend and being forecasted that will reach 21.8% by 2024, worldwide. Therefore, the digital customer penetration rate was 58.3% and eventually is expected to reach 65.2% by the end of 2021. As a result, it was estimated that the market was valued at 9.09$ trillions in 2020 and is expected to grow yearly at CAGR of 14.7% onwards until 2027, while e-commerce revenues worldwide is expected to grow from 2020 to 2025 at an 8.01% CAGR. Of all US online shoppers, in 2020, 63% research online their product before buying them, being in line with the higher conversion trend into acquiring products online.
E-commerce in context of a pandemic

The COVID-19 pandemic has impacted the world economy, as the overall production levels around the globe in 2020 fell abruptly with real GDP growth rates falling to -3.5% for the US and -5.94% for Europe. This was mainly caused by the generalized policy adopted by most governments throughout the globe which included lockdown and therefore leading to decreases in real GDP. However, e-commerce related business was clearly one of the least affected sectors, since people turned to online shopping to substitute most of the good, they bought at physical retail stores. As consumers avoided in-store shopping, e-commerce sales were boosted an additional 19% compared to pre-covid level forecasts during 2020. This has made physical-only retailers to realize that inserting an online sales channel was clearly one way to boost their business, along with the already expected expansion of e-commerce sales in B2C segment. In 2021, it is expected that this trend maintains, and it is forecasted that an additional 22% increase in online sales arise mainly due to impacts the pandemic had on consumer behavior boosting consumer propensity to start using more online channels instead of relying on Physical stores. As a result, in the United States, total retail sales before the pandemic had widely spread was of approximately 11%, which rose abruptly to 22% during its peak and then decreasing to 17% currently representing the idea that 60% of these consumers expect to integrate online channels into their shopping habits post-COVID.

B2C segment

B2C segment is expected to reach an approximate value of 7.65$ trillions in 2028, representing an CAGR of 9.7% over this horizon up from 3.67$ trillion dollars in 2021. The main factors that contribute to this growth are related to higher accessibility and internet penetration rate in all geographical areas, and more intense exposure to online marketing campaigns along with the extreme growth of social media that promotes the conversion rate for online customers. Lastly, as technology advances, there are certain characteristics of online shopping that support the e-commerce boom, such as availability of different and preferable payment methods for buyers, buy now pay later schemes, higher shipping efficiency regarding costs and time, and with the use of augmented reality “physical visualization” is permitted for certain products that allow you to have the same experience as if could try the product itself.

Geographically, this segment is dominated by the Asian Pacific region as it represents a total of 37.01% of all sales in 2021 mainly due being one of most dense and populated demographic areas along with intense real economic growth in the past decade. In the western territories (Europe and North America), it is expected consistent growth in the segment due to higher consumers spending power but due to the already high level of internet and digital buyers’ penetration.

Competitive Landscape

Competition in e-commerce platform industry is becoming increasingly higher, due to the phase of industry cycle it currently is presented in. Therefore, it is expected that along with the entrants that already have penetrated the market there is room for fiercer competition, as the market is still in a phase where abnormal profits have place. Additionally, we have colossal players such as Amazon and eBay that are present in this industry and that are viable alternative options for entrepreneurs and established retailers to reinforce their online sales channel.
Wix

Wix is an Israeli software company founded in 2006 that provides reliable and customizable tools to create an online website through the usage of “drag and drop” tools that allow people without programming and HTML skills to establish their own website and set up an online shop. Wix’s business model is based at its core on subscriptions, providing them with different price plans starting with the basic plan which is free scaling up to enterprise plan which is billed at 500$ a month aimed at established business with a significant number of sales providing advanced support, account managers and maximized automatization. Compared to Shopify, they also have third-party providers, an app store with hundreds of templates and tools to enhance the customer experience. Although Shopify’s intermediate plans are substantially more expensive (29$ to 79$), both services are cloud-based hosted providing similar back-end security regarding order and customer information’s. Moreover, the analytics tools of running the store’s management are not as scalable as Shopify platform, making it ideal for small and newly started online stores. Lastly, Shopify does not charge domain fees and provides drop shipping support unlike Wix and the latter imposes a max number of 100 pages on the website along with a maximum ceiling of sales for each subscription plan. They have approximately 700 000 e-commerce stores currently live out of the 4.5 million websites that Wix powers.

Squarespace

Squarespace is a website building and server hosting company founded in 2004 whose focus is minimalistic design providing access to plugins to enhance online shops functionalities. Alike Wix, it also provides drag-and-drop mechanics to set up the store design. However, it is important to refer is that the app store and themes designed are much less diversified and there imply a reduction in tools to implement on the website. For example, there are limited payment options such as apple pay and PayPal which may turn customers into incurring extra fees when not using them. Its pricing ranges from 18$ to 40$, which are most cost-friendly when compared to Shopify, although not providing the such a wide-range of tools such as shipping implementation, and mobile optimization. They provide software for about 3.79 million stores and have gone public through direct exchange listing in May 19 of this year.

BigCommerce

BigCommerce is an e-commerce platform provider like Shopify that is segmented and established online enterprises with the objective of handling a high volume of orders. It provides a diversified array of tools and provides the possibility of selling in variate channels such as eBay, Facebook, Amazon, and Pinterest and most importantly, consolidating all the inventory and analytics tools in user dashboard. However, the template and theme offering are limited and an annual sales ceiling is given, where the subscription is automatically promoted to a higher tier if you exceed it. However, one key difference is that it is not possible to converge online and physical stores sales, which impedes a unified platform when you can manage all your business. Currently, it has an approximate amount of 60 000 online stores. Its pricing plans range from the standard at 29.95$ to Pro at 299.95$, with a customizable plan of Enterprise level for higher volume stores that require additional insights. BigCommerce currently holds an approximate 60 000 online stores.

Magento (Adobe)

Magento is a cloud-based e-commerce platform released in 2008, being acquired by the software services provider giant, Adobe, in May 2018 for approximately 1.68$ billion. Two main differences
between the Shopify Platform and Magento’s software is that the latter is self-hosted while Shopify is automatically fully hosted for all subscription plans and the fact that Magento pricing is based on the average order size and Gross Merchandise Value which varies from scale and business of the respective store. Magento isn’t aimed at the beginner online store entrepreneur due to coding knowledge that is necessary to create a store that provides a high level of customization as drag and drop design platforms. There are approximately 250,000 Magento based stores in 2021, with most of its users in the United States representing a total of 74,296 stores.

- eBay

The American colossal e-commerce corporation focus mainly on C2C and B2C segments, and not only are they gaining from the accelerated growth of e-commerce worldwide, but also have an established position since the dot-com bubble in the 90s decade. Although their services are not directly comparable as eBay’s offers a marketplace with auction-style stalls where consumers and business are able to offer their products online, instead of offering a software to set up shop, both types of services are directly correlated with the trends in the e-commerce industry. The main common characteristic is that the value that is captured by both Shopify and eBay is that they are highly dependent on their merchant’s success, as the higher volume of business leads to a higher revenue growth for firms. In fact, Shopify has partnerships in place that allows smooth integration and harmonization of adapting the Shopify environment on eBay, and both act in the same Industry.

- Amazon

The fourth most valuable company by market capitalization, Amazon, is a colossal internet-based product enterprise that operates in selling directly through their platform or serving as the intermediary in the B2C and C2C segment. Their gigantic presents in different segments have all one focus aspect, which is the development of technology and automatization to facilitate online transactions for any customer in any area and provide online content, such as books and licensed streaming.

**Company Analysis and Main Drivers**

Shopify operates and reports in a single segment, which is composed by two different sources of revenue streams: Subscription Solutions and Merchant Solutions.

Subscription Solutions are the revenues prevenient from the fixed monthly fee payments that the merchants pay for the subscription of Shopify. Over the last years, subscription solutions weight over the total revenues have been declining, being 46.0% and 27.0% for 2017 and 2021, respectively.

Merchant Solutions arise from complimentary solutions that Shopify provides for the merchants including not only software tools that are included in chosen plan but additional products that complement the online eco-system that allow for merchants to scale the volume of business on their sales channel. Recently, we could observe a shift from subscription revenues to merchant solutions revenue, as the weight of this source of revenue over the total revenues has been increasing considerably, being 54.0% and 73.0% for 2017 and 2021, respectively.

Given these two different streams of revenues and that the company is moving away from the subscription-based revenues to merchant-based revenues, we treated each source separately, performing a distinctive breakdown and identifying different main drivers that compose each of
the treated segments.

Subscription Solutions

Subscription Solutions revenues are the revenues raised from the fixed payments that the merchants pay to get access to the solutions provided by Shopify plan that is chosen. Since the weight subscription’s revenue is decreasing, we believe that the Shopify’s increasing value arises more prominently to the success of each merchant’s store instead of the monthly recurring revenue originated from a higher number of integrated merchants. We performed a breakdown of this caption into Average Subscription Price and Number of Merchants, which are the main drivers of this segment. The growth of the Average Subscription Price is connected to the inflation rate since it related to a price measure while the. The growth of the number of merchants is connected to the historical compounded annual growth rate of Merchants.

Regarding the costs of subscription solutions, the company discloses they are primarily generated by billing processing fees, merchant support and operations expenses, such as third-party infrastructure and hosting costs. For this caption we performed a breakdown into average processing cost per subscription and number of merchants, which are the main drivers of this caption. The growth of the average processing cost per subscription is connected to the inflation rate since we expect that these costs will mainly change with changes in price while the growth of the merchants follows the same rationale for this segment’s revenue.

Merchant Solutions

Merchant Solutions are the revenues raised from the broad array of functionalities that Shopify provides for the merchants that complement the base software and which the main characteristic is its scalability as it is correlated to the amount of sales volume each store generates. This array of functionalities is composed by accepting different types of payments, shipping and fulfilment network, referral fees, advertising on the Shopify’s App and other functionalities useful that empower the merchants. The company discloses that a huge proportion of this caption come from processing fees from Shopify Payments, a payment processing service that allows the merchants to accept and process different payment cards without incurring into bank-specific rate costs. It is also disclosed that the payment processing fees are charged based on a percentage of Gross Merchandise Volume (GMV), which is the total dollar amount of transactions facilitated through the company’s platform on every Shopify powered store. Given this, the GMV is certainly the main driver of this caption and the GMV’s growth is connected to the historical compounded annual growth rate of historical values.

The costs of merchant solutions are defined as incurred costs when transactions are processed through the Shopify Payments, such as interchange fees, network fees and third-party processing fees. The company names all these transactions processed through their check out solution, and these are considered into the metric of GPV (Gross Payments Volume) as it represents the proportion of the GMV where Shopify Payments was used the finalizing an order through a merchant store. As so, by determining the GPVs we can compute a reliable estimate of what the costs of this revenue segment as the method to estimate it was the growth of the GMV, since it is a percentage of the latter.
Staying Ahead of the Market

Shopify’s mission on democratizing e-commerce

- With the arrival of the pandemic, Shopify’s shares have plumbed as with all the market, although the price bounced back escalating continuously generating a 217% return to stock owners since then, compared with 58% return of the S&P 500 index.

- The e-commerce market in general is starting to boom, with an expected CAGR of 14.7% for the period of 2020 until 2027. The Business-to-Consumer segment is estimated to reach 7.65$ trillions by 2028, bolstered by the pandemic. The Asian Pacific Region contributed with 37.01% of total online sales and is the dominant market, being a crucial expansion opportunity for Shopify.

- Shopify is shifting the main revenue stream from subscription solutions to merchant solutions, as a result to generate more profits from the success of its merchants instead of the monthly recurring revenue.

- The DCF model returned a share price for the 31st of December of 2022 of $1285.26. Since the price as of closing in 13th December of 2021 was off 1397.15$, the total shareholder return is of -8.01%, supporting our recommendation to sell as we believe that the stock is currently overvalued.

Company description

Shopify is a leading global cloud-based multi-channel e-commerce company based in Ottawa whose main value proposition arises from delivering a platform with reliable tools to start and manage a retail business. It is one of the leading e-commerce platform providers in the US.

Recommendation: SELL

Total Shareholder Return: 8.01%

Price Target FY22: 1285.26 $
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<td><strong>Final Recommendation</strong></td>
<td>26</td>
</tr>
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<td><strong>Appendix</strong></td>
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<tr>
<td>Report Recommendations</td>
<td>30</td>
</tr>
</tbody>
</table>
Company Overview

Company Description

Shopify is a leading global cloud-based multi-channel e-commerce company based in Ottawa whose main value proposition arises from delivering a platform with reliable tools to start, raise, market, and manage a retail business of any size through a subscription-based software. The company was founded in 2006 as a result from an attempt of its current CEO, Tobias Lutke, to open his online snowboarding equipment store. Due to the lack of reliable e-commerce solutions, the founders built their own store which eventually led to the launch of Shopify in 2006. Today they power more than one million businesses in more than 175 countries across the world, including notorious brands such as Pepsi, Staples, Nestlé, Red bull and are one of the leading e-commerce platform providers in the United States and increasingly fortifying their position in other markets.

Business Segment

As stated by the company, Shopify operates in single and reportable segment, the business to consumer (B2C segment). It is one of three that are considered to compose the e-commerce industry, where the others are Consumer to consumer (C2C) and Business to Business (B2B). As Shopify’s platform is targeted at entrepreneurs, physical stores or established enterprises that intend to leverage multi-channel selling, the complementary solutions and eco-system are aimed at providing the creation of new online stores as well as providing tools to scale the business into higher order volumes.

Business Model

Shopify uses a subscription business model, where the merchants must pay a fixed monthly fee to be able to use the services that Shopify provides. There are a total of five subscription plans available for the merchants differentiated by the solutions provided, payments terms, prices and their plans range from 9$ to 2000$. For the small and medium-sized businesses there are three plans available, Basic Shopify, Shopify and Advanced Shopify. The basic Shopify costs 29$ per month and offers the main functionalities, such as the online store, sales channels, staff accounts, basic reports, inventory locations and solutions as Shopify Shipping, Payments and Point-of-Sale software and hardware. The Shopify plan costs 79$ per month and provides lower transaction fees, more staff accounts and more inventory locations compared to the basic plan. Furthermore, it provides reports for the merchants and international pricing and domains.

<table>
<thead>
<tr>
<th>Type of Plan</th>
<th>Monthly Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopify Lite</td>
<td>$9</td>
</tr>
<tr>
<td>Basic Shopify</td>
<td>$29</td>
</tr>
<tr>
<td>Shopify</td>
<td>$79</td>
</tr>
<tr>
<td>Advanced Shopify</td>
<td>$299</td>
</tr>
<tr>
<td>Shopify Plus</td>
<td>$2000 or variable fee</td>
</tr>
</tbody>
</table>

Table 1: Shopify pricing plans
Lastly, the Advanced Shopify plan, allows the merchants to have even lower payment fees, more staff accounts, more inventory locations, and more specialized reports than the previous described plan. Additionally, it provides international pricing per variant and third-party calculated shipping rates. For smaller merchants, already present in any website, Shopify provides the Shopify Lite plan for only 9$ per month which adds buy buttons to any website and the transaction process is carried out by Shopify. The most scalable and premium plan targeted to high-volume merchants is called Shopify Plus where the monthly subscription is approximately 2000$ per month and offers more customization and control, improved multichannel functions and larger automatization abilities.

Ownership Structure

Shopify’s Class A shares is traded mainly on the New York Stock Exchange with the Ticker of “SHOP”. As of 9th December of 2021, there are a total of 113 607 328 shares with a corresponding market capitalization of 187 378$ millions. Most of the floating shares are owned by institutional holders (80.31%), mainly comprised of Investment Advisory institutions (74.34%). Directors and executive officers own a small fragment of the Class A shares (0.34%), contrasted when comparing to Class B multiple voting shares with a 10-to-1 voting ratio where they own the majority (97.17%) representing 49.82% of the voting power considering all outstanding shares. Currently, most ownership of Class A shares are scattered through institutional investors in the United States (65.92%), Canada (11.43%), and Europe (12.42%) mainly on the United Kingdom.

Board of Directors

Tobias Lutke serves as the current CEO and chairman of the board from Shopify and is one it’s of the co-founders. Previously to 2008, he acted as CTO (Chief Technology Officer, before taking his current role. Amy Shapero was announced as the company’s new CFO in April 2018, and due to her background revolving around positions where she served emerging growth opportunities, it is aligned with the company’s international growth strategy providing important expertise and knowledge to ultimately achieve it.
Stock Performance

Shopify trades under the “SHOP” ticker symbol. The security can be traded on the NYSE (New York Stock Exchange), the largest stock exchange market of the world or on the TSX (Toronto Stock Exchange). The company executed their Initial Public Offering on the April 14, 2015, issuing 7.7 million shares at 17$ each, raising approximately $131 billion. Since the IPO until nowadays, the stock has been facing a continuous uptrend. Indeed, an investment of 100$ at the IPO would worth nearly 8788$ today, representing an overall return of 8788% for the investor. To have some term of comparison, the same time-range return for an investment on the S&P Index would be around 121%. Overall, we can affirm that the “SHOP” security has significantly been beating the market since it started being traded due to the growing market it is inserted.

In March 2020, the stock market experienced a significant crash due to the arrival of the pandemic, affecting the “SHOP” security as well. However, from the end of March onwards, the security prices started to escalate continuously. An investment at the beginning of March 2020 on the “SHOP”, would lead to a return of 217% today. On the other hand, a same time-range investment on the S&P Index would result in a return of only 58%.

From October 2021 onwards, we can see that the Shopify’s stock prices have been trending similarly to AFFIRM (“AFRM”) stock returns. This trend is due to the announcement of the firm’s third quarter results where a vast unrealized gain on an equity investment of AFFIRM of about 3.3$ billions was registered. Considering that this is a large portion of income that did not arise from the operative part of the firm’s business, it is sensible to infer that the returns and of Shopify's shares are directly correlated to the performance of Affirm's shares.

Strategy

- Partnerships, acquisitions, and investments

Shopify’s software augmentation and integration with their increasingly and innovative offers, is key to developing a competitive advantage on their software as differentiation, convenience and customizability are factors that highly impact the choice of which platform solution to use when starting and scaling an online business. To achieve this advantage, Shopify pursues the creation of strategic partnerships to support their initiatives, acquisitions of companies that can directly contribute to the research and development of their merchant solutions and engaging in equity investments of companies that can accelerate and improve the implementation of complementary services.
Shopify Shipping was implemented in 2015 and comes because of partnership deal with UPS and DHL that allows their merchant to perform their own order fulfilment at favorable rates from available shipping partners of Shopify, create their shipping labels, manage, and track their orders directly in the merchant Dashboard. Recently, Shopify announced a collaboration with Facebook, resulting in Facebook Shops, a tool that allows merchants to create freely their online customized store fronts in both Facebook and Instagram, to take advantage of an increasing shift into mobile-first shopping. At the end of 2020, Shopify launched the Tik Tok Channel, collaborated with Tik Tok allowing merchants to create ads directly shown on the user's feed. In 2020, Walmart and Shopify partnered up to allow merchants to well on Walmart’s website through Walmart Channel.

In 2019, Shopify announced the closing of 6 River Systems’ acquisition, a leading provider of warehouse order fulfilment solutions based on machine learning, artificial intelligence and robots, mainly with the objective of being able to more efficiently develop and implement Shopify Fulfilment Network, a solution that offers a dedicated network of centers that ensure more timely deliveries, lower shipping costs and higher automatization improving further efficiency and improving the quality of the merchant’s online sales service.

In the fourth quarter of 2020, Shopify has performed an investment in Affirm, a BNPL (buy now, pay later) industry company, that operates as a financial lender that allows buyers to use pay what they due in instalments at the checkout phase which allows a higher propensity to consume due to easier financing provided. This strategic investment was aligned with the interests of Shopify in the development and allowing a limited number of merchants to access Shop Pay Instalments, providing flexibility and more payment regimens, and further boosting the average cart size of their merchants.

### Organic growth of complementary solutions

Shopify focus on R&D and creation of complementary products to their software allows the company to boost the immersion of their merchants through the growing accessibility of necessary services to operate their stores. This strategic direction is what allows Shopify to focus their future growth not only through increasing their merchant base through allowing higher subscription revenues for the firm but also being able to create value from leveraging their merchants stores into more dynamic, scalable, and profitable stores turning Shopify’s revenue directly correlated with the total business that their merchants can create on their stores.

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Tiny Hearts</td>
</tr>
<tr>
<td>2018</td>
<td>TicTall</td>
</tr>
<tr>
<td>2019</td>
<td>Handshake</td>
</tr>
<tr>
<td>2019</td>
<td>6 River Systems</td>
</tr>
<tr>
<td>2021</td>
<td>Primer</td>
</tr>
</tbody>
</table>

**Table 2: Shopify’s acquisitions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Shopify Payments</td>
</tr>
<tr>
<td>2015</td>
<td>Shopify Shipping</td>
</tr>
<tr>
<td>2016</td>
<td>Shopify Capital</td>
</tr>
<tr>
<td>2018</td>
<td>New Shopify App store</td>
</tr>
<tr>
<td>2020</td>
<td>Shopify POS</td>
</tr>
</tbody>
</table>

**Table 3: Shopify solutions launch date**
In 2013, Shopify Payments was launched and has since been one of the main growth factors for the merchant segment, as it allows for merchants to accept all credit cards and manage all the transfers directly through the platform, as opposed to using third-party payment processes providers with more unfavorable interchangeable rates without synchronizing directly to merchant’s workspace. This feature is embedded in all plans, while the respective processing fees that Shopify collect are based in fixed and variable component that differs from each of them. In 2016, Shopify Capital was launched in the United States, and it allowed easy, fast, and convenient access to working capital directly through the platform. In 2018, a new Shopify App Store was redesigned to offer a more personalized selection of apps and themes allowing their merchants to choose them more selectively according to their business segment and needs of their customer base. In 2020, Shopify introduced the new Shopify POS (Point-of-Sales), an app directed not only toward smaller business which operate in a brick-and-mortar system (selling in physical locations) but also towards online shops intending to create a physical store and integrating both parts of their business into a single management app. Recently, Shopify AR was launched which allows their merchants of all sizes to use augmented reality by bringing products into life through 3D models directly in the shop browsers improving the merchant’s stores shopping experience.

### International Expansion

Shopify’s intense growth and visibility mainly is restrained to the United States and Canada market where most of the merchants are located but partly due the solutions offering being mostly available and launched in this geographic area. Additionally, although the total e-commerce is growing intensely at a global perspective, it is expected that emerging markets such as Latin America, Asia pacific and Europe show later surge in the shift to online shopping. Therefore, as the firm has consolidated mainly and is steadily reaching a more mature phase in the United States, a heavier focus on foreign markets is being emphasized as a key aspect to Shopify’s growth. As a result, Shopify has been continuously launching their complementary solutions in other geographic areas to further scale their business internationally. Shopify Payments, the most dominant component of merchant solutions, was firstly launched in 2013 in the United States, but in 2018 was introduced in Germany and Japan, in Netherlands in 2019 and lastly in Belgium and Austria in 2020. Shopify Capital was inserted in the US market in 2016 but has already expanded to Canada and the United Kingdom in 2020. Lastly, Shopify Shipping was launched in 2015 but has already expanded to Canada in 2016, and to Australia and the United Kingdom in 2020.

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**Table 4: geographic launch of Shopify Shipping**

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>United States</td>
</tr>
<tr>
<td>2016</td>
<td>Canada</td>
</tr>
<tr>
<td>2020</td>
<td>Australia, UK</td>
</tr>
</tbody>
</table>

**Table 5: geographic launch of Shopify Capital**

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>US</td>
</tr>
<tr>
<td>2020</td>
<td>Canada, UK</td>
</tr>
</tbody>
</table>

**Table 6 – geographic launch of Shopify Payments**

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>US</td>
</tr>
<tr>
<td>2018</td>
<td>Germany, Japan</td>
</tr>
<tr>
<td>2019</td>
<td>Netherlands</td>
</tr>
<tr>
<td>2020</td>
<td>Austria</td>
</tr>
</tbody>
</table>
Industry Overview

Market Analysis

E-commerce is one of the largest growing industries recently, being mainly driven by the exponential development of technology and having an impact in manner people satisfy their needs and adapt their behaviors. These structural influences and continuing innovation lead to a shift and conversion from consumers performing a higher part of their shopping online, pointed at the fact that e-commerce share of total retail sales was of approximately 7.4% in 2015, compared to 18.0% at 2020, eventually continuing the trend and being forecasted that will reach 21.8% by 2024, worldwide. Therefore, the digital customer penetration rate was 58.3% and eventually is expected to reach 65.2% by the end of 2021. As a result, it was estimated that the market was valued at 9.09$ trillions in 2020 and is expected to grow yearly at CAGR of 14.7% onwards until 2027, while e-commerce revenues worldwide is expected to grow from 2020 to 2025 at an 8.01% CAGR. Of all US online shoppers, in 2020, 63% research online their product before buying them, being in line with the higher conversion trend into acquiring products online rather than on physical retail stores.

- E-commerce in context of a pandemic

The COVID-19 pandemic has impacted the world economy, as the overall production levels around the globe in 2020 fell abruptly with real GDP growth rates falling to -3.5% for the US and -5.94% for Europe. This was mainly caused by the generalized policy adopted by most governments throughout the globe which included lockdown and therefore leading to decreases in real GDP. However, e-commerce related business was clearly one of the least affected sectors, since people turned to online shopping to substitute most of the good, they bought at physical retail stores. As consumers avoided in-store shopping, e-commerce sales were boosted an additional 19% compared to pre-covid level forecasts during 2020. This has made physical-only retailers to realize that inserting an online sales channel was clearly one way to boost their business, along with the already expected expansion of e-commerce sales in B2C segment. In 2021, it is expected that this trend maintains, and it is forecasted that an additional 22% increase in online sales arise mainly due to impacts the pandemic had on consumer behavior boosting consumer propensity to start using more online channels instead of relying on Physical stores. As a result, in the United States, total retail sales before the pandemic had widely spread was of approximately 11%, which rose abruptly to 22% during its peak and then
decreasing to 17% currently representing the idea that 60% of these consumers expect to integrate online channels into their shopping habits post-COVID.

- **B2C segment**

B2C segment is expected to reach an approximate value of 7.65$ trillions in 2028, representing an CAGR of 9.7% over this horizon up from 3.67$ trillion dollars in 2021. The main factors that contribute to this growth are related to higher accessibility and internet penetration rate in all geographical areas, and more intense exposure to online marketing campaigns along with the extreme growth of social media that promotes the conversion rate for online customers. Lastly, as technology advances, there are certain characteristics of online shopping that support the e-commerce boom, such as availability of different and preferable payment methods for buyers, buy now pay later schemes, higher shipping efficiency regarding costs and time, and with the use of augmented reality “physical visualization” is permitted for certain products that allow you to have the same experience as if could try the product itself.

Geographically, this segment is dominated by the Asian Pacific region as it represents a total of 37.01% of all sales in 2021 mainly due being one of most dense and populated demographic areas along with intense real economic growth in the past decade. In the western territories (Europe and North America), it is expected consistent growth in the segment due to higher consumers spending power but due to the already high level of internet and digital buyers’ penetration.

**Competitive Landscape**

Competition in e-commerce platform industry is becoming increasingly higher, due to the phase of industry cycle it currently is presented in. Therefore, it is expected that along with the entrants that already have penetrated the market there is room for fiercer competition, as the market is still in a phase where abnormal profits have place. Additionally, we have colossal players such as Amazon and eBay that are present in this industry and that are viable alternative options for entrepreneurs and established retailers to reinforce their online sales channel.

- **Wix**

Wix is an Israeli software company founded in 2006 that provides reliable and customizable tools to create an online website through the usage of “drag and drop” tools that allow people without programming and HTML skills to establish their own website and set up an online shop. Wix's business model is based at its
core on subscriptions, providing them with different price plans starting with the basic plan which is free scaling up to enterprise plan which is billed at 500$ a month aimed at established business with a significant number of sales providing advanced support, account managers and maximized automatization. Compared to Shopify, they also have third-party providers, an app store with hundreds of templates and tools to enhance the customer experience. Although Shopify’s intermediate plans are substantially more expensive (29$ to 79$), both services are cloud-based hosted providing similar back-end security regarding order and customer information’s. Moreover, the analytics tools of running the store’s management are not as scalable as Shopify platform, making it ideal for small and newly started online stores. Lastly, Shopify does not charge domain fees and provides drop shipping support unlike Wix and the latter imposes a max number of 100 pages on the website along with a maximum ceiling of sales for each subscription plan. They have approximately 700 000 e-commerce stores currently live out of the 4.5 million websites that Wix powers.

- **Squarespace**

  Squarespace is a website building and server hosting company founded in 2004 whose focus is minimalistic design providing access to plugins to enhance online shops functionalities. Alike Wix, it also provides drag-and-drop mechanics to set up the store design. However, it is important to refer is that the app store and themes designed are much less diversified and there imply a reduction in tools to implement on the website. For example, there are limited payment options such as apple pay and PayPal which may turn customers into incurring extra fees when not using them. Its pricing ranges from 18$ to 40$, which are most cost-friendly when compared to Shopify, although not providing the such a wide-range of tools such as shipping implementation, and mobile optimization. They provide software for about 3.79 million stores and have gone public through direct exchange listing in May 19 of this year.

- **BigCommerce**

  BigCommerce is an e-commerce platform provider like Shopify that is segmented and established online enterprises with the objective of handling a high volume of orders. It provides a diversified array of tools and provides the possibility of selling in variate channels such as eBay, Facebook, Amazon, and Pinterest and most importantly, consolidating all the inventory and analytics tools in user dashboard. However, the template and theme offering are limited and an annual sales ceiling is given, where the subscription is automatically promoted to a higher tier if you exceed it. However, one key difference is that it is not possible to converge online and physical stores sales, which impedes a unified platform
when you can manage all your business. Currently, it has an approximate amount of 60,000 online stores. Its pricing plans range from the standard at 29.95$ to Pro at 299.95$, with a customizable plan of Enterprise level for higher volume stores that require additional insights. BigCommerce currently holds an approximate 60,000 online stores.

- **Magento (Adobe)**

Magento is a cloud-based e-commerce platform released in 2008, being acquired by the software services provider giant, Adobe, in May 2018 for approximately 1.68$ billion. Two main differences between the Shopify Platform and Magento's software is that the latter is self-hosted while Shopify is automatically fully hosted for all subscription plans and the fact that Magento pricing is based on the average order size and Gross Merchandise Value which varies from scale and business of the respective store. Magento isn't aimed at the beginner online store entrepreneur due to coding knowledge that is necessary to create a store that provides a high level of customization as drag and drop design platforms. There are approximately 250,000 Magento based stores in 2021, with most of its users in the United States representing a total of 74,296 stores.

- **eBay**

The American colossal e-commerce corporation focus mainly on C2C and B2C segments, and not only are they gaining from the accelerated growth of e-commerce worldwide, but also have an established position since the dot-com bubble in the 90s decade. Although their services are not directly comparable as eBay's offers a marketplace with auction-style sales where consumers and business are able to offer their products online, instead of offering a software to set up shop, both types of services are directly correlated with the trends in the e-commerce industry. The main common characteristic is that the value that is captured by both Shopify and eBay is that they are highly dependent on their merchant's success, as the higher volume of business leads to a higher revenue growth for firms. In fact, Shopify has partnerships in place that allows smooth integration and harmonization of adapting the Shopify environment on eBay, and both act in the same Industry.

- **Amazon**

The fourth most valuable company by market capitalization, Amazon, is a colossal internet-based product enterprise that operates in selling directly through their platform or serving as the intermediary in the B2C and C2C segment. Their gigantic presents in different segments have all one focus aspect, which is the development of technology and automatization to facilitate online transactions for
any customer in any area and provide online content, such as books and licensed streaming.

## Company Analysis and Main Drivers

Shopify operates and reports in a single segment, which is composed by two different sources of revenue streams: Subscription Solutions and Merchant Solutions.

Subscription Solutions are the revenues prevenient from the fixed monthly fee payments that the merchants pay for the subscription of Shopify. Over the last years, subscription solutions weight over the total revenues have been declining, being 46.0% and 27.0% for 2017 and 2021, respectively.

Merchant Solutions arise from complimentary solutions that Shopify provides for the merchants including not only software tools that are included in chosen plan but additional products that complement the online eco-system that allow for merchants to scale the volume of business on their sales channel. Recently, we could observe a shift from subscription revenues to merchant solutions revenue, as the weight of this source of revenue over the total revenues has been increasing considerably, being 54.0% and 73.0% for 2017 and 2021, respectively.

Given these two different streams of revenues and that the company is moving away from the subscription-based revenues to merchant-based revenues, we treated each source separately, performing a distinctive breakdown and identifying different main drivers that compose each of the treated segments.

### Subscription Solutions

Subscription Solutions revenues are the revenues raised from the fixed payments that the merchants pay to get access to the solutions provided by Shopify plan that is chosen. Since the weight subscription’s revenue is decreasing, we believe that the Shopify’s increasing value arises more prominently to the success of each merchant’s store instead of the monthly recurring revenue originated from a higher number of integrated merchants. We performed a breakdown of this caption into Average Subscription Price and Number of Merchants, which are the main drivers of this segment. The growth of the Average Subscription Price is connected to the inflation rate since it related to a price measure while the growth of the number of merchants is connected to the historical compounded annual growth rate of Merchants.

Regarding the costs of subscription solutions, the company discloses they are primarily generated by billing processing fees, merchant support and operations
expenses, such as third-party infrastructure and hosting costs. For this caption we performed a breakdown into average processing cost per subscription and number of merchants, which are the main drivers of this caption. The growth of the average processing cost per subscription is connected to the inflation rate since we expect that these costs will mainly change with changes in price while the growth of the merchants follows the same rationale for this segment's revenue.

**Merchant Solutions**

Merchant Solutions are the revenues raised from the broad array of functionalities that Shopify provides for the merchants that complement the base software and which the main characteristic is its scalability as it is correlated to the amount of sales volume each store generates. This array of functionalities is composed by accepting different types of payments, shipping and fulfilment network, referral fees, advertising on the Shopify's App and other functionalities useful that empower the merchants. The company discloses that a huge proportion of this caption come from processing fees from Shopify Payments, a payment processing service that allows the merchants to accept and process different payment cards without incurring into bank-specific rate costs. It is also disclosed that the payment processing fees are charged based on a percentage of Gross Merchandise Volume (GMV), which is the total dollar amount of transactions facilitated through the company’s platform on every Shopify powered store. Given this, the GMV is certainly the main driver of this caption and the GMV’s growth is connected to the historical compounded annual growth rate of historical values.

The costs of merchant solutions are defined as incurred costs when transactions are processed through the Shopify Payments, such as interchange fees, network fees and third-party processing fees. The company names all these transactions processed through their check out solution, and these are considered into the metric of GPV (Gross Payments Volume) as it represents the proportion of the GMV where Shopify Payments was used the finalizing an order through a merchant store. As so, by determining the GPVs we can compute a reliable estimate of what the costs of this revenue segment as the method to estimate it was the growth of the GMV, since it is a percentage of the latter.
Forecasting

Shopify classifies its business geographic locations as United states, EMEA, APAC, Canada, and Latin America. It is worth highlighting that the only information provided by broken down by geography are the revenues, long-lived assets, and number of merchants. Since each region is expected to be in different market phases and grow at different paces, we proceeded with allocations per geography for some captions, based on the above-mentioned captions, to be able to analyze and make projections for each region differently.

Revenues Forecasts

The growth strategy of the company is primarily focused on keeping their merchants by providing functionalities that boost the number of sales and visibility of their stores and attracting merchants in newly penetrated geographies to increase their presence and start benefiting from the increase in revenues. Given this, the forecasting of revenues is expected to progressively have lower weight for subscription solutions and higher weight for the merchant solutions, over the upcoming years and for each geography as the market matures. The weights of subscription solutions and merchant solutions in 2021 are 27% and 73%, respectively and are expected to be of approximately 20% and 80%, respectively, by 2030 based on our estimates. The CAGR for the subscription solutions and merchant solutions, for the period between 2021 and 2030 are 16% and 38%, respectively, which is in accordance with the company’s growth strategy. Overall, the CAGR for the total of revenues for the same period is 34%.

- United States

United States is the company’s largest geographic market presence, accounting for $3.24 billion, representing a significant 66% of 2021 revenues worldwide. In respect to the number of merchants, it is the geography with most of them as well, accounting for 1.23 million, representing 49% of 2021 merchants. Since this country represents the bigger slice of both revenues and merchants, we believe that it is the geography where the penetration of the company has already been the most and expect this market to have the lowest potential to grow when compared to other geographies. For the revenue’s projections in this geography, we estimated that it will reach $16.70 billion by 2030, representing 24% of 2030 revenues, occupying the third geography with the most sales. The CAGR of revenues for this geography for the period between 2021 and 2030 are expected to be the lowest among all the geographies, being 20%. Concerning the projections of merchants, we expect to have 2.17 million US merchants by 2030,
representing only 23% of the total number of merchants in 2030. The CAGR of merchants for this geography for this horizon are expected to be 6%, representing the lowest among all geographies as well. The growth of the revenues for this market is expected to stabilize by 2031, where the revenues growth will stabilize at approximately 5%.

- **EMEA**

EMEA is the company’s second largest market, accounting for $0.78 billion, representing 16% of 2021 revenues while the number being the geography with second greatest number of merchants with 0.64 million respective to 26% of 2021. Given that this geography is the second biggest slice of both revenues and merchants, we believe that Shopify is already penetrating in this geography, it still has a lot of potential to solidify their positions as go-to e-commerce platform. For the projections of the revenues in this geography we estimated that it will get to $13.60 billion by 2030, representing 33% of 2030 revenues, the second largest weight among the geographies. The CAGR of revenues for this geography for the horizon of 2021 to 2030 are expected to be the in the middle of the pack among all the geographies, representing 46%. Regarding the projections of merchants, we expect to have 3.57 million EMEA merchants by end of the decade, representing 38% of the 2030 merchants, being the region with highest concentration. The CAGR of merchants for this geography for the referred period are expected to be 21%, representing the third most significant among all geographies. The growth of the revenues for this market is expected to stabilize by 2037, with a constant revenue growth of 5%.

- **APAC**

APAC currently occupies the third highest revenue weight in the company’s respective geographic markets as well as present merchants, accounting for $0.49 billion, representing 10% of this year revenues and 0.37 million stores, constituting 15% of total merchants. It is important to note that this geography is the one that has a higher number of populations, has the highest prospective e-commerce growth rate and only occupies the third position for both revenues and merchants, although we believe that Shopify’s penetration in this geography has not yet developed fully until now and we expect an high level growth as they are able to grow their merchant base. For the revenue’s projections in this area, we estimated that it will reach $23.82 billion by 2030, representing 34% of 2030 total revenues, the largest weight in all geographical markets. The CAGR of revenues for this geography for the period in question is expected to be the in the second highest with an approximate value of 54%. We expect that the firm will reach a total of 2.74 million APAC merchants by the end of this decade, representing
29% of the 2030 merchants. The CAGR of this driver for the period is expected to extend to 25%, representing the highest weight of all areas. The growth of the revenues for this market is expected to only stabilize by 2040, where the revenues growth will of 5% going forward.

- **Canada**

Canada occupies is the fourth largest geography accounting for $0.33 billion, amounting to 7% of this year revenues and totalling for 0.15 million merchants, representing 6% of the total weight. This geography is the less total populated, and we expected to behave is very similarly to the United States regarding absorption of shopping behaviours, spending power of the population and we believe that the penetration of the company’s platform in this geography has already been achieved, entering in a more mature phase with less growth potential. Given this, we expect that Canada will not have potential for scaling such as the other regions. For the revenue estimation in this geography, we estimated that it will reach $3.31 billion by 2030, totalling 5% of 2030 revenues, the lower among all geographies. The CAGR of revenues for this geography for the period between 2021 and 2030 are expected to be the lowest except one position among all the markets, with a 29% growth rate. We expect to have 0.38 million Canadian merchants by 2030, representing 4% of the 2030 merchants, the highest dispersion out of all geographic segments. The CAGR of merchants for this geography for the period between 2021 and 2030 are expected to be 11%, representing the last but one position among others. The growth of the revenues for this market is expected to only stabilize by 2032, one year later than the United States market, where the revenues growth stabilizes at approximately 5%.

- **Latin America**

Latin America currently represents the last position in the company’s largest markets, amounting for $0.06 billion, representing approximately 1% of 2021 revenues. Regarding the number of merchants, it occupies the same position as well, accounting for 0.10 million, representing 4% of 2021 merchants. Given that this geography is the one that has the lowest internet penetration but steadily rising, we believe that the growth phase in this geography will happen later when compared to other markets, so it is going to grow significantly on the upcoming years. For the projections of the revenues in this geography we estimated that it will get to $3.68 billion by 2030, representing 5.2% of the year’s revenues, overpassing the weight of Canada. The respective CAGR of revenues for the horizon until 2030 are expected to be the highest among all the geographies, estimated to be of 58%. Regarding the projections of merchants, we expect to
have 0.59 million South American merchants by the end of the decade, representing only 6% of the total. We believe the estimated CAGR to be approximately 22%, the second highest. We expect that this geographic market will stabilize after 2040 with a perpetual rate of 6%.

**Cost of Revenues Forecasts**

Given the strategy of the company in increasing the weight of the merchant solutions, it is expected that the costs related to this caption will experience a higher growth than the ones related to subscription solutions. Indeed, the CAGR for subscription solutions costs, for the period between 2021 and 2030 is 16% and the CAGR for merchant solutions costs for the same period is 33%. The weights of subscription solutions costs, and merchant solutions costs in 2021 are 12% and 88%, respectively. The weights for each of these captions are expected to be 4% and 96%, respectively, by 2030.

**Operating Costs Forecasts**

- **Selling, General and Administrative**
  
  This caption is composed can be broken down in two: Sales and marketing costs and General and Administrative costs. For the past 5 years, the weight of the sales and marketing expenses within this caption was on average 72%. Given this percentage and that most of the marketing expenses on the US market have already reached their peak, and the company already has established a strong brand image as one of the leading e-commerce software providers, we believe that the percentage of Selling, General and Administrative over total revenues, will tend to decrease until 2030, and thereafter remain constant. The CAGR of this caption from 2021 until 2030 is 32%, 2 percentual points less than the CAGR for total revenues.

- **Research and Development**
  
  Research and Development costs are respective to the development of new complementary products to integrate on the company’s ecosystem, to provide more and innovative functionalities for the merchants as well as augmenting the skeleton of the platform. As Shopify has already developed a wide array of solutions, we expect that they will focus on implementing these in new markets so we believe that the percentage of Research and Development costs over total revenues will tend to decrease for the upcoming years. The CAGR of this caption from 2021 until 2030 is 30%, 4 percentual points less than the CAGR for total revenues.
• Depreciation & Amortization

The company depreciations and amortizations are applied over software costs and property and equipment. For that reason, we based the forecasted depreciations as a percentage of the company’s property plant and equipment and operating intangible assets. For that percentage we assumed that the average of the past 5 years will remain constant for the upcoming years. The depreciation CAGR for the period between 2021 and 2030 is 59% and is justified by the expected huge investment of the company in intangible assets relating to acquired relationships and software incurred expenses as well and acquisition of brick-and-mortar shops around their markets as well as opening physical offices in other geographies.

Assets Forecasts

• Operating Intangible Assets

This caption refers to all the acquired technology that Shopify retains due to acquisitions and partnerships in strategic companies that allows them to create synergies and base them on solutions to converge in the platform eco-system. We forecast this caption as an average of percentage of revenues using that increases with a coefficient of 1.1, to better estimate the increasing investment strategy of applying the retained earnings to develop new offers and solidify the existing ones. The average in percentage of revenues from 2017 to 2021 is of 5%, and we estimate that by 2030 it will rise to 9% and remaining constant since then, corresponding to a value of $6 034 millions in that year.

• Property, Plant and Equipment

We expect that the driver of this long-term asset is an average percentage of revenues, that in line with the company expansion strategy will lead to the acquisition of offices and necessary PP&Es to run the business in the multiple geographies where we Shopify to be operating in. The average of the past years from 2017 to 2021 corresponds to 5%, and we used a coefficient of 1.1 from 2026 until 2030 as we expect that this will be the period where Shopify will have sufficient presence in other geographies to justify setting up headquarters and even brick-and-mortar facilities to offer support and sell “POS” hardware. In 2030 we expect that this caption corresponds to $12 903 millions.

• Merchant Cash Advances and Loans receivable

This current and non-current account is one of the main focuses that is directly a consequence of the strategy Shopify is implementing when turning their focus from the increase in the number of merchants to the volume of business from the
existing merchants. This caption is allusive to loans conceded to Shopify users through Shopify Capital, and since Shopify is expected to expand their merchant solutions throughout all the geographies, we can expect that as Shopify is expanding to other geographies and the adoption rate increases, this caption will so at the same rate. Therefore, we forecasted that for the years until 2030, the average of past years (10%) in relation to revenues would be an accurate proxy, but from this point on we applied a 1.2 coefficient to the percentage until 2036, reaching 31% by this year. Going forward, we assumed a that this percentage would no longer change, and by 2036, the value for the caption would be $36 082 millions representing the caption with the highest value.

Profitability

The average operating margins for the period between 2017 and 2021 are negative due to the heavy investment strategy of the company. It is possible to see a volatile pattern on the operating margins, being negative between 2017 and 2019, then positive for both 2020 and 2021, reaching negative values again for the projections of 2022 and 2023. This arises from the e-commerce sales growth being bolstered due to COVID-19 pandemic which allowed for Shopify beat the consensus revenue forecast for both 2020 and 2021, but at which eventually will slow down as economies re-open and lock-down restrictions will no longer be applied by governments. Margins in 2022 and 2023 turn negative also due to the significant investment of the company to expand its operations to new geographic regions reflecting in both long-term assets and the increase in merchant cash advances to the higher availability of Shopify Capital. From 2024 onwards, we expect the operating margins to grow significantly until 2031, where it will reach its peak, 20%. For the following years it is expected to maintain constant and from 2036 onwards the expected profit margin will start do decrease due to a more mature phase of the e-commerce market.
Cost of Capital

Capital Structure

Shopify's debt-to-enterprise value has been fluctuating through past years, with high negative values mainly due to the high level of excess cash and marketable securities recorded during those years, because of stock offers benefitting from the high prices that the shares were traded. In 2020, Shopify presented a current ratio of 15.69 that when compared to 15.35 in 2017 which allows us to confirm that Shopify manages efficiently their current assets as they are easily able to cover their current obligations. This idea is more reinforced with the fact that the cash ratio presents similar levels with values of 14.57 and 14.20 in 2020 and 2018 respectively. As it is, Shopify can easily pay down short-term liabilities with the most liquid assets they have available. In 2021, the leverage ratio was of approximately -37.35%, representing a downward trend from capital structure comparing of its previous years. We believe that Shopify's will target the industry average debt ratio, due to similarity and convergence of most all the e-commerce industry players, to an average of 0.36% where Wix had the lowest ratio with -8.11% and eBay with the highest at 7.22%.

Cost of Equity

Shopify mostly operates in the United States market, as most of its revenues (approximately 68% in 2021) are generated there and most of the institutional ownership is located there. To compute the levered beta of Shopify, we used the S&P 500 hundred as a proxy for the market portfolio return against the past returns of Shopify. We decided to use a 5-year period starting in 2015 until 2021 (5-year horizon) with monthly steps, as due to COVID-19 outbreak favoring the e-commerce industry vastly, having a higher interval would allow us to get an more correct correlation between the market premiums and the firm’s returns. Since every company we used as comparable companies where based and operating in the United States, we also regressed each of their stock returns against the S&P 500 Index.

After unlevering all betas returned by our regressions on comparable companies, we decided to use median unlevered beta of the industry (1.215) to use a value that is not biased by outliers of companies (Squarespace, Shift4Shop, Unity and BigCommerce) that have recently realized their IPO's and provide a significantly small sample of returns providing with unreliable betas to our analysis. Additionally, the computed 95% confidence interval for our regression was of 0.737 to 1.935 being significantly wide. Although the median value of 1.215 and

### Table 10: Liquidity ratios

<table>
<thead>
<tr>
<th>Liquidity Ratios</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>1.90</td>
<td>2.20</td>
<td>1.76</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>15.74</td>
<td>16.92</td>
<td>21.53</td>
</tr>
<tr>
<td>Cash Ratio</td>
<td>18.49</td>
<td>15.40</td>
<td>20.37</td>
</tr>
</tbody>
</table>

### Table 11: Relevering the beta

<table>
<thead>
<tr>
<th>Relevering Beta Computation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D/R</td>
<td>0.38%</td>
</tr>
<tr>
<td>Tax rate</td>
<td>26.51%</td>
</tr>
<tr>
<td>Unlevered Beta</td>
<td>1.215</td>
</tr>
<tr>
<td>Relevered Beta</td>
<td>1.220</td>
</tr>
</tbody>
</table>
Shopify's unlevered beta of 1.379 were not that distinct, we believe that using the industry median to compute the cost of equity would be a more accurate proxy.

By re-levering it using the target capital structure of Shopify, we reached a final levered beta of 1.225 and the CAPM model was used to estimate the cost of equity. We considered the average market risk premium in the US of 5.5% and the 10-year US government T-bill quote with a 1.55% yield. By using this model, we reached a cost of equity of 8.29%.

Cost of Debt

Shopify’s debt arises mainly due to their one and only issuance of debt through convertible notes in 2020, maturing in 2025. To estimate the Shopify’s cost of debt, we believe the most accurate proxy would be to calculate the interest percentage in relation to the two debt components, providing an approximate value of 0.99%. To adjust this value, we then used the loss-given default of credit rating score of BBB+ in senior unsecured loan, resulting in a value of 46.15%.

Regarding the probability of default, we used Moody’s report of average cumulative issuer-weighted global default rates, providing us with an annualized probability of 0.226%, resulting in a pre-tax cost of debt of 0.89% and respective beta of -0.12.

Cost of capital (WACC)

Our assumed tax rate was of 26.51% as it has been the rate applied to corporate profits since 2014, and that we projected to be constant for the horizon of our forecasts. Before 2014, an 26.1% tax rate was applied and 27.6% before that supporting our assumption that tax rates will stay at this value. Additionally, since the implied target capital structure will be tending to 0.36% in the long term, minor changes will not be considered material when computing the weighted-average cost of capital. Therefore, considering a cost of equity of 8.29%, cost of debt of 0.226%, a targeted debt-to-equity ratio of 0.36% and a tax rate of 26.51%, we have reached a WACC value of 8.23% as an input to our DCF model.
Valuation

Free Cash Flows

Historically, Shopify has provided negative free cash flows since 2018, until 2020. The reasoning is that Shopify was focused on growing their offer of solutions mainly from the beginning to build a competitive advantage which led to a heavy investment in their long-term assets, mainly Intangible Assets. In 2021, the Company provided their first positive free cashflow, of 363 889$ thousands mainly due unexpected growth of e-commerce sales due to the pandemic’s arrival. However, as the shock began to wear down, in 2021 Shopify registered negative cash flows not only due to continuous heavy investment strategy but also due to the pandemic’s benefit regarding non-physical store shopping. This trend is forecasted to maintain until 2027, where with the beginning of creating solid market share, bolstering their revenues in other geographical markets, and having most of their complementary offers and eco-system expanded outside of the United States, from 2028 onward it is expected that the company will continuously generate positive free cash flows until 2040 with a CAGR of %%. At this point, the perpetuity is applied as we considered the company to be in a stable and mature state.

Return on Invested Capital

Shopify’s return on invested capital varied throughout the phases of their forecasted strategy. Initially, the company was dealing losses as it had not reached its break-even point, representing negative ROIC’s in the year of 2018 and 2019. Afterwards, with e-commerce accelerated growth due to the pandemic, it is expected that ROIC will be positive for 2021 and was in 2020 but will turn negative at in 2022 and 2023 due to the less accelerated e-commerce sales and heavy investing in other geographies. However, from 2024 onwards to 2029, it will turn significant values above WACC as high as 45.69% in 2029 indicating that its generating value for the Shareholders. However, from 2030 onwards this value-generation metric will tend to decrease steadily eventually reaching a stable and mature value 5,58% in 2040, as a proxy for the perpetuity terminal growth rate.

Pay-out ratio and Reinvestment rate

Shopify’s management states that the company can but has not paid any dividends since going public and they do not intend to declare any in the “foreseeable future”. We do believe that this decision will be maintained for the
first forecasting years due to the high investment strategy the company will pursue to grow its assets but additionally to be able to offer their software platform with most of their solutions in other geographical areas. Since we classify Shopify as growth stock, we believe that investing their retained earnings and not declaring any dividends is the most efficient way grow and so we believe this trend will maintain until 2030. From on then, we assumed an 55% pay-out ratio as the company slowly transitions into a value stock, where declaring a steady and stable stream of dividends is key to maintain their stock price and be able to continue finance through equity offerings. This is directly correlated with our ROIC decreases since by applying 55% pay-out ratio in 2030 onwards, the reinvestment rate is passed from 100% to 45%, eventually declining significantly ROIC onwards until the perpetual time.

Terminal growth rate

We used the last growth ROIC growth rate in 2040 as our proxy for how the company will grow in perpetuity, with a value of 5.58%. We believe it is fit not only due to the stability reached in the prior years but also to being in line with revenue-weighted average of real growth GDP rates adjusted for the inflation of each geographic market we expect Shopify to operate adjusted for their respective inflation, with a value of 5.68%.

DCF

To compute Shopify’s intrinsic value, we deducted the net operating debt and non-operating enterprise value to the result of all the cash flows discounted at our WACC Rate. We assumed that the book value of non-operating invested capital would be the most fitting proxy to the present values of its cash-flows. We then reached a total equity value of 168 419 213$ thousands, which divided by the 125 600 thousand of shares outstanding lead to a price per share of 1340.92$.

Multiples Valuation

To be complete a successful comparative valuation through the usage of multiples, we considered two types of comparable companies: e-commerce software providers, such as Square Inc, SAP, Wix and Squarespace and online retailer sellers where marketplaces for B2C and C2C are allowed such as Amazon and eBay. We also included in the latter Adobe due to their cloud-based software products which includes Magento, although their comparative measures are not perfectly in line with Shopify’s structure.

By retrieving data of all the referred comparables, we mainly focus our analysis on two main multiples: EV/Revenues. The reason we provide less importance to
P/E, EV/EBITDA EV/EBIT is that in the growth phase of e-commerce platform companies, companies like Wix and BigCommerce are accumulating losses and so they do not provide reliable multiples to value companies in this industry as each company are in specific phases before reaching break-even. By using EV/Revenues, we reached an average multiple of 16.9x and median of 7.3x. However, when computing the 1st and 3rd quartile we reached a multiple of 5.6x and 26.1x respectively. As a result, by using the average value, we reached a price per share of 1100.70$, while for the first quartile, median, and third quartile were of 421.10$, 521.91$ and 1650.61$.

**Risk Analysis**

**Sensitivity Analysis**

To better understand the risks associated with the business and variables that affect our valuation, we conducted a sensitivity analysis in relation to two main variables: Terminal Growth and Pay-out Ratio, along with variations in our cost of capital rate (WACC).

- **Terminal Growth**

When conducting the sensitivity analysis by variation both terminal growth and WACC by 0.3%. As we can observe, variations in terminal growth are much more aggressive regarding the change in the stock price the lower the WACC rate is. In the case where WACC was of 8.83% and terminal growth was the lowest of our guesses, the stock price returned by our model would be of 864.22$. On the other hand, in the situation where WACC is of 7.63% and terminal growth is as high as 6.02%, the computed share price would be of 2 376.68$. As observed, we can see that the DCF model is highly sensitive to variations in both growth and our discount rate.

- **Pay-out Ratio**

Regarding the impact of changing values in our assumed pay-out ratio, we performed the sensitivity analysis with the latter ranging from 50% to 60%, while making the WACC change by 0.3% again. As we can infer, the lower the pay-out ratio the higher the share price since the retention rate would be higher and contribute to a higher ROIC. In this way the share price would be of 2393.09$ in the scenario where the pay-out ratio was of 50% for a WACC of 7.63%. On the opposite case, if we input a Pay-out ratio of 60% and used the highest WACC, 8.83%, we would have a share price as little as 862.17$. This again shows how sensitive the Shopify’s share price is when reacting to changes in important
inputs such as the pay-out ratio, which then defines the retention rate and lastly, the terminal value growth rate.

### Scenario Analysis

Two of the main risks the company faces regarding uncertainties in our forecasting period is the pay-out ratio which will be declared when the companies start distributing dividends as well as the time, along with idea of successfully penetrating the Asian Pacific e-commerce market which is the biggest in the world due to rising internet penetration in rural areas but also due to high density of population in those geographies.

- **Dividends**

Since this assumption is highly speculated and is hard to forecast what percentage, it would be decided by Shopify's management, we assumed the base case of 55%, the best case with 35%, and the worst case with 75%. By changing these variables in scenario analysis, we have reached a share price of 10927.34$ in the best case, 1285.26$ as stated in the base case and 751.36$ in the worst. The difference between this analysis and using sensitivity, is that the later only allows us to check gradual and constant differences in this rate, while here we can wonder what the impact of three distinct cases would be where the range of assumed values are much wider.

- **Penetration rate in Asia**

One of the main risks on our forecast by the geographies is that uncertainty regarding the Gross Merchandise Volume growth rate at the entry date of the APAC geography, where we believe that conducting a scenario with 3 cases, where the base is composed of 60% growth rate, the best is of 85% and the worst is of 30%. In the best case, the computed share price would be of 1692.97$, whereas in the worst case would lead to 1165.74$. This allows us to understand that even though the base case does not “come to reality”, even if implied entry growth rate was half of the base case, the share price would be impacted, but not as much where the best case of 85% variation in GMV would lead to a much higher price.

<table>
<thead>
<tr>
<th>Scenario Analysis - Payout Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Case</td>
</tr>
<tr>
<td>Base Case</td>
</tr>
<tr>
<td>Worst Case</td>
</tr>
</tbody>
</table>

**Table 18: Scenario analysis, retention rate as variable**

<table>
<thead>
<tr>
<th>Scenario Analysis - Asian-Pacific Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Case</td>
</tr>
<tr>
<td>Base Case</td>
</tr>
<tr>
<td>Worst Case</td>
</tr>
</tbody>
</table>

**Table 19: Scenario analysis: entry GMV as variable**
Final Recommendation

Considering all our analysis and inputs provided to our DCF model, we estimate Shopify’s shares will be traded at $1285.26 on the 31st of December 2022 representing a total market capitalization of $161 428 billions, for a total of 125 600 thousand of shares outstanding. Therefore, our recommendation on the 16th of December 2021 is to sell Shopify’s stock. The recommendation is further supported by our multiple analysis, where the most relevant metric, EV/Revenues, returns a value of $1 100.7 per share, which is also biased using e-commerce colossal such as Amazon and eBay, providing support of our decision.

We consider that Shopify is one of the leading e-commerce platform providers, and they are will soon start generating consistent and solidified profits. Additionally, we believe that Shopify holds a competitive advantage over their competition not only to the stockpile of cash they hold that allows them benefit from internal growth opportunities as well as being financially healthy due to the minor claims over the company. However, we believe that the current price of the stock does not support the value of the company even when considering the boom in the e-commerce industry, especially in the B2C segment and their future prospective expansions in their platform eco-system, as well to growing in other geographical markets.
Appendix

Income Statement

<table>
<thead>
<tr>
<th>Description</th>
<th>2023</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
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<tr>
<td>Cost of Goods Sold</td>
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<td></td>
</tr>
<tr>
<td>Gross Profit</td>
<td></td>
<td></td>
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<tr>
<td>Operating Expenses</td>
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<td></td>
</tr>
<tr>
<td>Net Income</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Balance Sheet

<table>
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<th>Description</th>
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<th>2022</th>
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<tr>
<td>Assets</td>
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<td></td>
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<tr>
<td>Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Income</td>
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</table>

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## References


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Report Recommendations

<table>
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<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buy</strong></td>
<td>Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.</td>
</tr>
<tr>
<td><strong>Hold</strong></td>
<td>Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.</td>
</tr>
<tr>
<td><strong>Sell</strong></td>
<td>Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.</td>
</tr>
</tbody>
</table>

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