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

SHOPIFY:
THE VALUATION CASE

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Abstract

We start the coverage of Shopify with a **Sell** recommendation given our target price of **$391.00** corresponding a downside of 66% compared to the current price of $1180.00 (as of May 20th 2021).
The market is overestimating Shopify's external and internal opportunities.
The launch of vaccines and low barriers to entry in the industry are likely to slow down the surging value of Shopify.
Considering unrealistic expectations in high-tech stocks, Shopify's value is expected to slow its growth pace, thus the SELL recommendation.

Keywords
Valuation, Equity Research, E-commerce

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This report is part of the Shopify Equity research report (annexed) and should be read has an integral part of it.

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Company Overview

Shopify Inc. is a Canadian multinational E-commerce company, founded in 2004 by Tobias Lütke, Daniel Weinand, and Scott Lake, consequently to their attempt to launch Snowdevil, an online platform focused on snowboarding equipment. Headquartered in Ottawa, Ontario, Shopify derives its profits from two segments: subscriptions and merchant solutions. Not only it is a platform for merchants to display and sell products through an extended number of channels, but Shopify also offers add-on merchant solutions, including order processing, app stores, payments solutions, shipping.

Shopify went public in 2015, after filing for IPO at the New York Stock exchange (SHOP) and Toronto Stock Exchange (SH). The Canadian software company debuted trading at $28 on the NYSE: with an initial offering price of $17, the IPO resulted in raising more than $131 million.

As a leading global commerce company, Shopify counts over one million businesses in more than 175 countries. In 2020 alone, the firm generated a total revenue of $2.9 billion, corresponding to an 86% increase compared to the revenue results obtained in 2019, please refer to Exhibit 1.

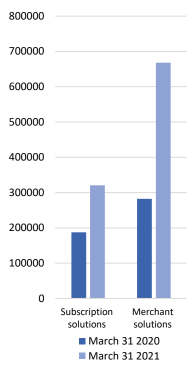
Exhibit 1: Shopify's Subscription and Merchant solutions revenue growth

Source: Shopify Inc.

The company offers both subscription solutions and merchant solutions: revenue from subscription solutions rose by 42% to $908 million, a growth mainly driven by the increasing number of merchants joining the platform, while revenue from merchant solutions grew by 116% to $2 billion, as a result of an increase of Gross Merchandise Volume (GMV).

In the first quarter of 2021 total revenue amounted for $988.6 million (YoY of 110%), where Subscription Solutions revenue corresponded to $320,7 million while revenue from Merchant

Exhibit 2:
Revenues Q1 2020 - Q1 2021



Source: Company data; Analysts estimates

Solutions equalled to $688,0 million, please refer to Exhibit 2.

In a global context where the internet, social media, cloud platforms and online commerce are increasingly influencing our lifestyle, Shopify strives to offer new commerce solutions, please refer to Exhibit 3, building value on:

- *A data advantage*: Shopify's cloud platform is able to aggregate rich data from the interactions between supply and demand, thus informing both the management and the merchants' decisions on the business.

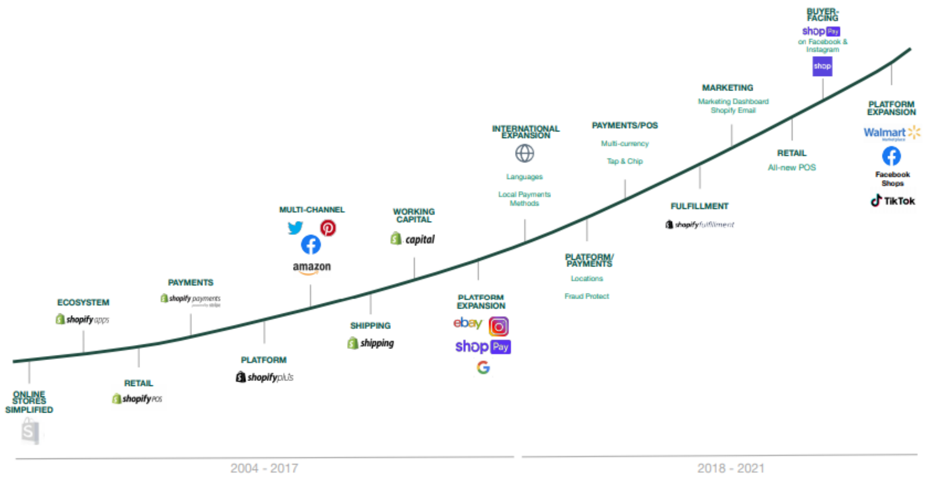
- *Brand Ownership*: Shopify supports the merchants to build their own brand recognition, hence helping them to create a fidelity relationship with the customers.

- *Mobile*: with the raising importance of the mobile E-commerce, being one of the primary channels of the shopping online, Shopify strives to offer merchants new solutions to accelerate checkout, through the use of, namely, Shopify Pay, Apple Pay, Google Pay. At the end of the first quarter in 2021, Shopify's app (*Shop*) counted more than 107 million users.

- *Multichannel front end*: merchants can display and sell their products through many different channels, such as mobile apps, internet, physical shops, social media marketplaces.

- *Single integrated back end*, that allows merchants to follow their business in a user-friendly back end (from processing orders, to shipping orders, to reporting analytics).

Exhibit 3: Shopify offer



Source: Shopify Inc.

Subscription Solutions

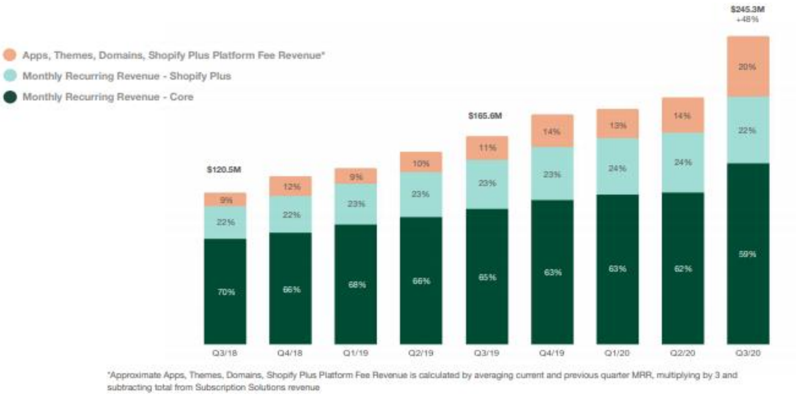
Subscription's solutions are generated from the sale of subscriptions on Shopify's platform, and, also, from the sale of custom themes, web applications and the registration of domain names.

Shopify's pricing plans	
BASIC	$29 per month
SHOPIFY	$79 per month
ADVANCED	$299 per month
SHOPIFY PLUS	$2000+ per month

Merchants and entrepreneurs can choose amongst a diversified offer of pricing plans: the higher the price option, the bigger the availability of tools to merchants.

Even if the majority of merchants sticks to the Basic and Shopify plans, Shopify GMV is mainly driven by the subscription to the Advanced and Shopify Plus plans, please refer to Exhibit 4.

Exhibit 4: Subscription Solutions revenue



Source: Shopify Inc.

Merchant Solutions

Shopify aims at offering one comprehensive E-commerce platform, enabling merchants to add value to their business. With one functional cloud, merchants can accept payments, sell their products and ship them.

The merchant solution related revenues are mostly driven by the payment processing fees of Shopify Payments and secondly by transaction fees, Shopify Shipping and Fulfilment and Shopify Capital. In Q1 2021, Shopify continued implementing Shopify Fulfilment network, aimed at easing merchants' ability to manage orders. Moreover, Shopify Capital rose to $312.8 millions at the end of March 2021, corresponding to a $2.0 billion cumulative growth since its launch in April 2016.

Introduced in 2013 in Canada and the US, Shopify Payments is now present in more than 15 countries and used by almost 70% of the merchants, resulting in a consequent increase in both revenues and costs from merchant solutions.

Shareholder structure

Exhibit 5: Ownership Structure

Ownership structure	
Institutional Ownership	64,07%
Total shares outstanding *(in millions)*	113
Total value of holdings *(in millions)*	$73,396

Source: Nasdaq

Shopify counts 1253 institutional investors, please refer to Exhibit 5, holding 72,253,715 shares in total, amongst whom there are Morgan Stanley, Vanguard Group Inc, Fmr Llc. Shareholders range from individual investors, hedge funds, major institutions, and filed for both 13D/G or 13F. While 13D refers to shareholders who own more than 5% of the firm and actively act to change the business strategy, Schedule 13 G refers to passive investments over 5%.

As per April 2021, principal shareholders, owning or exercising control or direction over more than 10% of all classes of shares, are depicted in the following Exhibit 6:

Exhibit 6: Principal shareholders

Name of shareholder	Number of Class A Subordinate Voting Shares Owned, Controlled or Directed	Percentage of Outstanding Class A Subordinate Voting Shares Owned, Controlled or Directed	Number of Class B Multiple Voting Shares Owned, Controlled or Directed	Percentage of Outstanding Class B Multiple Voting Shares Owned, Controlled or Directed	Percentage of Votes Attaching to all outstanding Shares Owned, Controlled ot Directed
Tobias Lutke	243,596	0.22%	7,891,852	65.56%	33.90%
Klister Credit Corp	81,000	0.07%	3,784,000	31.43%	16.24%

Source: Shopify Management Information Circular

Valuation

In order to value Shopify, we adopted the DCF method, because in our opinion it is the appropriate approach that captures all Shopify's main growth drivers.

We used a forecast period of 15 year. Our forecast period ends in 2036, though, for the period of 2037-2039, we estimate Shopify's cash flows to grow at a decelerating rate, reaching the terminal growth rate of 2.6% in 2039.

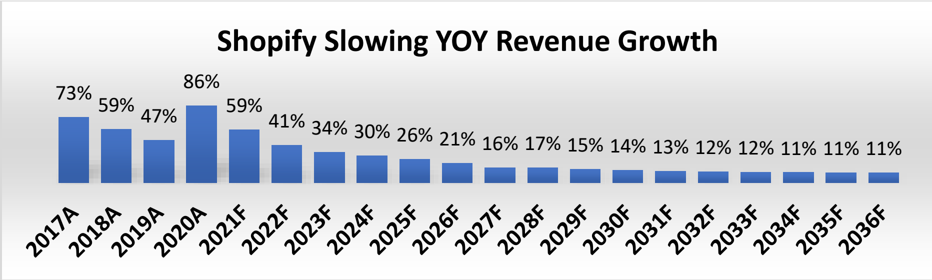
Cash flows are discounted using a growth rate of 2.6%. In fact, in the long run, assuming that the company's performance will revert to the mean, Shopify's revenue is projected to follow the economy growth rate (2.6%). Although at the moment Shopify's growth rate is above the industry average, in the long run (which extends throughout our forecast period), it appears difficult for Shopify to outperform the market, also considering a secular downturn in the whole E-commerce industry.

Revenues Forecast

Sales projections are essential in our valuation process, as they have been used to forecast the other inputs, by adjusting the ratios over the forecast period.

Shopify experienced an incredible growth in 2020, when revenues increased by 86% to 2.93 billion, however we expect this growth to slow down in 2021 to 59%, to then to gradually fall to the 10% range between 2030-2036, please refer to Exhibit 7.

Exhibit 7: Shopify's Revenue Growth



Source: Company data; Analysts estimates

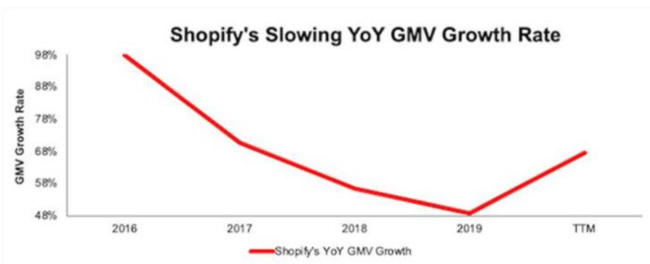
We expect a decrease in the revenues growth rate, largely caused by the distribution of vaccines, which will encourage people to return to in-store shopping, rather than shopping online. This will imply the revenue growth pace to normalize in 2021.

Competition is also another factor that affects Shopify's YoY revenues growth rate. The low barriers to entry in the industry imply stiffer competition, making it difficult for the company to maintain outperforming results in terms of revenue, given that the subscription fee that Shopify charges to the merchants will be hard to increase.

Moreover, despite the outstanding performance experienced in 2020, it is important to consider the high level of volatility embedded in high-flying tech stocks and the risk for Shopify's value to come back to reality because of the deteriorating fundamentals.

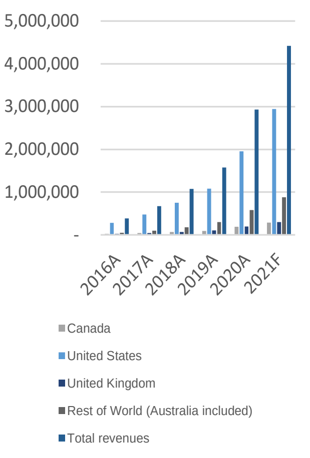
The threats of increasing competition are reflected in the GMV (Gross Merchandise Value) trends too, which saw a slowdown in the YoY growth rate in the past years (2017-2019). The rise in GMV YoY growth rate currently observed is, in our opinion, largely attributable to the spread-out of the pandemics, please refer to Exhibit 8.

Exhibit 8: Shopify's YoY GMV Growth



Source: New constructs, LLC

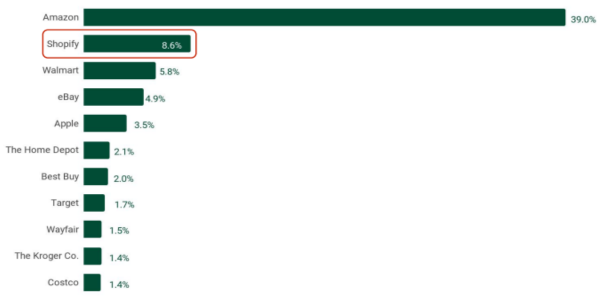
Exhibit 9:
Revenues by Geography (2016-2021) in USD



Source: Company data; Analysts estimates

Sales have been forecasted according to the E-commerce consumers data in the different regions (Source: Passport), please refer to Exhibit 9. Most of the revenue comes from the US, accounting for about 50% of total revenues over the forecasted period. In the total industry sales, North America is in fact only second to Asia with $552,6 billion sales in the -commerce, and Shopify represents the second major online retailer in the US, after Amazon, please refer to Exhibit 10.

Exhibit 10: Share of US Retail E-Commerce Sales 2020



Source: eMarketer

Operating expenses

As previously mentioned, one of the factors that impacts the operating expense ratios in the short term is the Covid factor. Due to the pandemic, a considerable shift to online platforms has been experienced in the industry, which needs to be considered when calculating operating expenses. This implies that cost of revenues will be higher in the following years and then decrease once Shopify will be able to become more efficient and optimize its business.

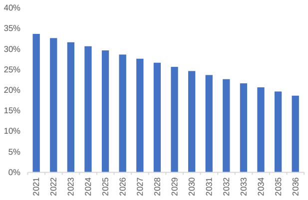
Merchant solutions costs, as well as R&D and Marketing expenses, need to be given a higher weight to reflect the resources spent by the company to adapt to the new pandemics' situation, and to also reflect the boom in sales recently experienced by Shopify.

Furthermore, it is important to consider marketing expenses, representing a key factor in the business expenses, given their correlation with subscriptions growth, a main revenue driver for Shopify. Marketing expenses are mostly employed with the "partnership program" of Shopify. As an example, we expect marketing expenses to reflect the recent marketing partnership with Tik Tok, aimed at reaching a younger audience and at targeting Shopify's audiences across age and gender, and user behaviour.

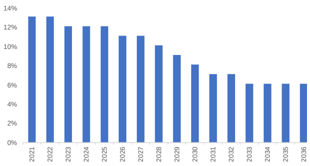
We predict that sales growth will be positively driven by the increasing need to buy essential items during the pandemics, as well as the implementation of a more user-friendly approach and implementation of Shopify Shipping and Shopify Payments.

We expect Shopify to invest in their know-how in the present years and to reinvest back into its

Exhibit 11:
Merchant solution as % of sales (2021-2036)



Sales and Marketing Expenses as % of sales (2021-2036)



Source: Analysts estimates

business, as also announced buy the company in its Q1 2021 reports.

Considering the consumer behaviour, merchants feel the need to shift their businesses to online platforms in order to reach a higher volume of clients in the E-commerce industry. Shopify is expected to benefit from the predicted rise of 16% in the worldwide E-commerce industry from 2021 to 2027, nonetheless it might not be sufficient to outperform the market and it might be difficult to meet the expectations embedded in its current stock price.

In 2021, we estimate Merchant solutions costs to be 34% of sales; with Shopify becoming more and more efficient, Merchant solutions costs are estimated to reach 19% of sales in 2036, please refer to Exhibit 11.

Sales and marketing expenses ratio will also drop from 13% to 6% from 2021 to 2036. We believe a higher focus on Sales and Marketing expenses is essential for Shopify to lead the industry, attract a higher number of customers and increase its competitiveness among its peers, given the previously mentioned stiff competition and low barriers of entry in the business. Shopify's expenses will be focused on the implementation and improvement of its software platform and Shopify Plus products.

Capex

Estimating the Capex is another important step in our valuation process. In fact, most of Shopify's cash requirements are for the working capital and capital expenditure.

Considering the cash derived from operations and the present cash and cash equivalents, Shopify's liquidity is expected to be sufficient to cover its financial obligations for the next year.

The capital expenditure of Shopify has been split in Net Capital Expenditures, Intangible assets and PPE.

Exhibit 12: Capex forecast

Capex forecast, Depreciation, Intangible assets & PPE forecast																
In thousands US dollars																
Year	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**	**2031F**	**2032F**	**2033F**	**2034F**	**2035F**	**2036F**
Gross Capital Expenditures	47,801	57,361	71,701	89,626	103,070	118,531	136,310	156,757	180,270	207,311	238,408	274,169	315,294	362,588	416,976	479,523
Net Capital Expenditures	52,091	62,509	78,137	97,671	112,322	129,170	148,545	170,827	196,451	225,919	259,807	298,778	343,594	395,133	454,404	522,564
YOY-Growth	70%	20%	25%	25%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Depreciation	(4,291)	(5,149)	(6,436)	(8,045)	(9,251)	(10,639)	(12,235)	(14,070)	(16,181)	(18,608)	(21,399)	(24,609)	(28,300)	(32,545)	(37,427)	(43,041)
As percentage of net CAPEX	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%	-8%
Intangible assets	291,370	291,370	291,370	291,370	291,370	291,370	320,507	320,507	320,507	320,507	384,609	461,530	553,836	664,604	664,604	664,604
Capex attributable to Intangibles	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%
PPE	319,847	487,222	742,182	1,130,563	1,722,181	2,623,391	3,996,198	6,087,390	6,087,390	6,087,390	9,272,893	14,125,354	14,125,354	21,517,085	21,517,085	32,776,873
Capex attributable to PPE	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%
Intangible assets & PPE	611,217	553,857	482,156	392,529	289,459	170,928	34,618	(122,139)	(302,409)	(509,720)	(748,128)	(1,022,296)	(1,337,590)	(1,700,179)	(2,117,155)	(2,596,678)
change	(47,801)	(57,361)	(71,701)	(89,626)	(103,070)	(118,531)	(136,310)	(156,757)	(180,270)	(207,311)	(238,408)	(274,169)	(315,294)	(362,588)	(416,976)	(479,523)

Source: Analysts estimates

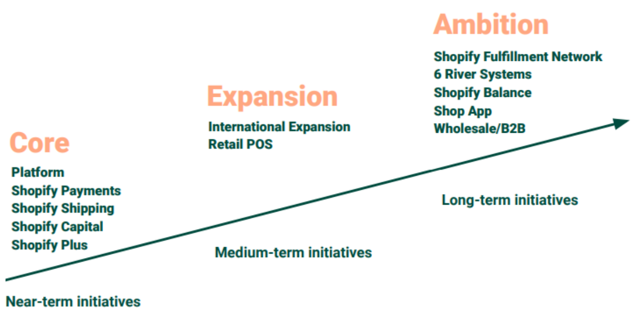
We forecast Capital expenditures to grow with the increasing number of merchants, being the Merchant solutions the main growth driver for Shopify. Net capital expenditures are expected to grow by 70% in 2021, explained by the exponential growth experienced by Shopify that also led the firm to undertake significant investments, to sustain its base of merchants and to implement a more user-friendly platform.

Nonetheless, we estimate the YoY of Net Capital expenditures to slow down to 20% in 2022 to continue to 15% until the end of the forecast period. This is explained by the company need to maintain their business, rather than growing it.

Given the industry where Shopify is, intangible assets represent a large portion of the capital expenditure. Most of Shopify Capital expenditures will be focused on additional sales capacity, to acquire larger merchants, the implementation of new sales channels and shipping solutions. A big focus will be given to improvements on mobile functionality of the platform, to ease and strengthen the relationship between merchants and final customers. The strategy followed by Shopify will be aimed at creating a reliable, secure and out-performing cloud.

In summary, key investments points will be the implementation of Shopify's app, the expansion of the company worldwide and the Shopify Fulfilment network, which will allow to get orders to the final clients faster and in a cost-efficient way, please refer to Exhibit 13.

Exhibit 13: Shopify's initiatives



Source: Shopify Inc.

Exhibit 14: WACC inputs

WACC	
Cost of debt	0.13%
Cost of Equity	8.80%
D/E	0.0112
D/EV	0.0110
E/EV	0.9891
Statutory Tax Rate	26.51%
1-Statutory Tax Rate	73.49%
WACC	8.71%

Source: Analysts estimates

WACC

Cost of debt

Since Shopify's credit rating is not available, instead of estimating a default spread based upon the rating, a rate of 0.125% has been used as a proxy for the cost of debt, corresponding to the rate of Shopify's issued international bonds.

Cost of equity

The CAPM approach has been adopted to estimate the cost of equity.

Since Shopify's statements are presented in dollars and since it is listed on the NYSE, we chose the risk-free rate to be the US 30-years government bond (2.25%).

When estimating the beta, we first calculated the levered beta, regressing the firms' excess stock returns on the excess returns of the market portfolio (NYA). We chose the NYSE Composite Index as most of the peers considered are listed on the NYSE.

We estimated the beta through comparable companies, with the peers chosen being Square (SQ), Wix (WIX), Etsy (ETSY), PayPal (PYPL), ServiceNow (NOW) and Amazon (AMZN).

In fact, the above-mentioned peers, being in the same industry, are thought to be influenced by the same external factors and economic trends.

As well as Shopify, Wix is a website building platform, allowing customers to get their online presence. ServiceNow is a software company too, aiming at helping firms to manage digital workflows. Etsy is in the e-commerce Industry as well, being a global marketplace with the goal of helping merchants to sell their products and helping creative entrepreneurs to scale their businesses.

On the other hand, Square and PayPal, being financial services and digital payments firms, can be compared to the Shopify in relation to the Shopify Payments feature. We decided to include Amazon amongst the peers too, being a leading digital e-commerce firm.

Exhibit 15: Beta calculations

	SHOP	SQ	WIX	ETSY	PYPL	NOW	AMZN
LEVERED BETA	1.536724	1.23189	1.000506	1.308665	1.135793	1.057717	1.215059
AVG				1.212336193			

Source: Analysts estimates

Then, all betas have been adjusted to reflect the tendency of beta to be mean reverting, and, consequently, betas have been unlevered. The average unlevered beta has then been re-levered, based on Shopify's debt beta to reflect the capital structure of our target firm.

The market risk premium is assumed to be 5.6%, as the generally accepted value by the literature. Historical data for the past 75 years show that the equity risk premium for the market portfolio has averaged 6% to 8%.

Valuation outcome

Exhibit 16: DCF Valuation

DCF VALUATION	
SHARES OUTSTANDING	122,529
EQUITY VALUE (IN MILLIONS $)	47,934,070
IMPLIED PRICE PER SHARE	$391

Source: Analysts estimates

Our model comes up with a final **SELL** recommendation of Shopify, with a target price of **$391** (which implies a downside of 66%, in respect to the current share price of $1180.00, as of May 20th, 2021).

Even though Shopify's growth has been strong and might remain so in the future (considering new merchant adds, rising GMV and its user-friendly approach), the firm is likely to fail to achieve such optimistic assumption.

As a matter of fact, Shopify appears to be overexposed to the economic cycle, considering a high failure rate for SMB merchants, worsen by a probable decline in retail volume.

Due to the Covid factor, we expect Shopify to experience growth, however at a slowest pace than the one observed in 2020.

In order to justify the current stock price, Shopify's revenue has to grow by 26% CAGR in the upcoming 15 years, which equals to $104 billion, making up to 35 times more than the current revenue. Compared with our 15-year forecasted CAGR of 19%, $60 billion in 2036, we think market's expectations are unrealistic.

Hence, this results in a SELL recommendation.

Multiples Valuation

Exhibit 17: Multiples Valuation

Shares outstanding	122,529
	Average
Multiple	16
Revenues	4,418,261
Estimated Enterprise Value	68,782,251
Net Debt	1,732,112
Equity Value	67,050,139
Price per Share ($)	547

Source: Analysts estimates

To support the decision making, a relative valuation has then been performed using the EV/Sales ratio, being sales multiples appropriate for young firms that do not have an established history of earnings and fast-growing firms in sectors as the e-commerce.

In this perspective, our analysis comes up with a share price of $547, much lower than the current share price, thus implying that Shopify's stock is highly overvalued by the market and expected to underperform the market. This outcome is in line with the DCF valuation predictions.

Sensitivity analysis

Exhibit 18: Sensitivity Analysis

βe	
βe LEVERED	1.212
SE (be)	0.202
Lower Limit	0.808
Upper Limit	1.617

WACC	
avg	10.70%
std dev	1.96%
upper	13.53%
lower	7.87%

	WACC			
	7.9%	8.7%	10.7%	13.5%
2.60%	445.77	391.21	285.41	179.06

Source: Analysts estimates

Being the industry in constant evolution, we then conducted a sensitivity analysis to understand how changing some critical inputs and assumptions of our valuation model would impact the outcome of the final recommendation.

The sensitivity analysis has been done on the capital structure, by testing the beta and the cost of equity, and the cost of debt, to understand how these factors impact the WACC and, consequently, the calculation of the target price.

The levered beta has been tested considering a lower limit of 0,808 and an upper limit of 1,617.

Our results show that, considering a range of 0,13% and 2,25% for r_d combined with a range of 7.95% and 13.66% for r_e, the WACC ranges between 7.87% and 13.53%, with an average of 10.70%.

From this we derive that the price sensitivity varies from $179.06 to $445.77.

Risk factors

Shopify's incredible growth might not be feasible or at least it is highly dependent on capability of attracting new merchants and keeping the already existing ones, in order to increase the sales.

Moreover, such a fast growth needs to be supported by an efficient operational structure. This also requires from Shopify an educated management, able to cope with the growth being experienced. Not managing the expenses effectively might negatively influence the gross profit and operating expenses. In this regard, it is noticeable to mention that three out of seven top executives of Shopify will leave the company in the next months, as announced in April 2021, following the departure of the CPO Craig Miller happened in September 2020. This is likely to negatively impact Shopify's performance.

Such fast growing scenario might also impact Shopify's ability to achieve profitability. As it happened in the past[1], the firm might not be able to sustain all the investments aimed at growing the business, hence resulting in losses and accumulated deficit.

Furthermore, Shopify operates in a highly competitive industry. Not only it faces competition from peers with long operating history, but also from new competitors, attracted by the rapid growth experienced by the market. The threat of new competitors, able to reflect and satisfy the customer's constantly changing and evolving needs, represents a key risk for the company.

By collecting a lot of personal data of the buyers and merchants using the app, keeping the

[1] Shopify incurred net losses of $124.8 million in 2019, $64.6 million in 2018, and $40 million in 2017. Furthermore, Shopify had an accumulated deficit of $304.2 million at December 31, 2019.

security of this information is another key factor that Shopify needs to preserve and monitor. The non-authorized access to personal and confidential information would undoubtedly expose the firm to losses and liabilities.

Appendix

Strategy

Shopify's strategy is focused on rapidly growing the business and planning to make investments that drives future growth. Shopify aims to invest in order to increase its revenue base, improve the retention of global base and strengthen ability to increase sales of their merchants.

Shopify aims to build for long-term. Such longer-term initiatives include localizing the platform for international expansion, promoting Shopify brand, expanding their existing services, introducing new solutions, and entering strategic partnerships and acquisitions. Regarding partnership and acquisitions, Shopify has a reputation as a company that cannot successfully integrate firms with different work cultures and Shopify has not taken any visible strategic steps to overcome this handicap.

As one of the long-term plans, Shopify aims to grow its base of merchants. To boost the adoption of the Shopify platform by merchants around the world, Shopify plans to include the translation of the Shopify platform, as well as the incorporation of local payment methods into Shopify Payments.

Shopify has no tangible strategy for one of its biggest pain points, the challenges presented by new entrants and competitors in the segment. Shopify's business model is dependent on merchants selling on Shopify's platform, as more revenue is generated when merchants process more transactions, upgrade plans, add new sales channels, ship more products, and use additional solutions. Because of the pressure of the risk of losing merchants to the new entrants in the segment and to its competitors, Shopify has not been able to increase its prices since 2017.

Even though Shopify is built to support innovation and the rapid technology changes in E-commerce, in 2020, the R&D investment of Shopify with $550 million is far behind its most notorious competitor Amazon's $45 billion R&D investment. Innovation initiative so far has seen Shopify Mobile application in 2010, and Shopify Payments in 2013, which eliminated the need for merchants to set up and maintain a direct relationship with a third-party payment gateway. Shopify added Shopify Shipping in 2015, allowing merchants to print postage labels and ship products directly through Shopify; Shopify Capital in 2016, offering growing merchants working capital directly through the Shopify platform. Additionally, Shopify introduced Shopify Fulfillment Network in 2019, expecting to spend approximately $1B over five years to build and operate a network of fulfillment centers dispersed across the United States, with a goal of ensuring merchant's orders are delivered to buyers quickly and cost-effectively. Shopify Fulfillment Network is expected to improve supply chain economics and delivery for merchants by leveraging on deep machine learning tools, including demand forecasting, smart inventory allocations across warehouses and intelligent order routing. Nonetheless, this might represent a challenge for new merchants, as most of them are not familiar with fulfillment processes and do not possess an extensive knowledge about of the warehouse capacity they need, and how many orders they will process per month. In fact, it must be remarked that most of Shopify's merchants are SMB, not large enterprises.

Industrial Overview

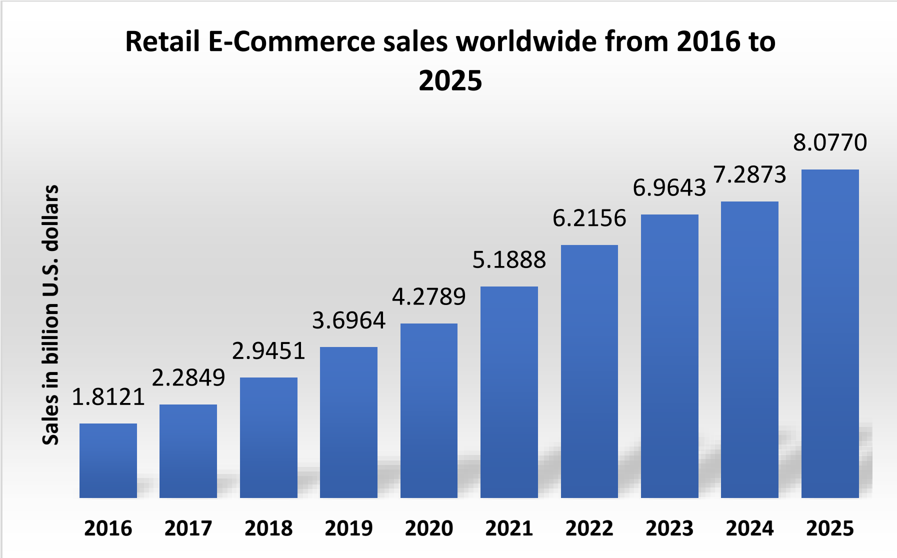
Shopify operates in one of the fastest growing and most competitive sectors: the E-commerce sector, which includes buying and selling of products on online services or over the internet, including technologies such as mobile commerce, electronic funds transfer, internet marketing, online transaction processing, electronic data interchange, and automated data collection systems. Therefore, E-commerce is driven by the technological advances of the semiconductor industry and is the largest sector of the electronics industry.

This industry also possesses low barriers of entry. Consequently, more and more corporations are focused on improving their IT capabilities and bolstering their presence on the Internet. New companies that are offering a quality suite can take a sizable bite out of another firm’s existing business, which we believe possesses one of the

biggest threats for Shopify. Moreover, in the E-commerce industry, new product releases are continuous, with many companies providing similar offerings and services. Consequently, since members of this industry are constantly introducing new products and services, research & development plays a prominent role. Accordingly, there is a heavy investment in the R&D in the industry, ranging from 15%-25% for the prominent players in the industry which is a note of importance.

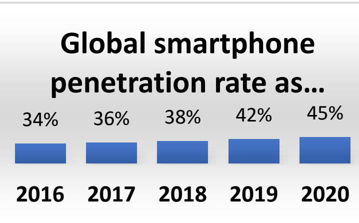
Constantly transforming and widely fragmented, the global E-commerce market accounted for 14% of the whole retail sales worldwide, with sales of $4.3 trillion in 2020, please refer to Exhibit 1. According to the Statista study, the CAGR of 24% between 2016 – 2020 will be not sustainable and will drop to 11% between 2021 – 2025. This drop is mainly attributable to the extraordinary performance of the E-Commerce sector between 2016 – 2020, partially boosted by the pandemic.

Exhibit 1: Retail E-commerce sales worldwide from 2016 to 2025



Source: Statista

Exhibit 2: Global smartphone penetration rate as share of population



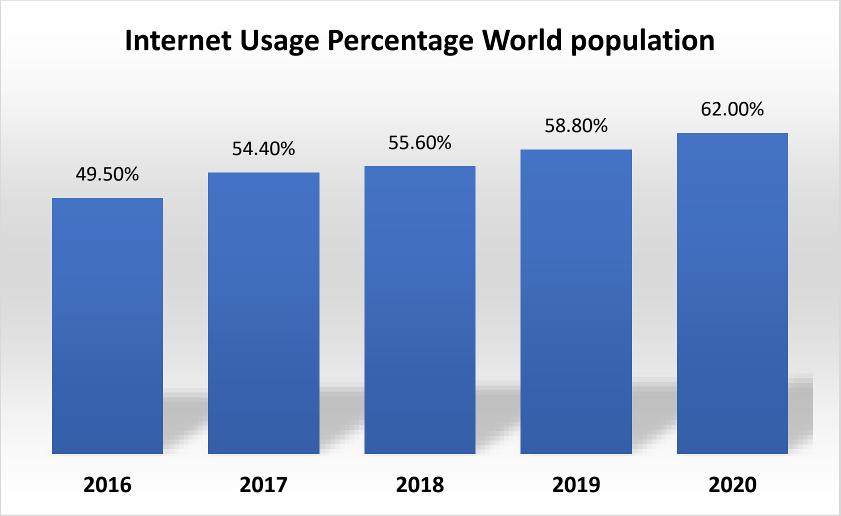
Source: Statista

Slowly increasing penetration of smartphone usage is improving the e-Commerce revenues industry across the world, please refer to Exhibit 2. Financial services, digital content, travel and leisure, e-tailing amongst others make up a variety of the E-commerce options available to the customer base that are obtaining momentum with increased internet usage, please refer to Exhibit 3. The increasing mobile and internet traffic usage is of importance for Shopify, but this increase is being generated slowly, yearly, around 2% for internet and smartphone usage.

The slightly above the average industry growth is justified by numerous factors and trends. The digital marketplace saves time and effort. On top of that, due to the Covid pandemic, governments strained the population to confine at their homes, therefore forced the usage of E-commerce for any retail needs.

It is becoming more and more clear with the new covid-19 vaccinations the pandemic will not be enduring for long, signifying that the surge in E-commerce sales will be brief as people will have the choice to accommodate their retail needs in person.

Exhibit 3: Internet Usage Percentage World population



Source: Ourworldindata

Competitors

Many other companies also host online stores and process payments at competitive prices. With very little technological advantage, Shopify will find it difficult to protect its market share from larger competitors or new entrants, please refer to Exhibit 4. Strong competition will not only cause the addition of more merchants, but it also puts a limit on how much Shopify can charge for its services. Shopify has not increased the price of its monthly subscriptions on any of its three existing plans since 2017, which has been a drag on profitability. One of Shopify's biggest competitors, Square, is pressuring Shopify by offering E-commerce plugin for free to all WordPress users.

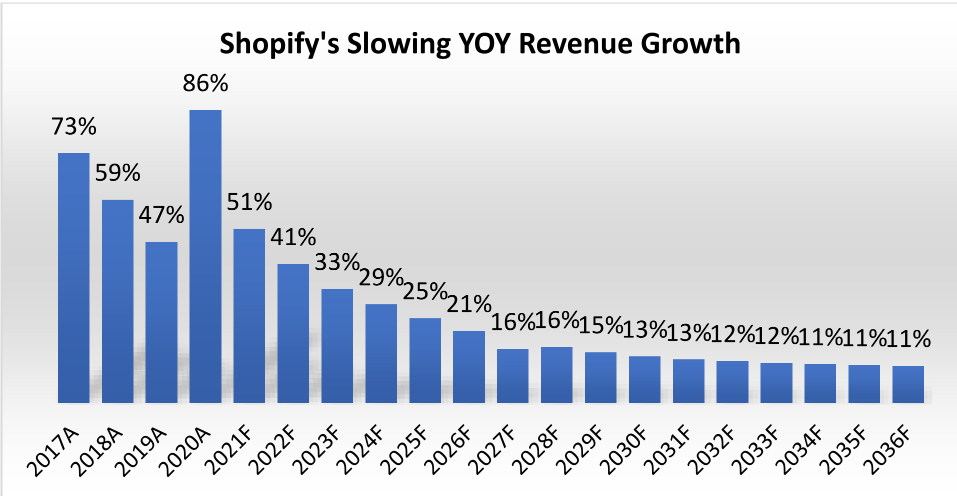
Over the long term, Shopify will find it difficult to maintain the year-over-year (YoY) growth it is experiencing in the TTM period, largely due to a secular slowdown and increasing competition in the overall E-commerce market. Exhibit 5 shows our estimate of Shopify's YoY revenue growth rates for forecasted years are much lower than the previous years.

Exhibit 4: Service Offers by Shopify and Competitors

	Service Offered		
	Web Content Management (or similar system)	Payment Gateway (or similar service)	Marketplace
Drupal	√		
Adobe Systems, Inc. (ADBE)	√	√	
Oracle Corporation (ORCL)	√	√	
Square, Inc. (SQ)	√	√	
SAP SE (SAP)	√	√	
salesforce.com Inc. (CRM)	√	√	
Wix.com, Ltd. (WIX)	√	√	
Big Commerce (BIGC)	√	√	
Squarespace	√	√	
Weebly	√	√	
Volusion	√	√	
GoDaddy	√	√	
WooCommerce	√	√	
HCL Technologies Ltd	√	√	
Shopify (SHOP)	√	√	
PayPal (PYPL)		√	
PayU Group		√	
Stripe		√	
Wepay, Inc.		√	
Skrill Limited		√	
Payline		√	
Helcim		√	
Authorize.net		√	
eBay (EBAY)		√	√
Facebook (FB)		√	√
Craigslist		√	√
Walmart (WMT)		√	√
Etsy Inc (ETSY)		√	√
JD.com (JD)		√	√
Amazon (AMZN)	√	√	√

Source: Forbes

Exhibit 5: Shopify's Slowing YOY Revenue Growth



Source: Analysts estimates

Reseller Market

We do not think Amazon's roughly 50 billion and e-Bay's 11 billion in reseller sales is available to Shopify, primarily due to Amazon and e-Bay having stronger traffic than Shopify, requiring a significant time and ongoing investments in social media (e.g., Instagram, Facebook) and in advertising (e.g., Post boosts). Even though Shopify chooses to pursue these investments, the traffic most likely will not be close to that of Amazon or e-Bay.

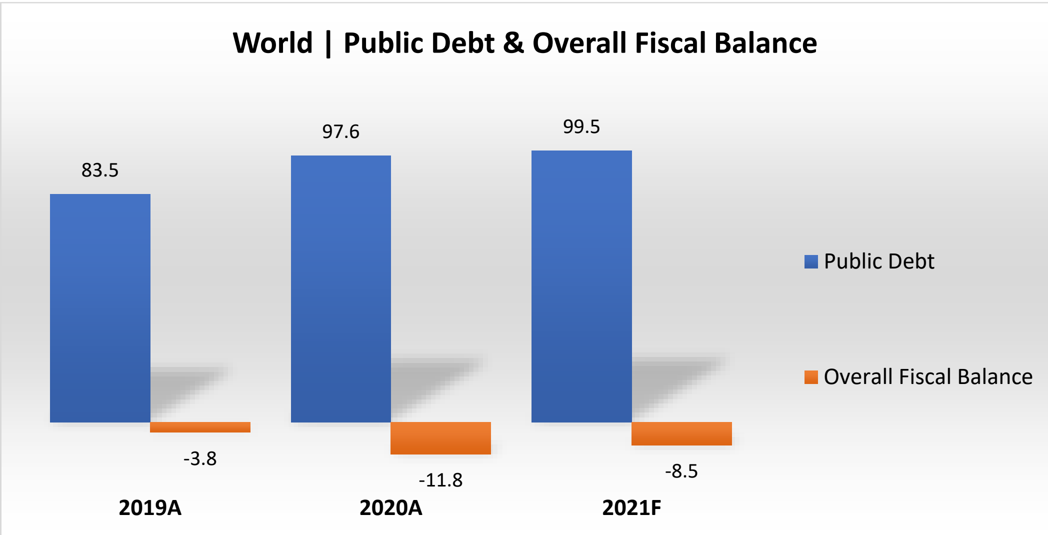
All in all, a merchant chooses Shopify to either create a brand with recurrent customers or dropship products and reduce the effect negative reviews could cause on future sales.

Economic Overview

Economic overview in 2020 can be attributed to Covid-19 pandemic. As a consequence of the pandemic, World GDP has decreased by 3.3% in 2020. This decrease in World GDP reflects pandemic restrictions, such as lockdowns taken place throughout the World, pandemic uncertainties, stagnant global trade, and consequently volatile financial markets. On the contrary, The World Bank expects in 2021 and in 2022 the world economy to grow by 5.5% and 4.2%, consequently the average for 3 years is forecasted to be 2.1%, much lower than the growth average before the pandemic (2010-2018), 3.4%.

Public debt increased from 83.5% of the GDP in 2019 to 99.5% of the GDP in 2020, please refer to Exhibit 6. According to "Debt and Growth" study made by The World Bank and the IMF, for debt levels less than 60 percent, public debt tends to have a positive effect on growth, while debt levels between 61 and 90 percent tend to have no significant impact on growth, and debt levels above 90 percent have increasingly negative impacts on growth rates. Consequently, we expect the high Public Debt rate to have a negative effect on the long-term GDP growth.

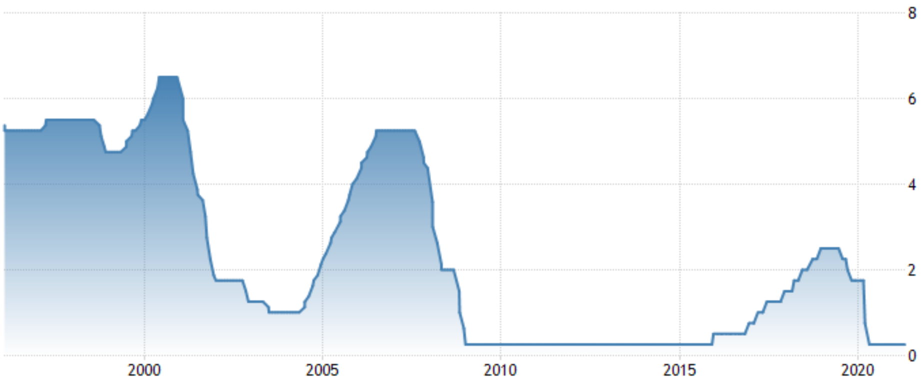
Exhibit 6: World | Public Debt & Overall Fiscal Balance



Source: IMF

Additionally, almost 0% interest rate in United States is helping Shopify to enjoy the ability to finance operations, acquisitions, and expansions at a cheaper rate, therefore improving the future earnings potential. Nevertheless, we believe this boost to Shopify will be short living as the low interest rates are rapidly increasing immediate consumption, the scarcity of real resources in the future will become obvious. Then there is either a crisis in which debts are liquidated or follow up steps regarding the loose monetary policy is taken, which may open on to an even greater disruption of the capital structure. Please refer to Exhibit 7.

Exhibit 7: United States Fed Funds Rate

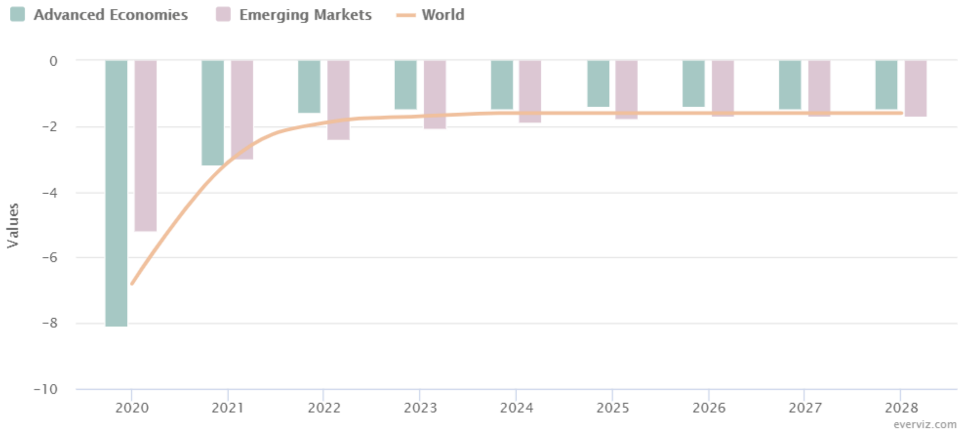


Source: *Federal Reserve*

Damage of Covid-19 to the World economy

On top of the present imminent economic damages of the Covid-19 pandemic, there is also a possibility that there will be medium-term costs to the global economy in the form of lost activity from the pandemic. Oxford Economics assumes that the level of global GDP does not fully be retained back as they were forecasting before COVID-19, implying that there are some longstanding losses that will be the result pandemic. In the medium term, the cost of the pandemic could be in the region of 1.6% of global GDP per year, although this estimate is subject to a high degree of uncertainty. On top of that, the tendency towards deglobalisation could likely accelerate after the 2020 Covid-19 pandemic, as firms look to save themselves against further significant supply chain disruption in the event of national lockdown in economies where parts of their supply-chain are located. While this may mitigate future risks, it may result in less efficient production at a global level. Please refer to Exhibit 8.

Exhibit 8: Continuing damage of Covid-19 to the World Economy



Source: Oxford Economics

Segment Analysis

Shopify has a market presence widely focused on Developed Countries. In this section, we will address all geographic business segments where the company operates, with a focus on the regional industry performance. Shopify's revenues and CAGR for each segment are presented in detail.

- **Canada**

Canada is an important market for Shopify both in terms of importance and size, having reached $193 million in revenues in 2020 and also because it is established and headquartered there. Shopify's revenues have been growing rapidly for this market segment over the past few years with a CAGR of 63.6% from 2016 to 2020, as Canada is forecasted to have an ever-increasing online shopping adoption rate, consequently Shopify's total revenue will hit $874 million with a CAGR of 31%. However, as the market value is small compared to other segments, Canada is more of a prestige location for Shopify as it was founded there, rather than a revenue driver. Please refer to Exhibit 9.

- **United States**

United States remains as the single most important market for Shopify, having the largest revenues for Shopify with $2 billion. Shopify's revenues have been growing rapidly for this market segment over with a CAGR of 62% from 2016 to 2020. In the future, due to increasing competition and slowing E-commerce growth, we expect Shopify's revenues in the US market to increase with a damped rate of 30% CAGR from 2021 to 2025. Consequently, the total revenue will grow from $2.9 billion to $8.5 billion, remaining as the highest revenue amongst the markets that

Shopify is present, preserving its importance as the single most valuable market for E-Commerce and for Shopify. Please refer to Exhibit 9.

- **United Kingdom**

United Kingdom is important for Shopify not only because it stands as the main foothold of Shopify in Europe, but also because of its current E-commerce size. United Kingdom E-commerce market had the highest CAGR after Rest of the World with 19.5% from 2016 to 2020, but this trend is expected dampen in the upcoming 5 years with a CAGR of 10%, due to the negative outlook on the UK Market because of Brexit. On the contrary, Shopify's CAGR in United Kingdom is considerable high with 66.5% from 2016 to 2020. We believe the impressive performance of Shopify in United Kingdom will not live long as we expect the revenue growth to be limited to 32.1% CAGR from 2021 to 2025, due to the below the average market growth rate and the increasing competition. Please refer to Exhibit 9.

- **Rest of the World**

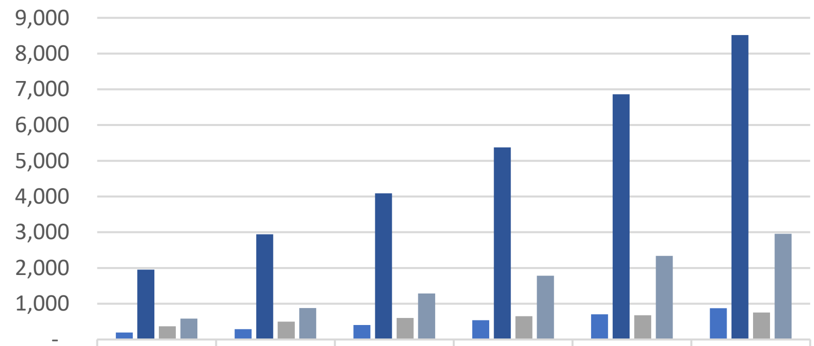
Any country that is not mentioned previously in Segment Analysis is added to Rest of the World cluster.

Globally, credit cards remain the most popular form of payment; but debit cards, digital payment systems, direct debits, and even cash on delivery are more popular in developing markets like India and China, which shows strong competition for Shopify which currently has little to no presence in these markets.

One of the most important initiatives of Shopify is to expand into non-English-speaking countries, as Shopify's presence has been limited in Rest of the World, compared to other segments. Nevertheless, Shopify has shown little success growing into this segment. Rest of the World market has a whopping CAGR of 25% from 2016 to 2020, but Shopify's revenues in the Rest of the World has stayed modest with $582 million, making only 20% of the total revenue. We believe the low revenue of Shopify in the Rest of the World is observed because of the competitive market which values national products over foreign made. Therefore, in the future, even though the market growth rate is high, we expect a moderate increase in Shopify's revenues for this segment with a 35% CAGR from 2021 to 2025. Please refer to Exhibit 9.

Exhibit 9: Shopify's Revenue by Segments

Shopif's Revenue by Segments (in million $)



	2020A	2021F	2022F	2023F	2024F	2025F
Canada	193	291	405	540	704	875
United States	1,954	2,943	4,090	5,375	6,863	8,518
UK	369	501	600	652	680	754
Rest of the world	583	881	1,286	1,785	2,341	2,956

Canada United States UK Rest of the world

Source: Analysts estimates

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

This report was prepared by [*Maria Elena Murgia and Mert Aydinok*], a Master in Finance student of Nova School of Business and Economics ("Nova SBE"), within the context of the Field Lab – Equity Research.

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