

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.

COMPANY REPORT: PAYPAL HOLDINGS, INC.
The Centre of the Next Innovation

GIEDRE MALINAUSKAITE 41814

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

Rosário André

2021-01-04

Abstract

This paper is done to value PayPal Holdings (\$PYPL) for an investment of a 12 month time horizon from a fundamental analysis perspective, utilizing various methods such as discounted cash flow analysis and multiple analysis. By seeking a fair valuation, we intend to reach a conclusion regarding the return expectations for an investor by holding Paypal for the incoming 12 month period, considering the future growth potential as well as risks and uncertainties.

Keywords (up to four)

Paypal, Fintech, payment, money

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

This report is part of the Company Report: PayPal Holdings report (annexed) and should be read has
an integral part of it.

Table of Contents

COMPANY OVERVIEW	5
MAIN PRODUCTS AND SERVICES	5
▪ <i>PayPal</i>	5
▪ <i>Braintree</i>	6
▪ <i>Venmo</i>	6
▪ <i>Xoom</i>	6
▪ <i>iZettle</i>	6
▪ <i>Simility</i>	7
▪ <i>HyperWallet</i>	7
▪ <i>Honey</i>	7
REVENUE CATEGORIES	7
▪ <i>Transaction revenues</i>	8
▪ <i>Other value-added services</i>	8
▪ <i>Geographics</i>	8
KEY PERFORMANCE INDICATORS.....	9
▪ <i>Active accounts</i>	9
▪ <i>Payment transactions</i>	10
▪ <i>Total Payment Volume (TPV)</i>	10
ACQUISITIONS	10
RISKS.....	11
FOREIGN CURRENCY EXCHANGE RATES.....	11
CROSS-BORDER TRADE.....	12
INTEREST RATES	13
FINANCIAL AND MULTIPLE ANALYSIS OF COMPETITORS.....	13
VALUATION.....	15
COST OF CAPITAL	15
INTRINSIC VALUATION.....	16
ANNEX: GROUP REPORT	17

Company overview

PayPal was first founded in 1998 as a software company for mobile devices, named Confinity. Due to the lack of success of this business model, in 1999, the company switched its track towards digital payments. In one year, Confinity merged with X.com, an online banking company. Later the company was renamed PayPal, and it went public for the first time in 2002 for the price of \$13 per share. Few months after the IPO, the company was acquired by eBay and became private again, continuing to operate as a part of the bigger business.

PayPal Holdings, Inc. was incorporated in Delaware in January 2015 after a spin-off from eBay. It became a publicly-traded company in July for the second time in its history. PayPal is a leading technology and digital payments company, which connects people and businesses through financial services. It allows digital and mobile payments anytime and using any device on behalf of consumers and merchants. As of the end of 2019, PayPal had more than 300 million active accounts (both consumer and merchants) in around 200 different markets. The company allows sending and receiving money, as well as transferring and withdrawing funds. For the fund management, PayPal offers various sources, such as a bank account, a PayPal account balance, a Venmo account balance, a PayPal credit account, credit or debit card, or even coupons and gift cards.

Main products and services

PayPal Holding, Inc. offers its customers and merchants different solutions for both physical and electronic payments. It is possible for people to pay using PayPal account balance, debit or credit card, bank balance or QR code (the latter was introduced recently, therefore is still developed to be used in more markets). For merchants, they are offering POS solutions for in-store payments (card readers, smartphones and tablets, contactless payments), as well as allowing them to accept various online payment methods (credit and debit cards, Venmo, Pay in 4, PayPal Credit, etc.). For merchants, they are offering data analysis tools and help to manage and bridge their cash flows. For private customers, PayPal is offering a digital wallet for drawing and charging their accounts in one single place. The company is putting a lot of effort into ensuring fast and secure payments, preventing fraud, and protecting both the consumers and merchants.



- PayPal

The main company's focus is making it easy and quick for customers to send and receive money online. The user creates an account, which is linked to a credit card or a bank account, and then can initiate the online payment through a website or an app. The transfers are completed within a few minutes and could be made to family, friends, or online sites, no matter which country they are in. PayPal provides a possibility to do the transaction without any fees for the family and selected friends as long as they have a PayPal account and are in the same country. However, PayPal charges money for international transfers and the conversion to the currency, as well as other fees, for example, credit/debit card confirmation or instant transfers. Moreover, PayPal is considered to be a very safe option for day-to-day transactions since they do not require to provide the card or bank account details during the transaction, unlike other competitors. PayPal is also offering credit services through PayPal Credit account, which allows customers to take credit for an additional fee.



- Braintree

Braintree was acquired by PayPal in 2013, while it was still part of its parent eBay. The business was focusing on improving and automating online payment gateway for merchants and online business, which expanded the customer base and region of PayPal. Braintree is used by e-commerce organizations that want to start accepting payments from customers in their websites or apps. It allows enterprises to reduce the costs and complexity of managing many different payment providers. Braintree charges a fixed amount and percentage per transaction by providing merchant payment gateway third-party integration, support, and other additional services. Back in 2012, Braintree bought peer-to-peer (P2P) mobile payments app Venmo, which, after PayPal's acquisition of Braintree, became part of the holdings as well.



- Venmo

Venmo was founded in 2002 as a P2P platform that was based on mobile messages. Later it integrated into social media networks. Being acquired by Braintree and later PayPal, gave them so needed cash for further development of the app. Venmo is seen to be like an intermediary between two banks and two people, which does not charge any additional fees if the transaction is done between users of the apps that are linked their debit cards or bank accounts¹. However, monetization of Venmo comes from the additional fees charged for credit cards and per-transaction fees for the merchants. In the past few years, Venmo introduced its debit card, from which a huge part of the revenues is generated. In October 2020 PayPal announced that Venmo (together with other PayPal services) will allow users to make transactions using cryptocurrencies from 2021, which might increase their number of customers significantly. For now, cryptocurrencies will be accepted only in the US, and customers there will be able to buy, sell and hold four different cryptocurrencies on PayPal: Bitcoin, Ethereum, Litecoin, and Bitcoin Cash.



- Xoom

Xoom was founded in 2001 was purchased in 2015 and helped PayPal to start building its remittances business. Until then, it was a publicly-traded company, backed by Sequoia Capital and other VCs. It enables money transfers, bill payments to family or friends to a different country online or through the mobile app. At the time of the acquisition, Xoom already had more than 1 million US users, which let PayPal expand their international markets even more. For customers, fees vary across different countries, depending on the transfer amount and currency. Xoom makes money out of those fees, as well as fluctuations of exchange rates of the received amount in other currency than the US dollar. The company is deemed to be competing with other money transfer giants, like Western Union or MoneyGram, for its lower prices.



- iZettle

iZettle, founded in 2010 and purchased by PayPal in 2018, is usually called "Square of Europe." It is a mobile credit card payment service, mostly used by small businesses for portable point-of-sale solutions or entrepreneurs that want to start accepting payments by cards. It charges a fixed rate per transaction received, regardless of the card used. It also accepts newly introduced QR payments via PayPal for a very low fee. Unlike other POS terminals, iZettle does not require landlines or GPRS SIM cards; it just needs a mobile phone and the internet. However, compared to its competitors like SumUp or Square, iZettle is seemed to be lagging off in POS systems

¹ <https://www.investopedia.com/articles/personal-finance/032415/how-safe-venmo-and-why-it-free.asp>

updates, innovations, and slow customer support for technical difficulties.



▪ Simility

To improve its payments security, in 2018 PayPal acquired Simility, a company that ensures fraud prevention. It uses machine learning and various APIs to build and improve digital security for merchants. The acquisition happened to be good both for PayPal and Simility: PayPal was able to ensure better security to its growing e-commerce customer base, and Simility got access to more different companies to test and improve their algorithms on. It charges fees per transaction and provides different pricing structure for ensuring the security for each of the company based on their products.

▪ HyperWallet



HyperWallet was acquired by PayPal in 2018 and allowed the company to broaden its pay-out capabilities. The system enables customers to integrate payment functionality directly to their platforms and allows their own customers to manage their payments much easier and faster. HyperWallet uses APIs for the clients to integrate the system easily to their platforms and make it user-friendly. The companies then can send all their payment to banks, suppliers, customers, and other parties, cost-effectively and transparently. It reduces administration and customer support costs regarding the payments. HyperWallet monetization comes from setup and monthly maintenance fees, transfers, and other additional features.

▪ Honey

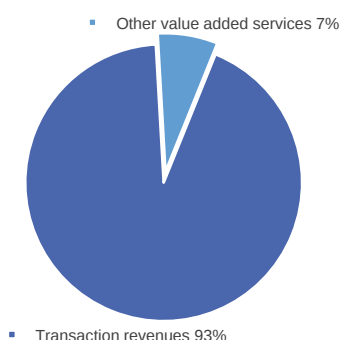


Honey is by far the biggest acquisition of the company up until today, purchased at the end of last year for 4 billion dollars. It provides an extension for the browsers that automatically applies coupons and discounts on e-commerce websites. At the same time, it increases the engagement of the customers in the online payment industry. Honey charges retailers a small percentage from sales made with coupons it finds, making the experience free and appealing for everyday shoppers. Honey also introduced its mobile app that lets to put to their cart products from various retailers and pay for them all at once, which makes the company very competitive among other shopping platforms, like Amazon or Google, that still do not have such functionalities integrated.

Revenue categories

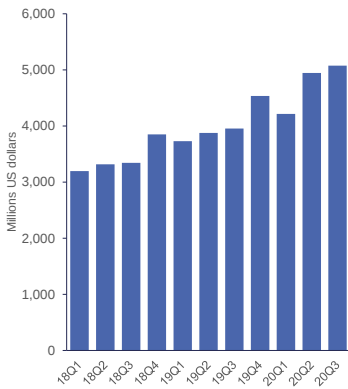
There are two main revenue categories that the company distinguishes: transaction revenues and revenues from other value-added services. Transaction revenues form the biggest share of the total revenues in the company (93% and 90% of total revenues in the third quarter of 2020 and 2019, respectively). Revenue is highly impacted by the mix of merchants, products and services provided, the number of transactions in different regions, and the amount of loans receivables outstanding.

Figure 1: Revenue categories
(3 months ended 2020-09-30)



▪ Transaction revenues

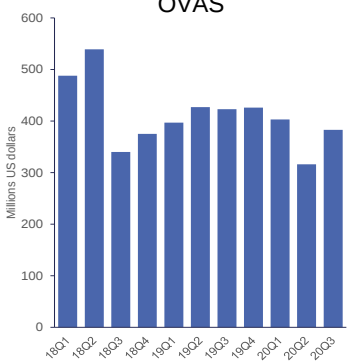
Quarterly transaction revenues



Transaction revenues are mostly coming from the various transaction fees charged to the merchants and consumers. The amount of revenue collected highly depends on the number of transactions completed in the payment platform. Therefore, it is mainly based on the volume of the activity, or so-called Total Payment Volume (TPV), and the number of payment transactions. In this revenue category, additional fees are included, such as the ones coming from currency conversion, cross-border payments instant transfers of payments made to/from debit/credit cards from/to PayPal accounts. As it could be seen in the figure on the left, from the beginning of 2018, the quarterly transaction revenues increased by almost 60%, and almost each of quarter, there could be seen an increase in the revenue.

▪ Other value-added services

Quarterly revenues of OVAS

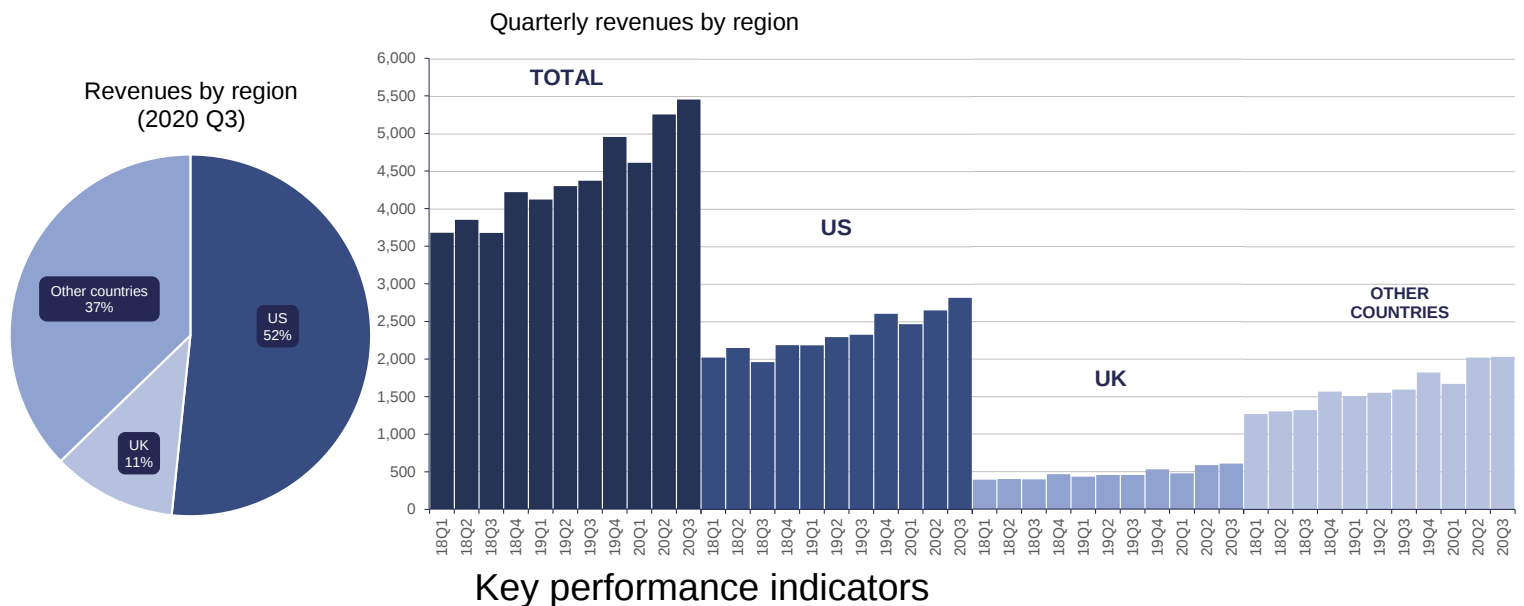


Other value-added services, or OVAS, includes all the other revenues earned that are not related to payment transactions, such as partnerships, subscriptions, gateway fees, and other revenues. Here interest earned from the customers' loans receivable is included as well. The fluctuation in OVAS compared to revenues from transactions is much bigger, with a significant decrease in the third quarter of 2018 and the second quarter of 2020. Usually, these decreases are offset by the increase in the transaction revenues and do not significantly affect the total revenues. Also, OVAS is a comparably small part of total revenues; therefore, the fluctuations do not affect the total number too much. There was a decrease in OVAS from the beginning of 2018 until today, mostly caused by the changes in the US consumers' credit receivables portfolio and the decrease in transition servicing activities provided by the Synchrony bank that ended in the middle of the year 2019. There was another decline in OVAS in the beginning of 2020 due to the world pandemic and changes in peoples' spending. However, the acquisition of Honey partially offset this decline in the second quarter of 2020, together with increased overall e-commerce business.

▪ Geographics

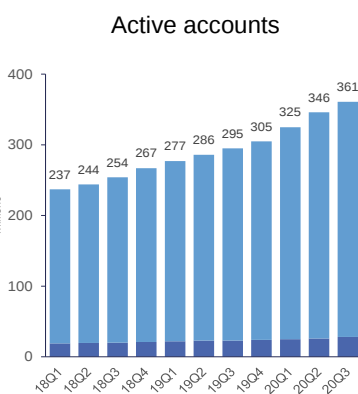
Net revenues are attributed to the country where the merchant is located or where the customer or merchant resides (in the case of international payments and other value-added services). The two countries that have the highest contribution to PayPal's revenue are the US and the UK. In the last reported quarter (ending September 30, 2020) the US accounted for more than half of the total revenues, and the UK around 11% (see figure 4). Other countries include all other markets where the company is operating. Throughout the history of PayPal, none of those countries alone exceeded 10% of total revenues (together, they make around 37% of total revenues).

In the figure below, quarterly revenues from different geographies are shown, together with total ones. Each region seems to be growing at the same pace since the beginning of 2018 with little fluctuations. US from the very beginning accounted for the biggest part of the total revenues.



The key performance indicators that drive financial success for the company and are used to measure the performance are active accounts, payment transactions, and payment value. These metrics are used to measure customer engagement and evaluate current and future performance. Transactions revenues are highly correlated with total payment value (TPV) and the number of payment transactions completed in the platform; therefore, they are seen to be key indicators of the operating results.

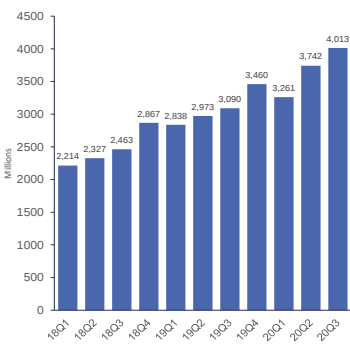
Active accounts



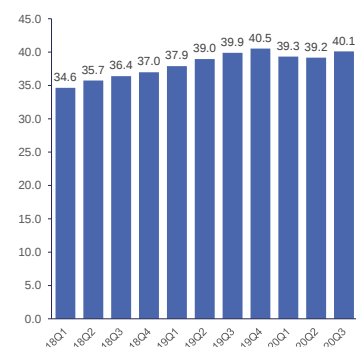
Active accounts are the accounts directly registered in PayPal or platform access partner and completed transactions in the past year. In the graph on the left, it could be seen the total number of active accounts (in millions) at the end of each quarter from the first quarter (Q1) of the year 2018. Since then, the number of active users in the PayPal company increased by more than 150% and most likely will keep increasing in the upcoming quarters. There could be seen a bit bigger increase than usual (+20 million accounts) in the Q1 of 2020. It was caused by the acquisition of Honey, which alone brought 10 million new active accounts. Also, due to the world pandemic and increased usage of digital devices, the number of active accounts keeps increasing in the other quarters of 2020. Around 8% of total active accounts (in the graph, it appears as dark blue color) are coming from merchants and the percentage is staying the same throughout all the quarters. The rest of the active accounts (92%) are coming from consumers, where around 20% of these accounts belong to Venmo company, and the rest are of the other core PayPal parts.

■ Payment transactions

Number of Payment Transactions



Number of Payment Transactions per active account

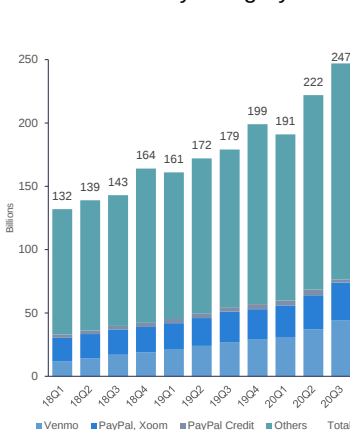


Payment transactions are defined as the number of transactions completed in PayPal Payments Platform or enabled via third party solutions (not including gateway-exclusive solutions). In the graph on the left, the number of payment transactions completed in each of the quarter from beginning of the year 2018 can be seen. There is a significant increase in quarterly transactions at the end of 2018 due to various acquisitions that PayPal made during this quarter and which will be analyzed later in the report. Also, the first quarter of the year 2020 shows a decline in the number of payment transactions, which mainly was caused by the acquisition of Honey (half of the new accounts came from Honey, while the number of transactions did not increase that much). Despite the decreased number of payments for traveling purposes, a number of transactions PayPal handled has jumped in the second quarter as the mobility restrictions governments imposed had changed consumers' spending habits in favor of PayPal.

The other metric used is the number of payment transactions per active account. It takes the total number of payments completed in the last one year and divides it by the active accounts at the end of the period. It is used to measure customer engagement to the platform or third parties that enable payments via PayPal. From the beginning of 2018 until the end of 2019, there was an increase in the customers' engagement, as the numbers of both measures were increasing. However, it brought an unexpected decrease, which was mainly caused by the decrease in the number of payment transactions due to various restrictions that occurred because of the pandemic and acquisition of Honey. In the last reported period, there could be seen an increase in this measure and expected increase in the end of the year.

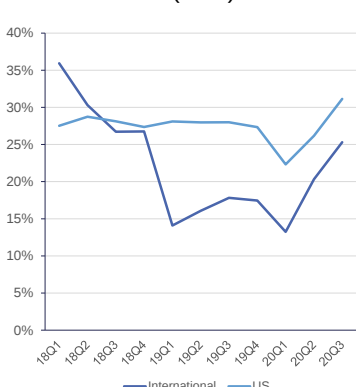
■ Total Payment Volume (TPV)

TPV by category



It is the value of the payments that are completed in the company's payment platform or via partner payment solution, not including gateway solutions. Transaction revenue growth is correlated to the TPV growth; therefore, it is mainly used for the evaluation of the PayPal's performance and customer engagement. A big part of it (around 30% in the last three quarters) is coming from main PayPal peer-to-peer transaction platforms: PayPal Payment Platform, Xoom and Venmo. 2% consists of payment volume created solely by the PayPal Credit and the rest of the volume is created by all other consumers and merchants. TPV growth depends a lot on payment transactions completed and highly correlated to the growth of revenue. From the beginning of the year 2018 From the end of the first quarter of 2020 until the end of the third quarter, TPV grew by almost 30% - the biggest growth in PayPal's history after the second IPO. In 2019 the company processed around 711 billion of TPV, while in only 9 months of the year 2020 they already completed 660 billion of TPV – 150 billion more than in the same period last year.

TPV growth by region (YTD)

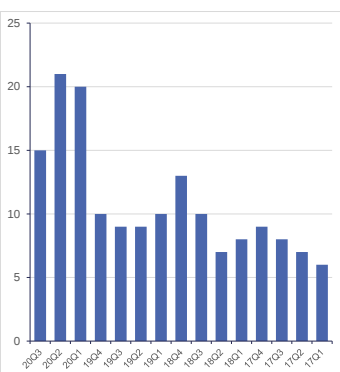


When it comes to TPV generated in different regions where PayPal is operating, most of it comes from the US alone. Since the beginning of 2018, the percentage of US TPV to total varied from 58% and 61% and kept increasing. In the second figure TPV growth (YTD) in two regions of US and International could be seen. The growth seemed to be bigger in the US over the two past years but in the year of 2020 international countries' payment volume is growing slightly more than in US.

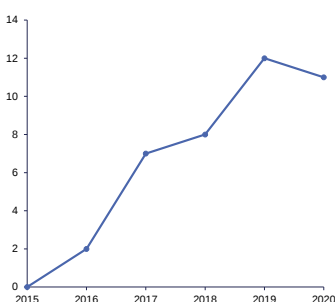
Acquisitions

Even before the second IPO, a big part of PayPal's strategy included acquisitions of other financial

Number of new new accounts



technologies companies, as well as investing in them and taking a minority share in their businesses. It was a big part of their growth as it allowed them to be the center of the next innovation, adding technical capabilities to the company, as well as expanding the geographical reach of new merchants and customers. After the IPO, PayPal's has been spending \$1 to \$3 billion dollars every year for acquisitions, as well as different investments. In 2018 CEO of PayPal of the company pointed out² that since acquisition is the integrated part of company's growth, they are targeting \$3 billion of investments every year, leaving a possibility for the higher value acquisition. The picture below shows the timeline of the acquisitions of PayPal and their values, if they are public. As it could be seen, PayPal is making one to three acquisitions every year and the value of them is growing significantly. In 2018's fourth quarter and 2020's first quarter, there could be seen an increase in net new active accounts (+4.7 million and +10 million, respectively), much more than in any other of the quarters. This growth can be explained by the acquisitions completed in each of these quarters and new active accounts added because of those acquisitions. For example, in 2018 net new acqutive accounts increased by almost 4.7 billion, while acquisitions themselves brought around 2.9 billion new active accounts, meaning that the organic growth of accounts was not as big as the real one. The same happened in the first quarter of 2020: acquisition of Honey alone brought half of the new active accounts that quarter. This last acquisition of Honey was by far the highest in its value as well, reaching up to \$4 billion, and opened a way for the company to reach the online shopping market more broadly, increasing customer engagement and adding marketing possibilities for merchants. The acquisition of GoPay (70% of the stake) helped PayPal to reach the market in China, which makes the access of all Asian market much easier, as it is the center of the economy there and most of the e-commerce growth in the next few years is projected over there.



PayPal is focusing not only on acquisitions but also spending a lot of money on investments in small companies as well. Another graph on the left shows the number of total investments made from 2015. Every year the number is growing significantly, and only in 2020, it got a bit smaller. It could be well explained by the acquisition of Honey that year and so far the biggest investment in PayPal's history. PayPal Ventures is a VC fund within PayPal Holdings that is targeting fintechs for the investments that are strategic for the company itself. It helps to increase the reach of the newest technologies and new markets. Investing in big companies, such as Uber Technologies or making partnerships with Facebook, for example, gives access to PayPal to an enormous number of new customer and make them competitive within the market.

Risks

Foreign currency exchange rates

Almost half of PayPal's revenues are coming from countries other than the US. Therefore, the transactions are highly dependent on the foreign currencies, mostly Euro, British Pound, Australian Dollar and Canadian Dollar. In the graph below, there could be seen US dollar against

² <https://www.reuters.com/article/us-paypal-m-a-idUSKBN1JY0VC>

all before mentioned currencies and their fluctuations from the beginning of the year 2016. These movements can affect the financial results of the company a lot. Almost half of the revenues are coming from international countries as well as costs related to them. PayPal also charges partners in other countries than US fees for the use of their intellectual property and technology. In general, PayPal is a net receiver of foreign currencies due to revenues coming from other countries. Because of this, the company is benefiting from the weakening of the US dollar. As it could be seen from the graph below, from 2018 the dollar was getting stronger against all four main currencies for the company, while after the start of the world pandemic in the beginning of 2020, the US Dollar started to weaken and benefiting PayPal's cash flows. The company is regularly hedging foreign currency exchange risk, but it impossible to entirely eliminate this risk, as the effect is not predictable. PayPal is mostly using foreign currency exchange forward contracts to minimize the risk coming from the investments in foreign subsidiaries.



Cross-border trade

Since a considerable part of PayPal's activities is happening in more than 200 different markets, anything that makes the cross-border trade (meaning transactions where two parties are in different countries) more difficult affects the business negatively. Cross-border trade is also highly impacted by the fluctuations in the foreign exchange rates. When the exchange rates rise, customers will be less willing to make the transactions to other countries, meaning that the volume of transactions gets smaller and consequently revenues decrease. Another major thing that affects this trade is the relationship between various countries, especially the US versus the rest of the world, especially regarding the changes in laws and regulations, such as increased trade tariffs or major changes in trade policy. A recent example of the high restrictions over the cross-border change was the world pandemic that caused a decrease in international trade, lower spending, and less traveling. Harm to PayPal's business, in this case, was offset by the increased digital payments and e-commerce. Another uncertainty for PayPal is Brexit. Today the deal is assumed to be already agreed between EU countries and UK; however, the exact conditions are not publicly available. Since around 10% of PayPal's revenues are coming from the UK, the final decision for the payment industry could affect the company a lot. Also, depending on the deal

itself, currency rates between the US dollar and British pound can fluctuate throughout the upcoming year.

Interest rates

PayPal is also exposed to the risk of fluctuation in interest rates of its investment portfolio and assets relating to customer balances. High-interest rates can negatively affect customer's spending levels and the overall income of the company. It generally leads to higher payment obligations for the credit products, which may reduce the customer's ability to repay its obligations on time. Furthermore, as of September 30, 2020, PayPal had around 9 billion of fixed-rate debt, meaning that their fair value changes as interest rates change. Also, the company has entered a revolving credit facility of 5 billion euros (available, as of September 30, 2020), which requires payments of interest over this facility, which rate is fluctuating.

Financial and multiple analysis of competitors

For the financial analysis of the competitors, the companies were divided into two sectors: network processing companies and other financial technology companies. The exact list of the companies and their selected financial information could be seen below. The reasoning why these companies were chosen for the competitor analysis lies behind the availability of the financial data. Some of the possible competitors of PayPal are owned by their respective parent companies which are only making their consolidated financial statements publicly available, preventing the detailed extraction of their financial data for their small parts of the businesses. An example of such a competitor is Apple Pay, which is legally not a separate entity, and therefore, not making its financials available for financial analysts. Also, only a part of some companies can be seen as the direct competitor for PayPal, and it creates limitations for the extraction of financial data for only that part of the company. Therefore, these companies were only included in the market share calculations but not in the financial analysis. The other limitation that was experienced is companies' financial data not being publicly available. Since PayPal Holdings is combined of multiple small companies that are focusing on different products and services, a lot of their direct competitors are startups themselves or growing companies that are not yet public. Based on this reasoning, twelve companies were chosen for the financial analysis of the competition.

When comparing PayPal with network processing companies, namely Visa, Mastercard, and American Express, its revenues of the last twelve months are just a bit below the average, only higher than Mastercard. However, revenue growth-wise over the year, PayPal has the only positive value, at almost 25%, while all the others experienced a high drop in the same period. The market cap and enterprise value of PayPal, compared to the other three companies, was the lowest. However, the overall debt of the company was also the lowest in the last reported period and the net debt stayed negative, as it holds more cash than debt itself.

Data taken from Bloomberg
\$M, except share price and ratios

	Network Processing Companies							
	PayPal	Visa	Mastercard	American Express	Median	Average	Low	High
<i>Ticker</i>	PYPL	V	MA	AXP				
<i>Last reported quarter date</i>	2020-09-30	2020-09-30	2020-09-30	2020-09-30				
Share price ⁽¹⁾	234	218	356	121	226	232	121	356
Share price ⁽²⁾	197	200	338	100	199	209	100	338
Shares outstanding ⁽²⁾	1,173	1,686	993	805	1,083	1,164	805	1,686
<i>Trailing Twelve Months (TTM):</i>								
Sales	20,299	21,846	15,595	38,101	21,073	23,960	15,595	38,101
% YoY growth	24.7%	-16.9%	-14.1%	-20.4%	-15.5%	-6.7%	-20.4%	24.7%
EBITDA	4,560	21,846	10,089	8,353	9,221	11,212	4,560	21,846
Earnings	3,142	11,167	7,416	3,282	5,349	6,252	3,142	11,167
<i>At the end of the last reported period:</i>								
Market cap	230,919	387,742	337,156	807,013	362,449	440,707	230,919	807,013
Cash and cash equivalents	14,158	20,272	10,625	33,030	17,215	19,521	10,625	33,030
Preferred & minorities & other	44	10,172	85	0	65	2,575	0	10,172
Total debt	9,664	24,697	12,574	46,493	18,636	23,357	9,664	46,493
EV	226,469	402,339	339,190	110,820	282,829	269,704	110,820	402,339

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

Comparing PayPal with other financial technology companies, it could be seen that both the revenues and earnings are way above the average and the highest. The same goes for the Market cap and the enterprise value, while the debt being the lowest. Share price, on the other hand, is not the biggest. Adyen and Shopify prices are a few times higher than PayPal's. However, the number of shares outstanding is the highest, which makes all the valuation to appear higher overall.

Data taken from Bloomberg
\$M, except share price and ratios

Data taken from Bloomberg \$M, except share price and ratios	Other Financial Technology Companies													
	PayPal	Square	FIS	Global Payments	Intuit	Western Union	MoneyGram International	Adyen	Euronet International	Shopify	Median	Average	Low	High
Ticker	PYPL	SQ	FIS	GPN	INTU	WU	MGI	ADYEN	EEFT	SHOP				
Last reported quarter date	2020-09-30	2020-09-30	2020-09-30	2020-09-30	2020-10-31	2020-09-30	2020-09-30	2020-06-30	2020-09-30	2020-09-30				
Share price ⁽¹⁾	234	218	141	215	380	22	5	2341	145	1126	217	483	5	2341
Share price ⁽²⁾	197	163	147	178	315	21	3	1457	91	1023	170	359	3	1457
Shares outstanding ⁽²⁾	1,173	371	619	299	262	411	64	30	52	110	281	339	30	1,173
Trailing Twelve Months (TTM):														
Sales	20,299	7,652	12,578	7,481	7,837	4,871	1,218	3,398	2,470	2,457	6,176	7,026	1,218	20,299
% YoY growth	24.7%	139.6%	13.3%	73.4%	13.6%	-3.7%	0.3%	36.4%	-15.6%	96.5%	19.2%	37.9%	-15.6%	139.6%
EBITDA	4,560	69	5,336	2,853	2,629	1,301	184	326	433	1,301	1,301	1,899	69	5,336
Earnings	3,142	-77	1,079	822	1,966	753	-6	210	129	93	482	811	-77	3,142
At the end of the last reported period:														
Market cap	230,919	72,773	91,345	53,147	82,669	8,808	200	44,064	4,766	124,714	62,960	71,340	200	230,919
Cash and cash equivalents	14,158	2,881	1,826	2,221	5,793	1,251	163	2,354	1,418	6,121	2,287	3,819	163	14,158
Preferred & minorities & other	44	0	190	218	0	0	37	-43	0	0	0	45	-43	218
Total debt	9,664	2,196	20,189	9,708	2,634	3,229	857	149	1,306	903	2,415	5,083	149	20,189
EV	226,469	72,087	109,898	60,853	79,510	10,786	931	41,816	4,654	119,496	66,470	72,650	931	226,469

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

Ratio analysis of these companies (results could be found in the figures below this paragraph) suggest that PayPal is fairly valued compared to its competitors. In the network processing companies, PayPal's P/E ratio seems to be below the average but above the median, which means that the company's share price is not overvalued, not overvalued. For the other companies, it is a bit hard to compare this ratio because of Square and Shopify being outliers. If these two companies are eliminated from the average, PayPal is slightly above it and above the median, which might suggest that its price, compared to these companies, is a bit overvalued. The price to sales ratio being the lowest among the network processing companies and highest among the others shows that the valuation of PayPal depends on the sector it is valued in. All the other ratios are very close to the average, which implies that overall, PayPal is valued fairly compared to the valuation of its competitors.

Network Processing Companies								
	PayPal	Visa	Mastercard	American Express	Median	Average	Low	High
Profit margin	15.5%	51.1%	47.6%	8.6%	31.5%	30.7%	8.6%	51.1%
P/E	73.49	34.72	45.46	245.89	59.48	99.89	34.72	245.89
Price / Sales	11.38	17.75	21.62	21.18	19.46	17.98	11.38	21.62
Price / EBITDA	50.64	17.75	33.42	96.61	42.03	49.61	17.75	96.61
Price / Earnings	73.49	34.72	45.46	245.89	59.48	99.89	34.72	245.89
EV / Sales	11.16	18.42	21.75	2.91	14.79	13.56	2.91	21.75
Price / EBITDA	49.66	18.42	33.62	13.27	26.02	28.74	13.27	49.66
EV / Earnings	72.08	36.03	45.74	33.77	40.88	46.90	33.77	72.08

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

	Other Financial Technology Companies													
	PayPal	Square	FIS	Global Payments	Intuit	Western Union	MoneyGram International	Adyen	Euronet International	Shopify	Median	Average	Low	High
Profit margin	15.5%	-1.0%	8.6%	11.0%	25.1%	15.5%	-0.5%	6.2%	5.2%	3.8%	7.8%	11.5%	-6.3%	15.5%
P/E	73.49	-950.04	84.64	64.67	42.04	11.69	-36.29	209.83	36.94	1,342.45	130.73	87.94	-2.61	73.49
Price / Sales	11.38	9.51	7.26	7.10	10.55	1.81	0.16	12.97	1.93	50.76	10.19	10.15	0.16	11.38
Price / EBITDA	50.64	1054.68	17.12	18.63	31.44	6.77	1.08	135.37	11.00	95.86	48.40	37.56	2.89	43.28
Price / Earnings	73.49	-950.04	84.64	64.67	42.04	11.69	-36.29	209.83	36.94	1342.45	130.73	87.94	-2.61	73.49
EV / Sales	11.16	9.42	8.74	8.13	10.15	2.21	0.76	12.31	1.88	48.64	10.76	10.34	0.76	11.16
Price / EBITDA	49.66	1044.73	20.60	21.33	30.24	8.29	5.05	128.47	10.74	91.85	51.10	38.25	13.49	42.44
EV / Earnings	72.08	-941.08	101.83	74.05	40.44	14.32	-169.24	199.12	36.07	1286.28	138.02	89.56	-12.15	72.08

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

Valuation

In order to evaluate the company, the value of equity was calculated for the end of the year 2021 and implied share price based on the given value. Later, the expected overall growth rate is calculated, and relevant conclusions are derived.

Cost of capital

Beta of debt	0.097
Beta of equity	1.152
Risk free	0.92%
MRP	6.86%
D/EV	4.28%
E/EV	95.72%
Cost of debt	1.58%
Cost of equity	8.48%
WACC	8.17%

To discount the future cash flows to today and arrive to the final equity value, the weighted average cost of capital (WACC) was first calculated. It refers to the return required both by both equity and debt holders; therefore, the required inputs are the cost of debt, cost of equity, and debt to equity ratio (together with other relevant inputs, they are summarized in the figure on the left). Risk-free rate was based on the US 10-year bond yield, which was 0.92%. Market Risk Premium (MRP) was calculated as the difference between average annualized S&P500 monthly returns (since 2007) and the risk-free rate. The obtained result was 6.86%. These values were later used to calculate cost of debt and cost of equity.

To calculate the cost of debt, it was considered the yield of maturity of the outstanding bond, which maturity was similar to the forecasted period (10 years), and was obtained as 1.704%. Using this value and knowing the credit rating of PayPal (Baa+³), cost of debt was calculated as 1.58%. Then beta of debt was calculated using CAPM model. Levered beta of equity was then obtained by regressing the excess returns of S&P500 and PayPal since July 2015 (the month when PayPal went IPO). The result of 1.152 shows that PayPal's stock is riskier than the market itself and the systematic risk of it higher, meaning that the stock is quite volatile but at the same time might bring higher returns. This beta was then adjusted through Bayesian method to reduce the statistical error, which might exist due to limited number of observations in the regression. Based on this beta, unlevered cost of equity was calculated, which led to levered cost of capital of 8.48%.

³ 'S&P500 2020-05-11 for Senior Unsecured Notes

Knowing all these inputs, WACC resulted in 8.17%.

In order to see how different values of MRP would affect WACC, a sensitivity analysis was made, together with checking the 95% confidence interval of beta. Overall market return varies throughout the years and is highly dependent on the situation in the world. During the crisis in 2008, the return was much lower than it is right now, and due to the pandemic today, we expect the overall returns of the market to go much lower than they are today. A decreased market return would indicate lower MRP, and that would make the WACC of the company go even to 4%, which would increase the value of the future cash flows, hence the company's valuation (through DCF method, *ceteris paribus*). However, if the average market does good in the near future, WACC can go much higher than it is today and decrease the overall expected equity value.

	Unlevered beta			
	8.173%	0.976	1.059	1.141
WACC	2.86%	3.702%	3.939%	4.175%
MRP	3.86%	4.678%	4.997%	5.316%
	4.86%	5.654%	6.056%	6.458%
	5.86%	6.630%	7.115%	7.599%
	6.86%	7.606%	8.173%	8.740%
	7.86%	8.582%	9.232%	9.881%
	8.86%	9.558%	10.291%	11.023%
	9.86%	10.535%	11.349%	12.164%
	10.86%	11.511%	12.408%	13.305%

Intrinsic valuation

For the valuation purposes, the DCF method was chosen, and cash flows were discounted using WACC. This method was used because we did not forecast any huge changes in the capital structure throughout our forecasted period. Levered EV at the end of 2021 was estimated to be nearly \$200 billion, and the value of equity of \$202 billion. The perpetual growth rate was assumed to be 4% based on the stable growth rate of the revenues in the 10 years period. These inputs gave us a target share price of \$167.82. The share price today is \$234.20⁴, meaning that stock price is overvalued. Expected capital gain was calculated as -28% and cash gain 2.6%. These results imply that overall shareholders' return is -26%.

⁴ As of end of 2020-12-31

Annex: Group report

PAYPAL HOLDINGS, INC.

FINANCIAL SERVICES

STUDENTS: GIEDRE MALINAUSKAITE
SARA RISTIVOJEVIC

COMPANY REPORT

4 JANUARY 2021

41814@novasbe.pt
42101@novasbe.pt

Company report: PayPal holdings

- Recommendation of PayPal's report is to SELL, as the target price was estimated as \$167.82 with the current price being \$234.2.
- PayPal's strong performance its driven by its content introduction of the innovative products and large global footprint.
- PayPal is going towards capturing the upside from the growth of the e-commerce in the relevant geographies.
- PayPal's key strategy focuses on acquisitions and investments in other financial technology companies
- Main risks for the company are related to foreign currency exchange rates, cross-border trade and interest rates.

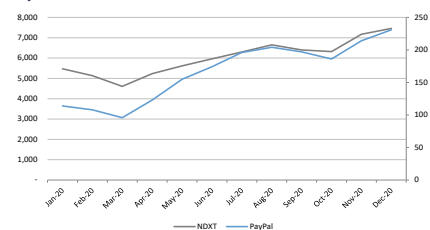
Company description

PayPal is a leading technology and digital payments company, which connects people and businesses through financial services. It allows digital and mobile payments using any device on behalf of consumers and merchants. As of end of 2019 PayPal had more than 300M active accounts in around 200 different markets.

Recommendation:	SELL
<i>Vs Previous Recommendation</i>	<i>n/a</i>
Price Target FY21:	\$167.82
<i>Vs Previous Price Target</i>	<i>n/a</i>
Price (as of 31-Dec-20)	\$234.20
Source: Yahoo Finance	

52-week range (\$)	82.07-244.25
Market Cap (\$m)	274,410.20
Outstanding Shares (m)	1,171.70
Source: Bloomberg	

PayPal vs. NDXT Index



Source: Yahoo finance

(Values in € millions)	2019	2020E	2021F
Revenues	17,772	21,431.30	25,436.50
EBITDA	3,858	6,063.40	7,214.70
Net Profit	2,539.40	4,507.60	5,382.30
EPS	2.14	3.79	4.53
P/E	50.6	61.68	51.68
P/Sales	7.15	12.8	10.79
EV/Sales	6.84	12.6	10.61
EV/EBITDA	32.34	44.4	37.32

Source: Bloomberg

Table of Contents

COMPANY OVERVIEW.....	4
MAIN PRODUCTS AND SERVICES	4
▪ PayPal	4
▪ Braintree.....	5
▪ Venmo.....	5
▪ Xoom.....	6
▪ iZettle.....	6
▪ Simility.....	6
▪ HyperWallet.....	7
▪ Honey.....	7
REVENUE CATEGORIES	7
▪ Transaction revenues.....	7
▪ Other value-added services	8
▪ Geographics	8
KEY PERFORMANCE INDICATORS.....	9
▪ Active accounts.....	9
▪ Payment transactions	10
▪ Total Payment Volume (TPV).....	10
ACQUISITIONS	11
RISKS.....	12
FOREIGN CURRENCY EXCHANGE RATES.....	12
CROSS-BORDER TRADE	13
INTEREST RATES	14
INDUSTRY OVERVIEW.....	14
OUTLOOK	15
COMPETITION	15
▪ Network processor companies.....	15
▪ Other financial technology companies	16
▪ Commercial banks	17
▪ Telecommunication companies in the emerging markets	18
▪ Privately held fintechs & other technology companies	19
▪ Financial and multiple analysis.....	20
MACROECONOMIC VIEW.....	22
VALUE DRIVERS	23
GROWTH IN E-COMMERCE AND MOBILE PAYMENT PENETRATION	23
▪ United States.....	23
▪ United Kingdom.....	24
▪ Other countries per region	24
INCREASED CONTACTLESS POS PAYMENTS.....	25
RISE OF THE MERCHANT SERVICES	26
REGULATION	27
TECHNOLOGY AND DEVELOPMENT	27
MARKET SHARE.....	27
PRODUCT MIX OFFERING AND GEOGRAPHICAL EXPANSION	28
FORECASTS.....	29
TRANSACTION REVENUES.....	29

▪ US.....	29
▪ Other countries.....	30
▪ United Kingdom.....	30
OTHER VALUE-ADDED SERVICE	30
OTHER FORECAST	31
VALUATION	31
COST OF CAPITAL	31
INTRINSIC VALUATION.....	32
APPENDIX.....	33
APPENDIX 1	33
APPENDIX 2	34
APPENDIX 3	35
APPENDIX 4.....	36
REPORT RECOMMENDATIONS.....	36

Company overview

PayPal was first founded in 1998 as a software company for mobile devices, named Confinity. Due to the lack of success of this business model, in 1999, the company switched its track towards digital payments. In one year, Confinity merged with X.com, an online banking company. Later the company was renamed PayPal, and it went public for the first time in 2002 for the price of \$13 per share. Few months after the IPO, the company was acquired by eBay and became private again, continuing to operate as a part of the bigger business.

PayPal Holdings, Inc. was incorporated in Delaware in January 2015 after a spin-off from eBay. It became a publicly traded company in July for the second time in its history. PayPal is a leading technology and digital payments company, which connects people and businesses through financial services. It allows digital and mobile payments anytime and using any device on behalf of consumers and merchants. As of the end of 2019, PayPal had more than 300 million active accounts (both consumer and merchants) in around 200 different markets. The company allows sending and receiving money, as well as transferring and withdrawing funds. For the fund management, PayPal offers various sources, such as a bank account, a PayPal account balance, a Venmo account balance, a PayPal credit account, credit or debit card, or even coupons and gift cards.

Main products and services

PayPal Holding, Inc. offers its customers and merchants different solutions for both physical and electronic payments. It is possible for people to pay using PayPal account balance, debit or credit card, bank balance or QR code (the latter was introduced recently, therefore is still developed to be used in more markets). For merchants, they are offering POS solutions for in-store payments (card readers, smartphones and tablets, contactless payments), as well as allowing them to accept various online payment methods (credit and debit cards, Venmo, Pay in 4, PayPal Credit, etc.). For merchants, they are offering data analysis tools and help to manage and bridge their cash flows. For private customers, PayPal is offering a digital wallet for drawing and charging their accounts in one single place. The company is putting a lot of effort into ensuring fast and secure payments, preventing fraud, and protecting both the consumers and merchants.

- PayPal

The main company's focus is making it easy and quick for customers to send and receive money online. The user creates an account, which is linked to a credit card or a bank account, and then can initiate the online payment through a website or an app.



The transfers are completed within a few minutes and could be made to family, friends, or online sites, no matter which country they are in. PayPal provides a possibility to do the transaction without any fees for the family and selected friends as long as they have a PayPal account and are in the same country. However, PayPal charges money for international transfers and the conversion to the currency, as well as other fees, for example, credit/debit card confirmation or instant transfers. Moreover, PayPal is considered to be a very safe option for day-to-day transactions since they do not require to provide the card or bank account details during the transaction, unlike other competitors. PayPal is also offering credit services through PayPal Credit account, which allows customers to take credit for an additional fee.

- Braintree

Braintree was acquired by PayPal in 2013, while it was still part of its parent eBay. The business was focusing on improving and automating online payment gateway for merchants and online business, which expanded the customer base and region of PayPal. Braintree is used by e-commerce organizations that want to start accepting payments from customers in their websites or apps. It allows enterprises to reduce the costs and complexity of managing many different payment providers. Braintree charges a fixed amount and percentage per transaction by providing merchant payment gateway third-party integration, support, and other additional services. Back in 2012, Braintree bought peer-to-peer (P2P) mobile payments app Venmo, which, after PayPal's acquisition of Braintree, became part of the holdings as well.

- Venmo

Venmo was founded in 2002 as a P2P platform that was based on mobile messages. Later it integrated into social media networks. Being acquired by Braintree and later PayPal, gave them so needed cash for further development of the app. Venmo is seen to be like an intermediary between two banks and two people, which does not charge any additional fees if the transaction is done between users of the apps that are linked their debit cards or bank accounts¹. However, monetization of Venmo comes from the additional fees charged for credit cards and per-transaction fees for the merchants. In the past few years, Venmo introduced its debit card, from which a huge part of the revenues is generated. In October 2020 PayPal announced that Venmo (together with other PayPal services) will allow users to make transactions using cryptocurrencies from 2021, which might increase their number of customers significantly. For now, cryptocurrencies will be accepted only in the US, and



¹ <https://www.investopedia.com/articles/personal-finance/032415/how-safe-venmo-and-why-it-free.asp>

customers there will be able to buy, sell and hold four different cryptocurrencies on PayPal: Bitcoin, Ethereum, Litecoin, and Bitcoin Cash.



- Xoom

Xoom was founded in 2001 was purchased in 2015 and helped PayPal to start building its remittances business. Until then, it was a publicly-traded company, backed by Sequoia Capital and other VCs. It enables money transfers, bill payments to family or friends to a different country online or through the mobile app. At the time of the acquisition, Xoom already had more than 1 million US users, which let PayPal expand their international markets even more. For customers, fees vary across different countries, depending on the transfer amount and currency. Xoom makes money out of those fees, as well as fluctuations of exchange rates of the received amount in other currency than the US dollar. The company is deemed to be competing with other money transfer giants, like Western Union or MoneyGram, for its lower prices.



- iZettle

iZettle, founded in 2010 and purchased by PayPal in 2018, is usually called "Square of Europe." It is a mobile credit card payment service, mostly used by small businesses for portable point-of-sale solutions or entrepreneurs that want to start accepting payments by cards. It charges a fixed rate per transaction received, regardless of the card used. It also accepts newly introduced QR payments via PayPal for a very low fee. Unlike other POS terminals, iZettle does not require landlines or GPRS SIM cards; it just needs a mobile phone and the internet. However, compared to its competitors like SumUp or Square, iZettle is seemed to be lagging off in POS systems updates, innovations, and slow customer support for technical difficulties.



- Similarity

To improve its payments security, in 2018 PayPal acquired Similarity, a company that ensures fraud prevention. It uses machine learning and various APIs to build and improve digital security for merchants. The acquisition happened to be good both for PayPal and Similarity: PayPal was able to ensure better security to its growing e-commerce customer base, and Similarity got access to more different companies to test and improve their algorithms on. It charges fees per transaction and provides different pricing structure for ensuring the security for each of the company based on their products.



▪ HyperWallet

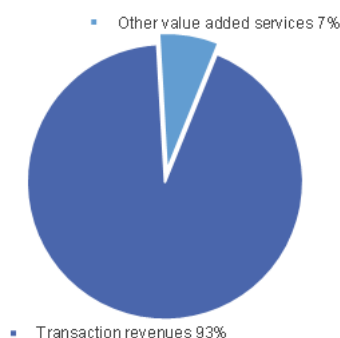
HyperWallet was acquired by PayPal in 2018 and allowed the company to broaden its pay-out capabilities. The system enables customers to integrate payment functionality directly to their platforms and allows their own customers to manage their payments much easier and faster. HyperWallet uses APIs for the clients to integrate the system easily to their platforms and make it user-friendly. The companies then can send all their payment to banks, suppliers, customers, and other parties, cost-effectively and transparently. It reduces administration and customer support costs regarding the payments. HyperWallet monetization comes from setup and monthly maintenance fees, transfers, and other additional features.



▪ Honey

Honey is by far the biggest acquisition of the company up until today, purchased at the end of last year for 4 billion dollars. It provides an extension for the browsers that automatically applies coupons and discounts on e-commerce websites. At the same time, it increases the engagement of the customers in the online payment industry. Honey charges retailers a small percentage from sales made with coupons it finds, making the experience free and appealing for everyday shoppers. Honey also introduced its mobile app that lets to put to their cart products from various retailers and pay for them all at once, which makes the company very competitive among other shopping platforms, like Amazon or Google, that still do not have such functionalities integrated.

Revenue categories

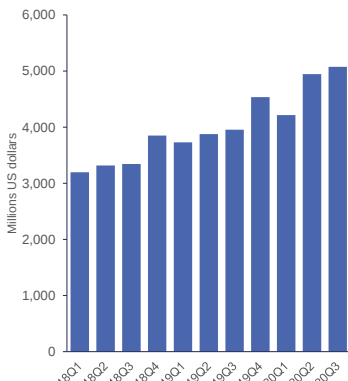


There are two main revenue categories that the company distinguishes: transaction revenues and revenues from other value-added services. Transaction revenues form the biggest share of the total revenues in the company (93% and 90% of total revenues in the third quarter of 2020 and 2019, respectively). Revenue is highly impacted by the mix of merchants, products and services provided, the number of transactions in different regions, and the amount of loans receivables outstanding.

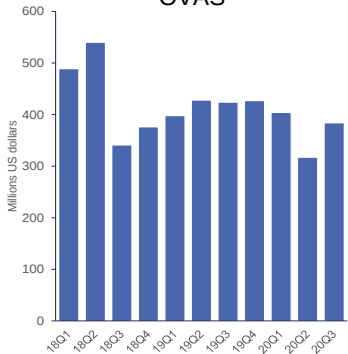
▪ Transaction revenues

Transaction revenues are mostly coming from the various transaction fees charged to the merchants and consumers. The amount of revenue collected highly depends on the number of transactions completed in the payment platform. Therefore, it is mainly based on the volume of the activity, or so-called Total Payment Volume (TPV), and the number of payment transactions. In this revenue category, additional fees are included, such as the ones coming from currency conversion, cross-border payments instant transfers of payments made to/from debit/credit cards from/to PayPal

Quarterly transaction
revenues



Quarterly revenues of
OVAS



accounts. As it could be seen in the table on the left, from the beginning of 2018, the quarterly transaction revenues increased by almost 60%, and almost each of quarter, there could be seen an increase in the revenue.

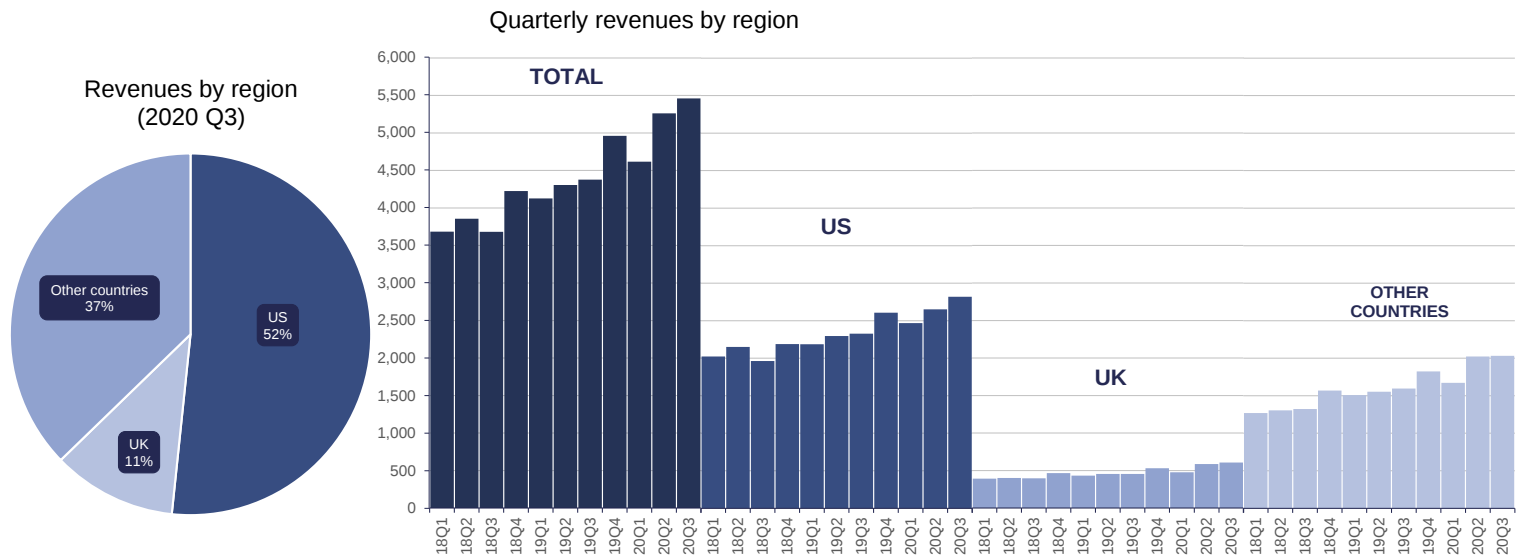
▪ Other value-added services

Other value-added services, or OVAS, includes all the other revenues earned that are not related to payment transactions, such as partnerships, subscriptions, gateway fees, and other revenues. Here interest earned from the customers' loans receivable is included as well. The fluctuation in OVAS compared to revenues from transactions is much bigger, with a significant decrease in the third quarter of 2018 and the second quarter of 2020. Usually, these decreases are offset by the increase in the transaction revenues and do not significantly affect the total revenues. Also, OVAS is a comparably small part of total revenues; therefore, the fluctuations do not affect the total number too much. There was a decrease in OVAS from the beginning of 2018 until today, mostly caused by the changes in the US consumers' credit receivables portfolio and the decrease in transition servicing activities provided by the Synchrony bank that ended in the middle of the year 2019. There was another decline in OVAS in the beginning of 2020 due to the world pandemic and changes in peoples' spending. However, the acquisition of Honey partially offset this decline in the second quarter of 2020, together with increased overall e-commerce business.

▪ Geographics

Net revenues are attributed to the country where the merchant is located or where the customer or merchant resides (in the case of international payments and other value-added services). The two countries that have the highest contribution to PayPal's revenue are the US and the UK. In the last reported quarter (ending September 30, 2020) the US accounted for more than half of the total revenues, and the UK around 11%. Other countries include all other markets where the company is operating. Throughout the history of PayPal, none of those countries alone exceeded 10% of total revenues (together, they make around 37% of total revenues).

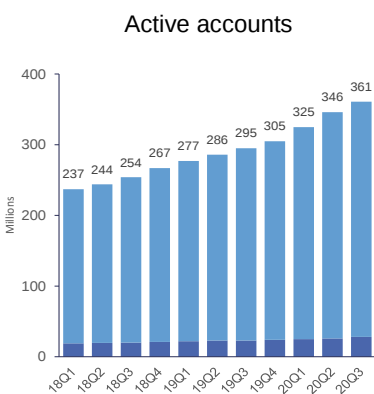
In the table below, quarterly revenues from different geographies are shown, together with total ones. Each region seems to be growing at the same pace since the beginning of 2018 with little fluctuations. US from the very beginning accounted for the biggest part of the total revenues.



Key performance indicators

The key performance indicators that drive financial success for the company and are used to measure the performance are active accounts, payment transactions, and payment value. These metrics are used to measure customer engagement and evaluate current and future performance. Transactions revenues are highly correlated with total payment value (TPV) and the number of payment transactions completed in the platform; therefore, they are seen to be key indicators of the operating results.

Active accounts

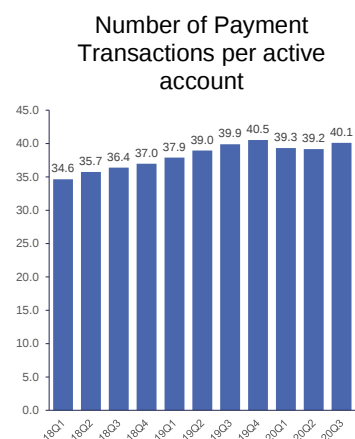
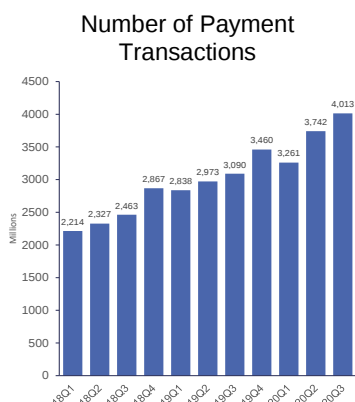


Active accounts are the accounts directly registered in PayPal or platform access partner and completed transactions in the past year. In the graph on the left, it could be seen the total number of active accounts (in millions) at the end of each quarter from the first quarter (Q1) of the year 2018. Since then, the number of active users in the PayPal company increased by more than 150% and most likely will keep increasing in the upcoming quarters. There could be seen a bit bigger increase than usual (+20 million accounts) in the Q1 of 2020. It was caused by the acquisition of Honey, which alone brought 10 million new active accounts. Also, due to the world pandemic and increased usage of digital devices, the number of active accounts keeps increasing in the other quarters of 2020. Around 8% of total active accounts (in the graph, it appears as dark blue color) are coming from merchants and the

percentage is staying the same throughout all the quarters. The rest of the active accounts (92%) are coming from consumers, where around 20% of these accounts belong to Venmo company, and the rest are of the other core PayPal parts.

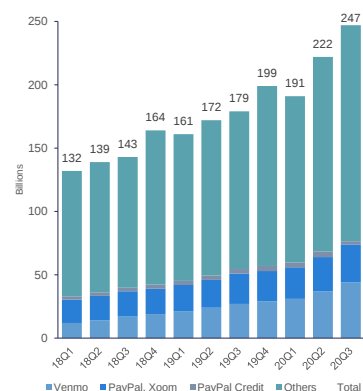
■ Payment transactions

Payment transactions are defined as the number of transactions completed in PayPal Payments Platform or enabled via third party solutions (not including gateway-exclusive solutions). In the graph on the left, the number of payment transactions completed in each of the quarter from beginning of the year 2018 can be seen. There is a significant increase in quarterly transactions at the end of 2018 due to various acquisitions that PayPal made during this quarter and which will be analyzed later in the report. Also, the first quarter of the year 2020 shows a decline in the number of payment transactions, which mainly was caused by the acquisition of Honey (half of the new accounts came from Honey, while the number of transactions did not increase that much). Despite the decreased number of payments for traveling purposes, a number of transactions PayPal handled has jumped in the second quarter as the mobility restrictions governments imposed had changed consumers' spending habits in favour of PayPal.



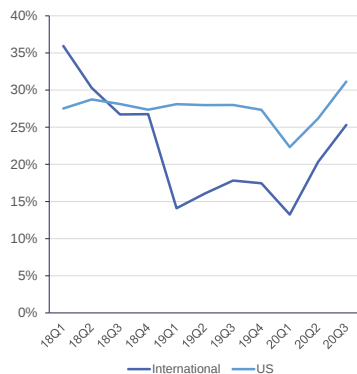
The other metric used is the number of payment transactions per active account. It takes the total number of payments completed in the last one year and divides it by the active accounts at the end of the period. It is used to measure customer engagement to the platform or third parties that enable payments via PayPal. From the beginning of 2018 until the end of 2019, there was an increase in the customers' engagement, as the numbers of both measures were increasing. However, it brought an unexpected decrease, which was mainly caused by the decrease in the number of payment transactions due to various restrictions that occurred because of the pandemic and acquisition of Honey. In the last reported period, there could be seen an increase in this measure and expected increase in the end of the year.

TPV by category



■ Total Payment Volume (TPV)

It is the value of the payments that are completed in the company's payment platform or via partner payment solution, not including gateway solutions. Transaction revenue growth is correlated to the TPV growth; therefore, it is mainly used for the evaluation of the PayPal's performance and customer engagement. A big part of it (around 30% in the last three quarters) is coming from main PayPal peer-to-peer transaction platforms: PayPal Payment Platform, Xoom and Venmo. 2% consists of payment volume created solely by the PayPal Credit and the rest of the volume is created by all other consumers and merchants. TPV growth depends a lot on payment transactions completed and highly correlated to the growth of revenue. From the

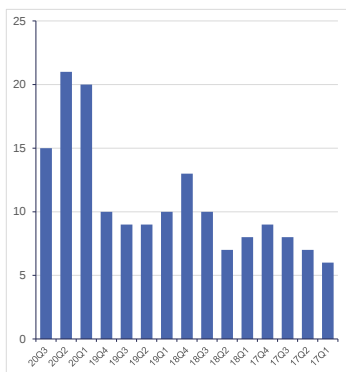
TPV growth by region
 (YTD)


beginning of the year 2018. From the end of the first quarter of 2020 until the end of the third quarter, TPV grew by almost 30% - the biggest growth in PayPal's history after the second IPO. In 2019 the company processed around 711 billion of TPV, while in only 9 months of the year 2020 they already completed 660 billion of TPV – 150 billion more than in the same period last year.

When it comes to TPV generated in different regions where PayPal is operating, most of it comes from the US alone. Since the beginning of 2018, the percentage of US TPV to total varied from 58% and 61% and kept increasing. In the second table TPV growth (YTD) in two regions of US and International could be seen. The growth seemed to be bigger in the US over the two past years but in the year of 2020 international countries' payment volume is growing slightly more than in US.

Acquisitions

Even before the second IPO, a big part of PayPal's strategy included acquisitions of other financial technologies companies, as well as investing in them and taking a minority share in their businesses. It was a big part of their growth as it allowed them to be the centre of the next innovation, adding technical capabilities to the company, as well as expanding the geographical reach of new merchants and customers. After the IPO, PayPal's has been spending \$1 to \$3 billion dollars every year for acquisitions, as well as different investments. In 2018 CEO of PayPal of the company pointed out² that since acquisition is the integrated part of company's growth, they are targeting \$3 billion of investments every year, leaving a possibility for the higher value acquisition. The picture below shows the timeline of the acquisitions of PayPal and their values, if they are public. As it could be seen, PayPal is making one to three acquisitions every year and the value of them is growing significantly. In 2018's fourth quarter and 2020's first quarter, there could be seen an increase in net new active accounts (+4.7 million and +10 million, respectively), much more than in any other of the quarters. This growth can be explained by the acquisitions completed in each of these quarters and new active accounts added because of those acquisitions. For example, in 2018 net new acquiritive accounts increased by almost 4.7 billion, while acquisitions themselves brought around 2.9 billion new active accounts, meaning that the organic growth of accounts was not as big as the real one. The same happened in the first quarter of 2020: acquisition of Honey alone brought half of the new active accounts that quarter. This last acquisition of Honey was by far the highest in its value as well, reaching up to \$4 billion, and opened a way for the company to reach the online shopping market more broadly, increasing customer engagement and adding marketing possibilities for merchants. The acquisition of GoPay (70% of the stake)

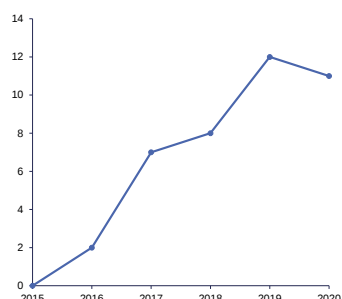
 Number of net new
 active accounts


² <https://www.reuters.com/article/us-paypal-m-a-idUSKBN1JY0VC>

helped PayPal to reach the market in China, which makes the access of all Asian market much easier, as it is the center of the economy there and most of the e-commerce growth in the next few years is projected over there.



Number of investments



PayPal is focusing not only on acquisitions but also spending a lot of money on investments in small companies as well. Another graph on the left shows the number of total investments made from 2015. Every year the number is growing significantly, and only in 2020, it got a bit smaller. It could be well explained by the acquisition of Honey that year and so far the biggest investment in PayPal's history. PayPal Ventures is a VC fund within PayPal Holdings that is targeting fintechs for the investments that are strategic for the company itself. It helps to increase the reach of the newest technologies and new markets. Investing in big companies, such as Uber Technologies or making partnerships with Facebook, for example, gives access to PayPal to an enormous number of new customer and make them competitive within the market.

Risks

Foreign currency exchange rates

Almost half of PayPal's revenues are coming from countries other than the US. Therefore, the transactions are highly dependent on the foreign currencies, mostly Euro, British Pound, Australian Dollar and Canadian Dollar. In the graph below, there could be seen US dollar against all before mentioned currencies and their fluctuations from the beginning of the year 2016. These movements can affect the financial results of the company a lot. Almost half of the revenues are coming from international countries as well as costs related to them. PayPal also charges partners in other countries than US fees for the use of their intellectual property and technology. In general, PayPal is a net receiver of foreign currencies due to revenues coming from other countries. Because of this, the company is benefiting from the weakening of the US dollar. As it could be seen from the graph below, from 2018 the dollar was getting stronger against all four main currencies for the company, while after the start of the world pandemic in the beginning of 2020, the US Dollar started to weaken and benefiting PayPal's cash flows. The company is regularly hedging foreign currency exchange risk, but it impossible to entirely eliminate this risk, as the

effect is not predictable. PayPal is mostly using foreign currency exchange forward contracts to minimize the risk coming from the investments in foreign subsidiaries.

Cross-border trade



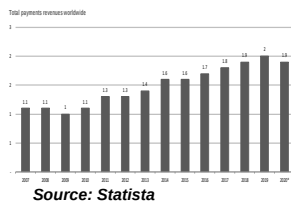
Since a considerable part of PayPal's activities is happening in more than 200 different markets, anything that makes the cross-border trade (meaning transactions where two parties are in different countries) more difficult affects the business negatively. Cross-border trade is also highly impacted by the fluctuations in the foreign exchange rates. When the exchange rates rise, customers will be less willing to make the transactions to other countries, meaning that the volume of transactions gets smaller and consequently revenues decrease. Another major thing that affects this trade is the relationship between various countries, especially the US versus the rest of the world, especially regarding the changes in laws and regulations, such as increased trade tariffs or major changes in trade policy. A recent example of the high restrictions over the cross-border change was the world pandemic that caused a decrease in international trade, lower spending, and less traveling. Harm to PayPal's business, in this case, was offset by the increased digital payments and e-commerce. Another uncertainty for PayPal is Brexit. Today the deal is assumed to be already agreed between EU countries and UK; however, the exact conditions are not publicly available. Since around 10% of PayPal's revenues are coming from the UK, the final decision for the payment industry could affect the company a lot. Also, depending on the deal itself, currency rates between the US dollar and British pound can fluctuate throughout the upcoming year.

Interest rates

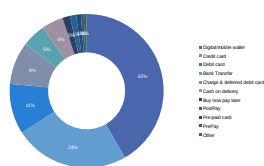
PayPal is also exposed to the risk of fluctuation in interest rates of its investment portfolio and assets relating to customer balances. High-interest rates can negatively affect customer's spending levels and the overall income of the company. It generally leads to higher payment obligations for the credit products, which may reduce the customer's ability to repay its obligations on time. Furthermore, as of September 30, 2020, PayPal had around 9 billion of fixed-rate debt, meaning that their fair value changes as interest rates change. Also, the company has entered a revolving credit facility of 5 billion euros (available, as of September 30, 2020), which requires payments of interest over this facility, which rate is fluctuating.

Industry overview

Total Payment revenue
(2011-2020)



% of payment methods of
total e-commerce
transaction volume
worldwide in 2019



PayPal operates in a highly accelerating financial services industry. Due to its various product mix offering, it competes in several independent yet overlapping industries. Besides its leading role in the online payment processing software industry, PayPal also engages in providing the liquidity services for consumers and merchants, thus competing with other credit card processors and money transferors. The total payment revenues worldwide grew from 1.1 trillion U.S. dollars in 2007 to 2 trillion U.S. dollars in 2019, an increase of 6% (see table on the left). The transaction value in digital payments in 2019 amounted to 3.8 billion U.S. dollars. The disruptive change in the industry has affected both, the checkout process (online purchases) and Point-Of-Sale payment process (offline purchases). According to Statista, 41.8% of total e-commerce transaction volume in 2019 was made by mobile wallet worldwide, followed by credit card volume amounted to 24.2% (see table on the left). Asia Pacific recorded the highest growth of 58.4% in the mobile wallet e-commerce transaction volume. However, mobile payments not only drive e-commerce but also in-store payments. The most popular mobile in-store payment method in 2019 was QR code scanning, and most popular digital wallet services were PayPal, Google

Wallet and Apple Pay according to U.S. users. Moreover, the number of users in the Mobile POS Payments segment is expected to reach 1.8 billion by 2024.³

Financial services industry has seen major changes in the recent years mainly driven by advanced technologies and changing customer and merchant needs, but also by larger adoption of technology companies by regulators globally. Furthermore, many governments around the world are supporting cashless transactions as they reduce

³ Share of selected payment methods as percentage of total e-commerce transaction volume worldwide in 2019, by region, Statista

money laundering and fraud and can potentially boost annual gross domestic product.⁴

Outlook

COVID-19 pandemic has accelerated already existing trends, which we believe will remain through recovery as well. Some of them are increased customer demand for online purchasing, increased use of advanced technologies in business decision making and increased spending on data security. Mobile payment services will continue to gain broad acceptance, especially in the rural areas lacking the banking infrastructure in the developing markets. Thus, the continued evolution of financial system will strengthen sharing economy among financial services firms and new FinTechs companies in a form of the various partnerships.

Competition

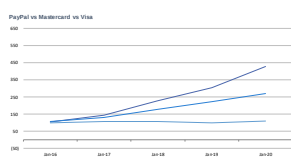
Increased demand of the electronic payment methods worldwide incentivized the entrance of new competitors. Consumers as well as the merchants are seeking for improved, less-complex and more convenient solutions. The information technology has enabled the companies to develop innovative and easy-to-use products. Thus, the ability to provide cost-effective and secure platforms will be crucial among competitors for future success. In this section we analyzed the most relevant competitors of PayPal in various segments and identified PayPal's disadvantages and advantages in each of them. The analysis has a purpose to explain the strength of the current PayPal's competitive advantage but also to emphasize its major threats in the future.

▪ Network processor companies

Table on the left shows the relative stock performance of the PayPal and one of its strongest competitors in the digital payment industry, Visa, and MasterCard. PayPal's stock outperformed the stock of other two in the period from January 2016 to January 2020, with an annual return in the 2020 of 114% for investors, and 17% and 15% respectively.

With their long histories and well established brands, the network processor companies overtake most of the payment volume in the world. They act as the network processors between Issuers (financial institutions that issue products to account holders) and Acquirers (companies that contract with merchants). Both, PayPal and credit cards companies earn most of their revenues from the transaction fees and thus, aim to increase transaction volume. Whereas the latter plays as an

Relative stock performance



Source: Yahoo finance

⁴ Tapping into pockets of growth, Global Payments 2019, BCG

intermediate between financial institutions, PayPal tries to establish its own payment ecosystem. In this category, we sort American Express and Discover, two credit card issuers, as the relevant competitors too.

We see Visa and others as the leaders in the face-to-face transactions and point-of-sale experiences. Moreover, outside of the U.S. Visa's Tap to Pay technology constitutes more than 50% of face-to-face transactions. On the other side, in the online payment environment, PayPal offers a more convenient and easy way of payment, where the buyer is allowed to pay without giving merchants access to their credit card number. In fact, it speeds up the transaction with the single login at the checkout. Furthermore, it provides strong protected purchase for buyer if something goes wrong, taking over the risk a non-provided service by the merchant. While Visa and MasterCard are more business-to-customer oriented, PayPal has a strong advantage in the person-to-person payment flows. It even personalizes the payments with animation and stickers on its Venmo business, making the overall experience funny and pleasant. We believe that PayPal has a greater potential to tackle increasingly e-commerce and mobile payments growth.

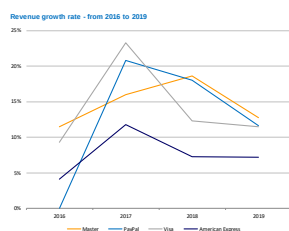
However, we see the network processor companies improving their online purchasing experience. For instance, Visa introduced Visa Token Service in fiscal year 2019. The aim of the services is to replace the consumer's card information with a unique token, which protects online transactions. Visa Checkout is another product of Visa, a digital wallet that directly competes with the PayPal upon the online purchase. Furthermore, they have a strong pull of customers and already built base, which allows the companies like Visa to benefit from the larger base of customers when developing new services. Beside the improvements of the core consumer-to-business payments, the companies are entering into new payment flows, such as B2B, G2C and P2P flows. On the other hand, PayPal is improving its in-store payments with its recent launched QR code, which does not require any hardware, software or card reader for the merchant.

In the table, the one can see the revenue growth rates of PayPal, MasterCard, Visa and American Express for the period from 2016 to 2019. Visa and PayPal had recorded the highest revenue growth rate in 2017, with PayPal maintaining its growth rate over the period.

■ Other financial technology companies

There are many financial technology companies around the globe that compete with PayPal in specific segments. In the United States, Square has been considered the main competitor. While PayPal was formally directed more towards online transactions, Square is a leading US company for POS solutions and thus in-person transactions. Both are transparent in pricing and offer flat-rate fees charged per

Revenue growth rate
(2016-2019)



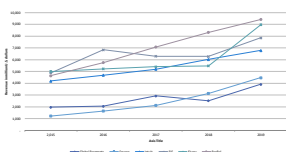
Source: Companies annual reports

transaction. Square is well known for the mobile payment processors and square-shaped plug-in devices suitable for the payments on the go. In contrast to PayPal who offers POS solutions through third party, Square develops its own hardware options and POS systems. PayPal competes in its recent developed QR code payment solution, which does not require any software installed by the merchant. However, this limits the possibility for buyer to pay with other payment options different from PayPal account. Moreover, Square develops more specific software for appointments, retail and restaurants. Both integrate well with third parties and provide encrypted transactions and necessary compliance.

Companies like FIS, Fiserv and Evo Payments develop their own software solutions for merchants and target the consumers who desire a single integrated platform. So, Fiserv for example develops electronic billing and payment solution, as well as the mobile solutions like mobile banking and mobile person-to-person payments. Its customers are largely financial institutions, banks, but also merchants. Similarly, FIS provides integrated payment solutions for the e-commerce, card and retail payments. It serves mainly large multi-national enterprises globally. Another interesting player is Adyen, which is more popular in Europe than in United States. In contrast to PayPal, it focuses on the unified commerce, rather than omnichannel system. This single platform provides merchant with a unified overview of all shopper transactions. The company also issues physical and virtual cards worldwide and is largely using the machine learning to increase revenues.

Although, there are some differences among them, they are all technology companies focused on the in-house developments of the various software and are merchant oriented. In contrast, PayPal is a single technology platform for digital payments focuses on both merchants and consumers. PayPal' technology utilizes a combination of proprietary and third-party technologies. Therefore, other companies might be able to react faster to rapidly changing global payments industry as they rely mainly on its in-house technologies. Yet, merchants using PayPal are not required to invest in new hardware. Moreover, its two-sided platform benefits both consumers and merchants. The larger adoption of PayPal among consumers will contribute to higher benefits for the merchants as the demand for PayPal services will increase. Pay in 4 and Buy now Pay Later are some of the benefits provided to consumers that drive merchant sales. Table on the left of the previous page illustrates the historical performance of the peers' revenues excluding the revenues other than PayPal's comparable revenues.

Historical performance of the peers (2015-2019)



Source: Companies annual reports

▪ Commercial banks

PayPal competes with the commercial banks such as JP Morgan Chase&Co, Citi Group, and Bank of America. They offer large amount of credit cards, which include

business cards, travel cards, and rewards cards. Recently JP Morgan Chase launched a QuickAccept service that will enable merchants to accept card payments fast through mobile app or contactless card reader. What is more, it will be free of charge and merchants will receive those payments on the same day. This service represents an essential competitive advantage over PayPal and Square, whose platforms take a day or more to transfer the funds, unless the merchant is willing to pay a fee for the instant transfers. For merchants, that means less expensive offer and more flexible one. Further, it developed all-in-one solution for SMBs, Chase Business Complete Banking, that aims to provide merchants with streamline services found at one place, avoiding searching for different solutions from banks and FinTechs.⁵

While in the past PayPal was directly competing with the banks and credit card networks, nowadays it is partnering with major financial institutions resulting in a win-win solution. For bank's customers it provides the flexibility to shop how they want and where they want, and for PayPal this helps expanding its network of safe contactless payments at physical retail locations.

PayPal limits users to withdraw their funds and enables only the transaction payment. In addition, it limits users to spend their balance only at the places that accept PayPal. Nevertheless, PayPal launched its Cash Debit MasterCard and Business Debit MasterCard, which offset this issue. On the other side, commercial banks still lead in terms of the flexibility and convenience when it comes to paying the bills and depositing cash. For users who want to place their money on the accounts and want their money to be safe and easily accessible, bank accounts are still better option. Furthermore, U.S. banks users benefit from entities like Federal Deposit Insurance Corporation to protect bank checking accounts. On the other side, PayPal provides safe money movement, but the company does not carry depositor insurance.

The example of the JP Morgan Chase illustrates the successful respond of the banks to the changed financial services payment ecosystem. What is more, banks are becoming more willing to partner with the fintech companies. The partnership of the Bank of America and Citi Group with PayPal is an example. Citi recognized the increasingly switch to mobile devices and digital wallets and through the partnership with PayPal its consumers can benefit from more flexible payments.

- Telecommunication companies in the emerging markets

In some countries telecommunication companies are taking big junk of transaction payments. That is especially case with African countries and other developing

⁵ <https://www.pymnts.com/smb/2020/jpmorgan-takes-on-square-and-paypal-at-the-point-of-sale/>

markets. Mobile payments provide a cheap and safe transferring of money and represent cheaper alternatives to banks and other financial institutions. Kenya is the most developed mobile money market in Africa, with 26.3 million subscribers in 2016.⁶ Distrust for formal banking system has led consumers in these countries to opt for other alternatives. The ability of the mobile payment platforms to make services traditionally offered by banks less expensive triggered the increased penetration of mobile money payments. However, not only the price is an important parameter for the consumers, but the safety, reliability and accessibility. Although there are approx. over 100 mobile money providers operating in Sub-Saharan Africa, the M-Pesa, MoMo and Orange Money account for a major share of the market. PayPal competes with these telecommunication companies in this region.

M-Pesa, the largest mobile network provider in Kenya, widely used for payments and micro-financing services. With a single PIN-secured SMS text message money is sent. The small fee for sending and withdrawing money has been charged. M-Pesa operates in 7 countries and is managed by Vodacon and Safaricom. It acts like a mini bank, allowing customers to pay bills and deposit and withdraw money from a network of agents. A good competitors of M-Pesa is MoMo – MTN Group's mobile money offering. The focus of telecoms is the pricing and products, rather than customer experience.

There are also fintechs companies in Africa that compete with the PayPal. Eversend- multi currency e-wallet and neobank that allows users in Africa to exchange, spend and send money; Xend – payment platform allows SMEs to send money, pay bills; Chipper Cash enables free and instant P2P cross-border transactions in Africa

- Privately held fintechs & other technology companies

Big tech companies are heavily investing in the payments segment. Apple Pay, Google Pay, Amazon Pay are gaining great popularity in the recent times. Moreover, Whatsapp launched its payment service this year too. These companies are planning to expand into emerging markets like Brazil and India. We expect to see the incredible rise of these digital wallets due to the high mobile penetration worldwide. They directly compete with the PayPal Checkout process and could significantly overtake PayPal's market share.

Other examples of the private companies are Klarna, popular E-commerce payment processor, N26, a private German bank, Transferwise in United Kingdom and Stripe in the United States.

⁶ Mobile Payments Markets in Kenya, Tanzania and Zimbabwe – A Comparative Study of Competitive Dynamics and Outcomes

Pay Pal and its various competitors:



Financial and multiple analysis

For the financial analysis of the competitors, the companies were divided into two sectors: network processing companies and other financial technology companies. The exact list of the companies and their selected financial information could be seen below. The reasoning why these companies were chosen for the competitor analysis lies behind the availability of the financial data. Some of the possible competitors of PayPal are owned by their respective parent companies which are only making their consolidated financial statements publicly available, preventing the detailed extraction of their financial data for their small parts of the businesses. An example of such a competitor is Apple Pay, which is legally not a separate entity, and therefore, not making its financials available for financial analysts. Also, only a part of some companies can be seen as the direct competitor for PayPal, and it creates limitations for the extraction of financial data for only that part of the company. Therefore, these companies were only included in the market share calculations but not in the financial analysis. The other limitation that was experienced is companies' financial data not being publicly available. Since PayPal Holdings is combined of multiple small companies that are focusing on different products and services, a lot of their direct competitors are startups themselves or growing companies that are not yet public. Based on this reasoning, twelve companies were chosen for the financial analysis of the competition.

Data taken from Bloomberg
\$M, except share price and ratios

	Network Processing Companies							
	PayPal	Visa	Mastercard	American Express	Median	Average	Low	High
Ticker	PYPL	V	MA	AXP				
Last reported quarter date	2020-09-30	2020-09-30	2020-09-30	2020-09-30				
Share price ⁽¹⁾	234	218	356	121	226	232	121	356
Share price ⁽²⁾	197	200	338	100	199	209	100	338
Shares outstanding ⁽²⁾	1,173	1,686	993	805	1,083	1,164	805	1,686
Trailing Twelve Months (TTM):								
Sales	20,299	21,846	15,595	38,101	21,073	23,960	15,595	38,101
% YoY growth	24.7%	-16.9%	-14.1%	-20.4%	-15.5%	-6.7%	-20.4%	24.7%
EBITDA	4,560	21,846	10,089	8,353	9,221	11,212	4,560	21,846
Earnings	3,142	11,167	7,416	3,282	5,349	6,252	3,142	11,167
At the end of the last reported period:								
Market cap	230,919	387,742	337,156	807,013	362,449	440,707	230,919	807,013
Cash and cash equivalents	14,158	20,272	10,625	33,030	17,215	19,521	10,625	33,030
Preferred & minorities & other	44	10,172	85	0	65	2,575	0	10,172
Total debt	9,664	24,697	12,574	46,493	18,636	23,357	9,664	46,493
EV	226,469	402,339	339,190	110,820	282,829	269,704	110,820	402,339

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

When comparing PayPal with network processing companies, namely Visa, Mastercard, and American Express, its revenues of the last twelve months are just a bit below the average, only higher than Mastercard. However, revenue growth-wise over the year, PayPal has the only positive value, at almost 25%, while all the others experienced a high drop in the same period. The market cap and enterprise value of PayPal, compared to the other three companies, was the lowest. However, the overall debt of the company was also the lowest in the last reported period and the net debt stayed negative, as it holds more cash than debt itself.

Comparing PayPal with other financial technology companies, it could be seen that both the revenues and earnings are way above the average and the highest. The same goes for the Market cap and the enterprise value, while the debt being the lowest. Share price, on the other hand, is not the biggest. Adyen and Shopify prices are a few times higher than PayPal's. However, the number of shares outstanding is the highest, which makes all the valuation to appear higher overall.

Data taken from Bloomberg
\$M, except share price and ratios

	PayPal	Other Financial Technology Companies										Median	Average	Low	High
Ticker	PYPL	SQ	FIS	Global Payments	Intuit	Western Union	MoneyGram International	Adyen	Euronet International	Shopify					
Last reported quarter date	2020-09-30	2020-09-30	2020-09-30	2020-09-30	2020-10-31	2020-09-30	2020-09-30	2020-06-30	2020-09-30	2020-09-30					
Share price ⁽¹⁾	234	218	141	215	380	22	5	2341	145	1126	217	483	5	2341	
Share price ⁽²⁾	197	163	147	178	315	21	3	1457	91	1023	170	359	3	1457	
Shares outstanding ⁽²⁾	1,173	371	619	299	262	411	64	30	52	110	281	339	30	1,173	
Trailing Twelve Months (TTM):															
Sales	20,299	7,652	12,578	7,481	7,837	4,871	1,218	3,398	2,470	2,457	6,176	7,026	1,218	20,299	
% YoY growth	24.7%	139.6%	13.3%	73.4%	13.6%	-3.7%	0.3%	36.4%	-15.6%	96.5%	19.2%	37.9%	-15.6%	139.6%	
EBITDA	4,560	69	5,336	2,853	2,629	1,301	184	326	433	1,301	1,301	1,899	69	5,336	
Earnings	3,142	-77	1,079	822	1,966	753	-6	210	129	93	482	811	-77	3,142	
At the end of the last reported period:															
Market cap	230,919	72,773	91,345	53,147	82,669	8,808	200	44,064	4,766	124,714	62,960	71,340	200	230,919	
Cash and cash equivalents	14,158	2,881	1,826	2,221	5,793	1,251	163	2,354	1,418	6,121	2,287	3,819	163	14,158	
Preferred & minorities & other	44	0	190	218	0	0	37	-43	0	0	0	45	-43	218	
Total debt	9,664	2,196	20,189	9,708	2,634	3,229	857	149	1,306	903	2,415	5,083	149	20,189	
EV	226,469	72,087	109,898	60,853	79,510	10,786	931	41,816	4,654	119,496	66,470	72,650	931	226,469	

⁽¹⁾ Current, 2021-01-03

⁽²⁾ at the end of the last reported quarter

Ratio analysis of these companies (results could be found in the figures below this paragraph) suggest that PayPal is fairly valued compared to its competitors. In the network processing companies, PayPal's P/E ratio seems to be below the average but above the median, which means that the company's share price is not overvalued, not overvalued. For the other companies, it is a bit hard to compare this ratio because of Square and Shopify being outliers. If these two companies are eliminated from the average, PayPal is slightly above it and above the median, which might suggest that its price, compared to these companies, is a bit overvalued. The price to sales ratio being the lowest among the network processing companies and highest among the others shows that the valuation of PayPal depends on the sector it is valued in. All the other ratios are very close to the average, which implies that overall, PayPal is valued fairly compared to the valuation of its competitors.

	Network Processing Companies							
	PayPal	Visa	Mastercard	American Express	Median	Average	Low	High
Profit margin	15.5%	51.1%	47.6%	8.6%	31.5%	30.7%	8.6%	51.1%
P/E	73.49	34.72	45.46	245.89	59.48	99.89	34.72	245.89
Price / Sales	11.38	17.75	21.62	21.18	19.46	17.98	11.38	21.62
Price / EBITDA	50.64	17.75	33.42	96.61	42.03	49.61	17.75	96.61
Price / Earnings	73.49	34.72	45.46	245.89	59.48	99.89	34.72	245.89
EV / Sales	11.16	18.42	21.75	2.91	14.79	13.56	2.91	21.75
Price / EBITDA	49.66	18.42	33.62	13.27	26.02	28.74	13.27	49.66
EV / Earnings	72.08	36.03	45.74	33.77	40.88	46.90	33.77	72.08

⁽¹⁾ Current, 2021-01-03⁽²⁾ at the end of the last reported quarter

	Other Financial Technology Companies													
	PayPal	Square	FIS	Global Payments	Intuit	Western Union	MoneyGram International	Adyen	Euronet International	Shopify	Median	Average	Low	High
Profit margin	15.5%	-1.0%	8.6%	11.0%	25.1%	15.5%	-0.5%	6.2%	5.2%	3.8%	7.8%	11.5%	-6.3%	15.5%
P/E	73.49	-950.04	84.64	64.67	42.04	11.69	-36.29	209.83	36.94	1,342.45	130.73	87.94	-2.61	73.49
Price / Sales	11.38	9.51	7.26	7.10	10.55	1.81	0.16	12.97	1.93	50.76	10.19	10.15	0.16	11.38
Price / EBITDA	50.64	1054.68	17.12	18.63	31.44	6.77	1.08	135.37	11.00	95.86	48.40	37.56	2.89	43.28
Price / Earnings	73.49	-950.04	84.64	64.67	42.04	11.69	-36.29	209.83	36.94	1342.45	130.73	87.94	-2.61	73.49
EV / Sales	11.16	9.42	8.74	8.13	10.15	2.21	0.76	12.31	1.88	48.64	10.76	10.34	0.76	11.16
Price / EBITDA	49.66	1044.73	20.60	21.33	30.24	8.29	5.05	128.47	10.74	91.85	51.10	38.25	13.49	42.44
EV / Earnings	72.08	-941.08	101.83	74.05	40.44	14.32	-169.24	199.12	36.07	1286.28	138.02	89.56	-12.15	72.08

⁽¹⁾ Current, 2021-01-03⁽²⁾ at the end of the last reported quarter

Macroeconomic view

The outbreak of COVID-19 pandemic has seriously impacted operations in many sectors globally. The sectors such as hospitality, transportation, tourism, and logistics got hit hard by the current pandemic. While the overall economic growth has considerably decreased, the pandemic has boosted digital payments. During the pandemic, consumers switched largely to online shopping and companies like PayPal benefited as a result. The digital customer interactions have accelerated over 60% globally only from December 2019 to July 2020 according to McKinsey&Company.⁷

It has brought the shift in consumer behaviour, accelerating the adoption of safe cashless payments, an effective way for the reduction of spread of the virus. However, the interest rates decreased sharply, and consumer confidence and spending slowed dramatically. The key global payments geographies such as North America, Europe and China are the once most affected by the Covid-19 crises. As demand across many sectors (including entertainment, retail and travel) dropped, so did the payments revenues. For instance, the US tourism spending has decreased by 78% and UK daily retail footfall by 54.5%. For payments providers this means slashed interest rates, reduced digital payment and liquidity-related fees. And thus, compressed revenues resulting from the reduced consumption. Nevertheless, for the

⁷ How Covid-19 has pushed companies over the technology tipping point-and transformed business forever, McKinsey Company

companies as PayPal the Covid-19 can represent the great opportunities for growth and success in a remote-working economy.⁸

Value drivers

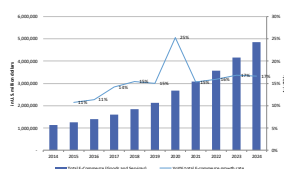
The main driver for the PayPal's revenues is the transaction payment volume. PayPal is pursuing high volume strategy and therefore, the market share is an important performance metric for the company. The growing number of accounts, and thus increased engagement trigger the PayPal's transaction volume. As the pricing of transaction fees is aligned with other competitors and differs slightly, we believe the price won't affect the revenues very much in the future. To understand the main growth source for the PayPal, we analysed both macroeconomic and company-specific drivers, as well as the competition in each region.

Other value-added revenues require a different forecast. They represent smaller part of the PayPal's revenues and thus they were not our key focus. We identified two drivers for these revenues, namely the effect of the acquisitions and the development of the interest rates.

Growth in E-commerce and mobile payment penetration

E-commerce has experienced a substantial growth over the last few years. It has become essential part of the global retail sector. The number of digital buyers has been rising due to increased internet access and adoption globally. Since the PayPal's revenues rely mostly on the online payments, the growth of E-commerce represents the major growth driver for the transaction payment volume. One of the most significant contributors to the rise of e-commerce is the unprecedented usage of mobile devices. The mobile integration will remain dominant in shopping experience in the future. The adoption of the mobile devices has been developing at a high-speed pace, exceptionally in regions that lack other digital infrastructure

Total E-commerce value and YoY % - US



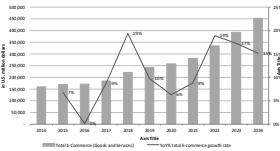
Source: Passport, Euromonitor

United States

The United States E-commerce volume experienced a 25% growth rate in 2020, mainly due to Covid-19 pandemic (see table on the left). The physical stores were closed in the first months of the year, and the spread of virus forced millions of people to stay at home, making digital channels the most attractive alternative to offline shopping. The mobile e-commerce represents almost half of the total e-commerce volume in the United States. The acceleration of digital commerce was reflected

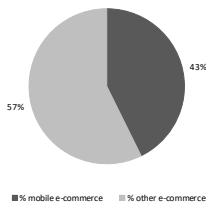
⁸ 10 ways Covid-19 is Impacting Payments, Accenture

Total E-commerce value
and YoY % - UK



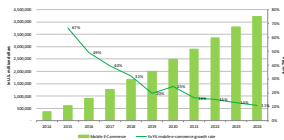
Source: Passport, Euromonitor

% mobile e-commerce



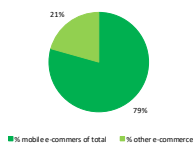
Source: Passport, Euromonitor

Total E-commerce value
and YoY % - Asia Pacific



Source: Passport, Euromonitor

% mobile e-commerce



Source: Passport, Euromonitor

Card payments vs total
payment transaction



Source: Passport, Euromonitor

significantly in the PayPal's performance in 2Q20 and 3Q20, latter being the company's strongest quarter in the history. With the PayPal Checkout experience, the company capitalize on these growing e-commerce trends. This growing trend is expected to continue both for e-commerce and mobile e-commerce. The E-commerce is projected to be around 15% -17% in the next 4 years.

United Kingdom

In terms of online shopping penetration, United Kingdom is the dominant country in Europe. After PayPal, credit cards are the most popular payment methods. In the E-commerce market, Amazon has been the biggest player. E-commerce value sees significant fluctuations in the growth rate over the last few years. While in 2018 the e-commerce increased by 19%, in 2020 it dropped significantly, amounting only 6%. This is mainly due to decline in the consumer confidence caused by the Covid-19 pandemic. However, in comparison to United States, it seems that this growing trend is yet to come. Over next following years, E-commerce in United Kingdom is expected to recover, though with somewhat slower pace. Mobile commerce sees the rise too, as the merchants are increasingly adopting the mobile digital solutions for their businesses. 43% of total E-commerce was conducted with mobile in 2020 (see table on the left).

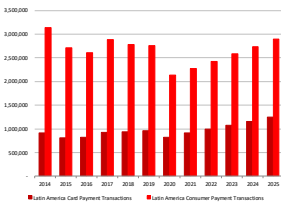
The digital wallets will take more than a third of E-commerce sales, according to J.P. Morgan studies. Apple and Google Pay and PayPal will capture the highest growth. Nevertheless, card will continue to be dominant payment method partly because of their long history in the market, similarly like in the US.

Other countries per region

E-commerce value has seen the surge in other countries worldwide too. We analysed development of the m-commerce value and future growth of the following regions: Asia, Latin America and Middle East and Africa.

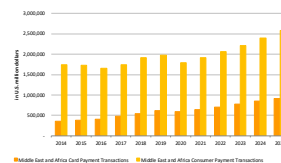
Exhibit on the left shows a declining trend of E-commerce trend in Asia. The region experienced the surge in the past years and so in 2015 the growth amounted even 67%. The cause of such surge was large adoption of mobile phones and increased mobile penetration. The Southeast Asia is the strongest Asian region in terms of the mobile payments. Graph on the left illustrates the growth of m-commerce and shows that even 79% of the total E-commerce in Asia Pacific was the mobile E-commerce in 2020. This share is expected to reach 83% by 2024. Similar like in the US and UK, the strong credit cards growth is expected in Asia, particularly in China (see graph on the left). China's Union Pay will be primar beneficiary, and ongoing regulatory barrier will make it difficult for new entrants and foreign competitors (see Regulation).

Card payments vs total payment transaction



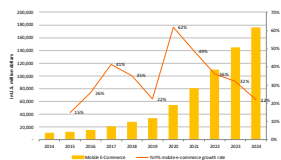
Source: Passport, Euromonitor

Card payments vs total payment transaction



Source: Passport, Euromonitor

Total mobile E-commerce value and YoY % - Middle East and Africa



Source: Passport, Euromonitor

Alipay and WeChat dominate mobile payments in China. They account for more than 90% of third-party mobile payments market. In addition, the strong credit cards growth is expected in China in the future. The primary beneficiary of this is going to be China's UnionPay. Ongoing regulatory barriers will make it difficult for new entrants and foreign competitors.

Also, this region has experienced double-digit growth over the analysed period. Brasil and Mexico hold more than 50% of the Latin America E-commerce market. Mercado Pago is the largest wallet in South America and operates across Argentina, Brazil, Chile, Colombia, Mexico and Venezuela. Credit card are not very used (see the graph on the left) and cash still represents high percentage of the e-commerce volume. Mercado Libre is the largest start-up, based in Argentina.

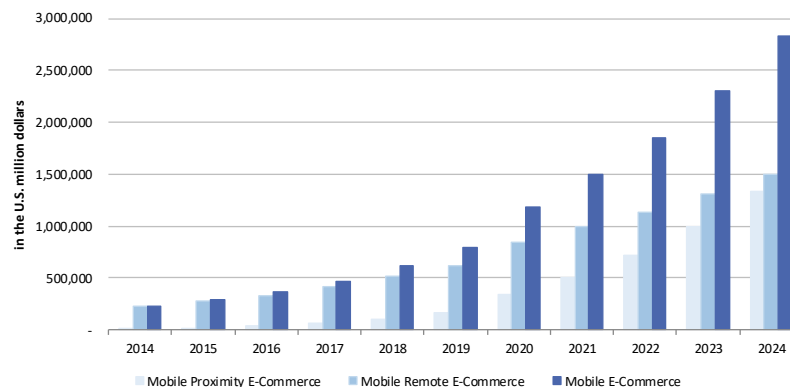
Being one of the most unbanked regions in the world, Africa continued to more than a half of all mobile money transactions worldwide in 2019. Namely, according to Statista, 690.1 billion dollars were made in mobile money transactions in 2019, of which 456.3 billion U.S. dollars in Sub-Saharan Africa. Therefore, mobile money provides financial inclusion, which allows other non-bank participants to be involved in the economy. People who live in rural areas benefited largely, as paying the bills does not require long distance traveling anymore. Large number of agents comparing to banks and ATMs enables also easier money withdrawal. The graph on the left side shows the low value of credit card transactions in the Middle East and Africa due to the limited penetration of traditional financial services.

However, to support the rapid growth of mobile payment services, African countries need to maintain a stable infrastructure, which relies on a stable internet connection, and regulation that is keeping up with the fast pace of innovation.

Increased contactless POS payments

As a result of the pandemic, the contactless payments have increased substantially. The concern for health has raised greater awareness for hygiene among consumers. Moreover, merchants encourage buyers to use them as it helps reduce disease transmission. Even before the pandemic, we saw a decline in the cash trend. However, Covid-19 accelerated the adoption of these newer mobile wallet payment methods. In the region like United States, Mobile proximity E-commerce will rise in the future years, mainly due to large adoption of the digital wallets (Exhibit below).

Mobile Proximity and Remote E-Commerce vs Total Mobile E-commerce in the US:



With its QR Code for In-Person purchases, PayPal will capitalize on this trend worldwide. This option has been introduced in the 28 markets around the world and enables customers to buy or sell in-person touch free, in a more safe and secure way. With this new option of the payment, we expect PayPal's in-person payment transactions to rise. However, not only PayPal will capture this growth, but also traditional network processor card Visa, with its newly developed Visa Checkout product, but also other digital wallets that rely on the mobile proximity E-commerce.

Rise of the merchant services

With the coronavirus pandemic, not only mainstream verticals saw an acceleration in shifts toward digital payment, but also the merchant segments like education and healthcare, which in the past have not received a significant portion of digital payments. This resulted in a dramatic digitization of small-business commerce across the world, mostly through marketplace platforms like Amazon, eBay and Shopify. The shift to digital is causing merchants' payment-acceptance cost to rise. However, digitization of commerce has developed broader willingness to pay for enhanced services and solutions among merchants. Even in the industries such as groceries, merchants are willing to pay up to 30% higher fees for better payment performance and positive impact on the business as a result. In the U.S. the number of merchants who opted for buy-now, pay later solutions has almost tripled. The largest merchant service providers invested heavily in Data Analytics, fraud and enhanced payments, but only few exploited the opportunity to provide enhanced value-added services to retailers. The willingness of large retailers to pay for such services has been growing and they also seek these from their current merchants.⁹ For PayPal, it represents a significant opportunity as the merchants will have been increasingly adopting those services.

⁹ McKinsey – Global Payments Report 2020

Regulation

Latin America has been opening for fintech companies in the recent years. In Brasil, the bank market has been highly concentrated and as a result the interest rates are high. Regulators have created an environment where development of fintechs is highly supported. With a licence, P2P lending fintech can act independently of banks.

M-Pesa in Africa is another example where Central Bank of Kenya adopted a lean regulation approach working with M-Pesa. The success of M-Pesa was driven by supported regulatory approach. Similarly, the Central Bank of Philippines engaged with the non-bank based mobile payments model, GCash. As the consequence, GCash became a global mobile money leader in Southeast Asia. These approaches are often seen in the countries with high unbanked population. Therefore, the regulation of entrance in certain market is an essential value driver for PayPal. Moreover, the ability of PayPal to comply with rising payments regulations globally will be determinant for its growth as well.

Technology and development

Keeping pace with rapid technological developments to provide innovative products and services will be crucial for PayPal in future. PayPal's R&D expense amounted \$1.1 billion in 2018 and 2019. To continue to compete with other highly technological companies, PayPal will need to continue to invest in the research and development. In relation to fraud and risk decisioning, developments in artificial intelligence and machine learning are essential. Moreover, the investments in the real time payments, blockchain technologies and proximity payment technology will be necessary. However, beside its own initiatives, PayPal relies partly on third parties for the development of these technologies. We see dependence on third parties as a downside of PayPal as they may restrict or prevent the access of those technologies. Thus, to be able to succeed, PayPal needs to become less dependent and more able to develop new technologies and thus adapt to rapid changes in the payment industry. The own developments might require substantial expenditure, take time and bear risks of not being successful. To be able to have the competitive advantage over its competitors on the long run, PayPal would need to substitute acquisitions of companies with in-house R&D. Both cases represent high amount of expenditure for continued development of new and innovative products.

Market share

Market share is of the essential importance for PayPal. It depends largely on the overall demand for its products. As more merchants uses PayPal's platform, it incentivizes other merchants to follow. The popularity of PayPal among consumers

A pie chart illustrating the distribution of expenditure types for the 100 largest U.S. corporations. The chart is divided into 11 segments, each representing a different expenditure type and its corresponding percentage of the total. The segments are: International (12%), Payroll (12%), Square (10%), Other (10%), United States (8%), Travel (8%), Entertainment (6%), Other (4%), Other (3%), Other (2%), and Other (1%).

Expenditure Type	Percentage
International	12%
Payroll	12%
Square	10%
Other	10%
United States	8%
Travel	8%
Entertainment	6%
Other	4%
Other	3%
Other	2%
Other	1%

PAGE 28/39

fees, while allowing consumers to pay later in four interest-free instalments. In this way, the customers pay over a six-week period, while merchants are getting their payments upfront. Pay in 4 represents an additional value proposition for the merchants and is already included in the existing PayPal's pricing. PayPal's Pay Later products drive increased conversion and help merchants easier to connect with new customers every day. Some studies show that consumers are 54 percent more willing to buy when a business accepts PayPal, proving that with all its product offering, PayPal creates a substantial value-added to merchants. Next to it, PayPal offers many more buy now pay later services, of which the PayPal Credit is the most commonly used one.

PayPal also continues to expand its services globally, mainly through various partnerships. To capture the mobile E-commerce growth in Asia, PayPal entered into a partnership with mobile commerce leader Gojek that captures large custom base in Southeast Asia. Moreover, PayPal entered into another partnership with a Latin American leading start-up, Mercado Pago. This partnership enabled PayPal to gain from the cross-border transactions and to be available as an online checkout in Brazil and Mexico. Through these partnerships, PayPal has a great potential to capture high-growth in digital payments of one of the most accelerating regions in the future.

Forecasts

Transaction revenues

We used top-bottom approach and forecasted PayPal's revenues based on the projected market share. Based on our assumption on heavy competition, changing customer needs, and different regulation policies in various regions, the market share per each region where PayPal is operating has been obtained. For our market size we obtained the revenues of the biggest network processor companies and other financial services companies as it was explained in the Market Share paragraph. Then, we forecasted our synthetic market size based on the growth rates of the macro factors. Namely, for the network processor companies, we expect size to grow by average of e-commerce growth in that region and growth in the credit card payments. For the forecast of the market size of other financial services companies, the e-commerce growth rate was assumed.

- US

United States remains stable and dominant market of PayPal. Moreover, it is a leading market in the E-commerce usage and adoption.

We project that the United States will experience the highest growth as most of the merchants using PayPal services are coming from this region. Moreover, PayPal

offers its products mainly in this region, before it expands them into other markets. The rise of the contactless payments will further trigger the growth, and the substitution of cash for card for small purchases is expected to continue. Despite of the competitors introducing competitive and similar products, we expect PayPal to remain popular payment method in its origin country due to its well-established brand, large adoption in the region and increasing number of products. Due to the increased engagement driven by the introduction of services such as Pay in 4 during the pandemic, and the large increase of the customer base, we assumed market share to amount 15% at the end of this year and in 2021. From 2022 it will experience slight decline as the rise of new entrants is expected.

- **Other countries**

For the market size of other countries, we obtain the revenues of the same competitors as in the United States. In the annual reports of these companies, the international sales were taken. We assumed 13% of the market share in this geographic segment for the end of 2020 and 2021. As we expect to see growth of PayPal in larger number of e-commerce emerging markets. So, PayPal is gaining the higher acceptance in Europe, and its introduction of Business Debit Mastercards to European business will trigger the transaction sales in this region. Moreover, partnerships in Latin America and Asia will contribute to the growth of the PayPal's revenues, too. From 2022 we expect the market share to decline for the same reason as in the United States.

- **United Kingdom**

As other companies do not provide specific data for the United Kingdom revenues, we simply assumed the E-commerce growth rate for the forecasted period for PayPal's revenues. From 2021, we assumed that PayPal will capture only 90-95% of the forecasted sales due to rising competition expected in this region. Amazon is the most popular retail company and accounts for high amount of the retail e-commerce as well. Thus, the introduction of amazon pay will affect the PayPal's market share. However, we believe that PayPal will remain popular payment method as it has seen the larger adoption among consumers in the past years.

Other Value-Added Service

We expect a significant revenue decline in 2020 due to mainly reduced interest rates. The gains from the acquisitions as well as the larger adoption of merchants' services will cause these revenues also to rise, but first from 2021. The pandemic will cause many companies to face liquidity problem, and PayPal can gain additional market share as it distinguishes itself by providing the financing product, PayPal

WorkingCapital and PayPal Business Loan. The large success of Honey acquisition and introduced Xoom service in 12 countries in Africa will trigger the Other value-added services in the United States and other countries in 2022.

Other forecast

PPE and Intangibles were forecasted as the percentage of sales as they are assumed to grow in the correlation with the revenues. PayPal does not need any significant factories to grow and thus the Invested Capital for the company is not of a high relevance. Moreover, Capex is projected to be positive over the projected period, resulting in a higher free cash flow.

However, the company will further invest in technology and thus we projected slightly higher R&D expense in the Income Statement for the period between 2022 and 2025. We expect General and administrative costs slightly to decrease, and sales and marketing to remain at the historical level as PayPal's invests considerably in its marketing efforts. We do not expect any decrease or increase in the cost of sales, but rather the historical level. Nature of the company's business won't allow the decline of these costs, and they will be aligned with the growth of revenues in the future.

Valuation

In order to evaluate the company, the value of equity was calculated for the end of the year 2021 and implied share price based on the given value. Later, the expected overall growth rate is calculated, and relevant conclusions are derived.

Cost of capital

Beta of debt	0.097
Beta of equity	1.152
Risk free	0.92%
MRP	6.86%
D/EV	4.28%
E/EV	95.72%
Cost of debt	1.58%
Cost of equity	8.48%
WACC	8.17%

To discount the future cash flows to today and arrive to the final equity value, the weighted average cost of capital (WACC) was first calculated. It refers to the return required both by both equity and debt holders; therefore, the required inputs are the cost of debt, cost of equity, and debt to equity ratio (together with other relevant inputs, they are summarized in the figure on the left). Risk-free rate was based on the US 10-year bond yield, which was 0.92%. Market Risk Premium (MRP) was calculated as the difference between average annualized S&P500 monthly returns (since 2007) and the risk-free rate. The obtained result was 6.86%. These values were later used to calculate cost of debt and cost of equity.

To calculate the cost of debt, it was considered the yield of maturity of the outstanding bond, which maturity was similar to the forecasted period (10 years), and was obtained as 1.704%. Using this value and knowing the credit rating of PayPal

(Baa+¹⁰), cost of debt was calculated as 1.58%. Then beta of debt was calculated using CAPM model. Levered beta of equity was then obtained by regressing the excess returns of S&500 and PayPal since July 2015 (the month when PayPal went IPO). The result of 1.152 shows that PayPal's stock is riskier than the market itself and the systematic risk of it higher, meaning that the stock is quite volatile but at the same time might bring higher returns. This beta was then adjusted through Bayesian method to reduce the statistical error, which might exist due to limited number of observations in the regression. Based on this beta, unlevered cost of equity was calculated, which led to levered cost of capital of 8.48%. Knowing all these inputs, WACC resulted in 8.17%.

In order to see how different values of MRP would affect WACC, a sensitivity analysis was made, together with checking the 95% confidence interval of beta. Overall market return varies throughout the years and is highly dependent on the situation in the world. During the crisis in 2008, the return was much lower than it is right now, and due to the pandemic today, we expect the overall returns of the market to go much lower than they are today. A decreased market return would indicate lower MRP, and that would make the WACC of the company go even to 4%, which would increase the value of the future cash flows, hence the company's valuation (through DCF method, *ceteris paribus*). However, if the average market does good in the near future, WACC can go much higher than it is today and decrease the overall expected equity value.

WACC	Unlevered beta			
	8.173%	0.976	1.059	1.141
MRP	2.86%	3.702%	3.939%	4.175%
	3.86%	4.678%	4.997%	5.316%
	4.86%	5.654%	6.056%	6.458%
	5.86%	6.630%	7.115%	7.599%
	6.86%	7.606%	8.173%	8.740%
	7.86%	8.582%	9.232%	9.881%
	8.86%	9.558%	10.291%	11.023%
	9.86%	10.535%	11.349%	12.164%
	10.86%	11.511%	12.408%	13.305%

Intrinsic valuation

For the valuation purposes, the DCF method was chosen, and cash flows were discounted using WACC. This method was used because we did not forecast any huge changes in the capital structure throughout our forecasted period. Levered EV at the end of 2021 was estimated to be nearly \$200 billion, and the value of equity of \$202 billion. The perpetual growth rate was assumed to be 4% based on the stable growth rate of the revenues in the 10 years period. These inputs gave us a target share price of \$167.82. The share price today is \$234.20¹¹, meaning that stock price is overvalued. Expected capital gain was calculated as -28% and cash gain 2.6%. These results imply that overall shareholders' return is -26%.

¹⁰ 'S&P500 2020-05-11 for Senior Unsecured Notes

¹¹ As of end of 2020-12-31

Appendix

Appendix 1

Consolidated Statements of Income							
<i>In millions US dollars, except for per share amounts</i>							
Source	2016YR	2016YR	2019YR	2019YR	2019Q3	2019YR	2020Q3
Year	2015	2016	2017	2018	2019Q3	2019	2020 ⁽¹⁾
Net revenues	9,248	10,842	13,094	15,451	12,811	17,772	15,338
YoY%	13%	15%	17%	15%		13%	16%
Operating expenses:							
Transaction expense	2,610	3,346	4,419	5,581	4,877	6,790	5,604
YoY%	17%	22%	24%	21%		18%	13%
Transaction and loan losses	809	1,088	1,011	1,274	999	1,380	1,375
YoY%	20%	26%	-8%	21%		8%	27%
Customer support and operations	1,110	1,267	1,265	1,407	1,177	1,615	1,271
Customer support and operations reported prior to reclassification	1,110	1,267	1,364	1,482	1,252	1,715	1,369
Sales and marketing	937	969	1,142	1,314	1,001	1,401	1,256
Sales and marketing reported prior to reclassification	937	969	1,128	1,313	995	1,392	1,248
Technology and development	792	834	1,740	1,831	1,527	2,085	1,910
Technology and development reported prior to reclassification	792	834	953	1,071	857	1,193	1,041
General and administrative	873	1,028	1,258	1,541	1,239	1,711	1,501
General and administrative reported prior to reclassification	873	1,028	1,155	1,451	1,155	1,600	1,393
Depreciation and amortization	608	724	-	-	-	-	-
Restructuring	48	-	132	309	71	71	95
Total operating expenses	7,787	9,256	10,967	13,257	10,891	15,053	13,012
Operating income	1,461	1,586	2,127	2,194	1,920	2,719	2,326
Other income (expense), net	27	45	73	182	224	279	880
Income before income taxes	1,488	1,631	2,200	2,376	2,144	2,998	3,206
Income tax expense	260	230	405	319	192	539	571
Net income	1,228	1,401	1,795	2,057	1,952	2,459	2,635
Net income per share:							
Basic	1.00	1.16	1.49	1.74	1.66	2.09	2.25
Diluted	1.00	1.15	1.47	1.71	1.64	2.07	2.22
Weighted average shares:							
Basic	1222	1210	1203	1184	1174	1174	1173
Diluted	1229	1218	1221	1203	1188	1188	1186

Consolidated Statements of Comprehensive Income							
<i>In millions US dollars</i>							
Source	2016YR	2016YR	2017YR	2018YR	2019Q3	2019YR	2020Q3
Year	2015	2016	2017	2018	2019Q3	2019	2020 ⁽¹⁾
Net income	1,228	1,401	1,795	2,057	1,952	2,459	2,635
Other comprehensive income (loss), net of reclassification adjustments:							
Foreign currency translation adjustments ("CTA")	(37)	(15)	43	(68)	(148)	(57)	(111)
Net investment hedge CTA gain (loss)	-	-	-	-	-	(31)	55
Unrealized gains (losses) on cash flow hedges	(69)	74	(242)	293	16	(176)	(111)
Tax (expense) benefit on unrealized gains (losses)	-	(1)	4	(5)	(5)	3	1
Unrealized losses on investments, net	(16)	11	(7)	(1)	7	15	10
Tax benefit on unrealized losses on investments	3	(1)	1	1	-	(5)	(3)
Other comprehensive (loss) income, net of tax	(119)	68	(201)	220	(130)	(251)	(159)
Comprehensive income	1,109	1,469	1,594	2,277	1,822	2,208	2,476

Appendix 2

Reformulated Consolidated Balance Sheets							Reformulated Forecasted Consolidated Balance Sheets											
In millions US dollars, except par value																		
Year	2015A	2016A	2017A	2018A	2019A	2020A ⁽¹⁾	2020F ⁽²⁾	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	
Core																		
Operating cash	185	217	262	309	355	307	425	479	459	463	532	575	609	638	663	688	715	
% of sales	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Accounts receivable, net	137	214	283	313	435	482	470	534	527	520	600	652	687	720	749	777	807	
Avg Collection Period	5.4	7.2	7.9	7.4	8.9	8.6	8.1	8.1	8.4	8.2	8.2	8.3	8.2	8.2	8.3	8.2	8.2	
Loans and interest receivable, net of allow	4,184	5,348	1,314	2,532	3,972	2,597	3,459	4,393	4,356	4,134	4,888	5,296	5,549	5,847	6,070	6,293	6,545	
% of sales	45%	49%	10%	16%	16%	12%	16%	18%	19%	18%	19%	18%	18%	18%	18%	18%	18%	
Funds receivable and customer accounts	12,261	14,363	18,242	20,062	22,527	30,530	28,075	31,036	29,702	30,170	34,486	37,353	39,587	41,398	43,031	44,687	46,403	
% of sales	133%	133%	139%	130%	127%	197%	132%	130%	129%	130%	130%	130%	130%	130%	130%	130%	130%	
Prepaid expenses and other current asset	617	745	647	808	711	833	1,005	1,115	1,023	1,068	1,216	1,309	1,394	1,456	1,512	1,572	1,632	
% of sales	7%	8%	7%	9%	8%	9%	9%	9%	8%	9%	9%	9%	9%	9%	9%	9%	9%	
Total Current Assets	17,384	20,887	20,748	24,024	28,000	34,749	33,435	37,557	36,067	36,355	41,720	45,185	47,827	50,058	52,025	54,017	56,101	
Property and equipment, net	1,344	1,482	1,528	1,724	1,693	1,757	1,915	1,677	1,836	1,852	1,861	2,014	2,132	2,232	2,319	2,408	2,501	
Goodwill	4,069	4,059	4,339	6,284	6,212	9,119	12,648	11,018	10,553	11,071	12,981	14,077	15,511	15,847	16,007	16,734	17,516	
Intangible assets, net	358	211	168	825	778	1,146	1,590	979	1,035	1,194	1,361	1,516	1,471	1,587	1,680	1,738	1,801	
Other assets	114	79	133	565	1,292	1,417	847	1,191	1,241	1,108	1,343	1,462	1,515	1,606	1,667	1,725	1,796	
% of sales	1%	1%	1%	2%	5%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Total non-current Assets	5,885	5,831	6,168	9,398	9,975	13,439	16,999	14,865	14,665	15,226	17,545	19,069	20,630	21,271	21,673	22,606	23,614	
Total core Assets	23,269	26,718	26,916	33,422	37,975	48,188	50,434	52,422	50,733	51,580	59,265	64,254	68,457	71,329	73,698	76,623	79,715	
Accounts payable	145	192	257	281	232	159	354	378	347	372	418	447	480	500	520	540	560	
Avg Payable Period	11.7	12.3	13.8	12.3	12.3	8.6	11.6	10.8	10.3	10.9	10.7	10.6	10.7	10.7	10.7	10.7	10.7	
Funds payable and amounts due to custo	12,261	15,163	19,742	21,562	24,527	32,530	30,374	33,574	32,200	32,661	37,341	40,459	42,867	44,831	46,602	48,392	50,251	
% of sales	133%	140%	151%	140%	138%	213%	140%	140%	140%	141%	140%	141%	141%	141%	141%	141%	141%	
Accrued expenses and other current liab	1,179	1,459	1,781	2,002	1,983	2,324	2,675	2,930	2,751	2,839	3,232	3,492	3,712	3,877	4,029	4,187	4,346	
% of sales	13%	13%	14%	13%	13%	11%	13%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	
Income taxes payable	32	64	83	61	73	100	83	83	87	85	88	85	86	86	86	86	86	
Total current Liabilities	13,617	16,878	21,863	23,906	26,815	35,113	33,486	36,966	35,385	35,957	41,079	44,483	47,144	49,294	51,237	53,205	55,243	
Deferred tax liability and other long-term li	1,505	1,513	1,917	2,042	2,117	2,278	2,820	3,066	2,904	2,987	3,398	3,677	3,906	4,079	4,241	4,405	4,573	
% of sales	16%	14%	19%	19%	19%	15%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	
Total non-current Liabilities	1,505	1,513	1,917	2,042	2,117	2,278	2,820	3,066	2,904	2,987	3,398	3,677	3,906	4,079	4,241	4,405	4,573	
Total core Liabilities	15,122	18,391	23,780	25,948	28,932	37,391	36,306	40,031	38,289	38,945	44,476	48,160	51,049	53,374	55,478	57,610	59,817	
CORE INVESTED CAPITAL	8,147	8,327	3,136	7,474	9,043	10,797	14,128	12,390	12,444	12,636	14,789	16,094	17,407	17,956	18,220	19,012	19,898	
Non Core																		
Restricted cash	18	17	79	75	64	77	103	106	98	105	117	127	135	141	147	152	158	
% of operating cash	10%	8%	30%	24%	18%	25%	24%	22%	21%	23%	22%	22%	22%	22%	22%	22%	22%	
Loans and interest receivable, held for sal	-	-	6,398	-	-	-	-	-	-	-	-	-	-	-	1	2	2	
Prepaid expenses and other current asset	38	88	66	139	89	104	135	163	139	148	170	181	194	202	210	218	227	
% of sales	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
Total non-current Assets	56	105	6,543	214	153	181	238	269	237	253	288	307	329	343	356	371	385	
Long-term investments	2,348	1,539	1,961	971	2,863	3,439	3,220	3,594	4,075	4,584	5,157	5,817	6,549	7,377	8,311	9,361	10,545	
% of sales	25%	14%	15%	9%	18%	22%	12%	12%	13%	12%	13%	13%	13%	13%	13%	13%	13%	
Total non-current Assets	2,348	1,539	1,961	971	2,863	3,439	3,220	3,594	4,075	4,584	5,157	5,817	6,549	7,377	8,311	9,361	10,545	
TOTAL NON-CORE ASSETS	2,404	1,644	8,504	1,185	3,016	3,620	3,457	3,862	4,312	4,837	5,444	6,124	6,878	7,720	8,668	9,732	10,930	
NON-CORE INVESTED CAPITAL	2,404	1,644	8,504	1,185	3,016	3,620	3,457	3,862	4,312	4,837	5,444	6,124	6,878	7,720	8,668	9,732	10,930	
Financial																		
Debt ⁽³⁾	-	-	1,000	1,998	5,472	9,664	6,018	6,468	6,202	6,710	7,630	8,456	9,200	9,749	10,198	10,908	11,695	
% of Invested Capital	0%	0%	9%	23%	45%	67%	34%	40%	37%	38%	38%	38%	38%	38%	38%	38%	38%	
Excess cash	3,208	4,741	5,354	8,725	10,342	13,774	12,312	12,292	13,914	13,735	15,545	17,448	19,247	20,105	21,034	22,587	24,228	
% of Invested Capital	30%	48%	40%	101%	86%	95%	70%	70%	83%	79%	77%	79%	79%	79%	78%	79%	79%	
TOTAL NET DEBT	(3,208)	(4,741)	(4,354)	(6,727)	(4,870)	(4,110)	(6,294)	(5,824)	(7,712)	(7,025)	(7,915)	(8,992)	(10,046)	(10,356)	(10,836)	(11,679)	(12,532)	
Shareholder's equity	13,759	14,712	15,994	15,386	16,885	18,483	23,879	22,076	24,468	24,497	28,148	31,210	34,332	36,032	37,724	40,423	43,360	
Non controlling interests	-	-	-	-	44	44	44	44	44	44	44	44	44	44	44	44	44	
Total equity	13,759	14,712	15,994	15,386	16,929	18,527	23,835	22,032	24,424	24,453	28,144	31,166	34,288	35,988	37,680	40,379	43,316	

Appendix 3

Reformulated Cash Flow Statement						Reformulated Forecasted Cash Flow Statement												
<i>In millions US dollars, except par value</i>																		
Source	2016YR	2017YR	2018YR	2019YR	2020Q3													
Year	2015	2016	2017	2018	2019	2020 ⁽¹⁾	2020F ⁽¹⁾	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	
CORE																		
EBIT	1,461	1,586	2,127	2,194	2,719	2,326	4,189	4,892	3,691	3,635	4,599	5,052	6,230	6,507	6,758	7,026	7,305	
Notional Taxes on EBIT	(511)	(555)	(744)	(461)	(571)	(488)	(878)	(1,027)	(775)	(763)	(966)	(1,061)	(1,308)	(1,367)	(1,419)	(1,475)	(1,534)	
Tax Adjustments	261	341	365	180	91	102	-	-	-	-	-	-	-	-	-	-	-	
NOPLAT	1,210	1,372	1,748	1,913	2,239	1,940	3,513	4,161	3,129	3,093	3,898	4,290	5,288	5,525	5,735	5,964	6,201	
Depreciation & Amortization	(608)	(724)	(805)	(776)	(912)	(888)	(959)	(840)	(914)	(944)	(935)	(1,012)	(1,073)	(1,126)	(1,167)	(1,212)	(1,259)	
Operational Cash Flow	1,818	2,096	2,553	2,689	3,151	2,828	4,472	5,001	4,042	4,037	4,832	5,302	6,361	6,651	6,902	7,177	7,461	
Invested Capital - PPE&Intangible Assets	1,702	1,693	1,696	2,549	2,471	2,903	3,504	2,656	2,871	3,046	3,221	3,530	3,603	3,819	3,999	4,147	4,302	
Gross Capex investment	9	(3)	(853)	(141)	(432)	(432)	(601)	848	(216)	(175)	(175)	(309)	(73)	(216)	(181)	(147)	(155)	
Net capex	(715)	(808)	(1,629)	(1,053)	(1,320)	(1,560)	(1,560)	8	(1,129)	(1,119)	(1,110)	(1,321)	(1,146)	(1,341)	(1,348)	(1,359)	(1,414)	
Operational NWC	4,329	4,723	19	1,312	2,457	1,127	1,818	2,407	2,410	2,169	2,658	2,885	3,001	3,185	3,306	3,427	3,572	
Investment in NWC	(394)	4,704	(1,293)	(98)	1,331	(492)	(492)	(789)	(3)	241	(489)	(227)	(116)	(184)	(120)	(121)	(146)	
Other non-cash adjustments	2,116	1,911	1,421	3,613	4,115	6,767	9,005	7,327	7,162	7,421	8,910	9,679	10,803	10,952	10,916	11,439	12,024	
Investment in other	205	490	(2,192)	(432)	(2,652)	(2,338)	(2,338)	1,678	165	(258)	(1,489)	(769)	(1,124)	(149)	36	(524)	(585)	
Investment Cash Flow	(904)	4,386	(5,114)	(1,563)	(2,641)	(4,291)	(4,291)	897	(967)	(1,136)	(3,088)	(2,317)	(2,386)	(1,675)	(1,432)	(2,004)	(2,145)	
Core Free Cash Flow	1,192	6,939	(2,425)	1,567	187	187	182	5,899	3,075	2,900	1,744	2,985	3,975	4,977	5,470	5,172	5,316	
NON CORE																		
Non-core operating result	(101)	97	(149)	425	60	655	1,057	1,305	1,612	1,977	2,469	3,052	3,774	4,669	5,787	7,161	8,863	
Non-core invested capital	2,404	1,644	8,504	1,185	3,016	3,620	3,457	3,862	4,312	4,837	5,444	6,124	6,878	7,720	8,668	9,732	10,930	
Changes in invested capital		760	(6,860)	7,319	(80)	(604)	163	(405)	(450)	(524)	(608)	(680)	(754)	(841)	(948)	(1,064)	(1,198)	
Non-core Free Cash Flow	857	(7,009)	7,744	(20)	50	50	1,220	901	1,162	1,453	1,861	2,372	3,020	3,827	4,840	6,097	7,665	
TOTAL FREE CASH FLOW	2,049	(70)	5,319	1,548	237	237	1,402	6,799	4,237	4,353	3,605	5,357	6,995	8,804	10,310	11,269	12,981	
FINANCING																		
Financial Result	-	-	(5)	(61)	(91)	(119)	(217)	(239)	(257)	(246)	(266)	(303)	(336)	(365)	(387)	(405)	(433)	
Net Debt	(3,208)	(4,741)	(4,354)	(6,727)	(4,870)	(4,110)	(6,294)	(5,824)	(7,712)	(7,025)	(7,915)	(8,992)	(10,046)	(10,356)	(10,836)	(11,679)	(12,532)	
Investment in Net Financial Assets	(1,533)	387	(2,373)	305	759		(2,184)	470	(1,889)	688	(890)	(1,077)	(1,055)	(309)	(480)	(843)	(854)	
Net Cash Transaction with Shareholders	(516)	(312)	(2,885)	(1,762)	(878)		999	(7,031)	(2,092)	(4,794)	(2,449)	(3,977)	(5,604)	(8,129)	(9,443)	(10,022)	(11,694)	
FINANCING CASH FLOW	(2,049)	70	(5,319)	(1,548)	(237)	(237)	(1,402)	(6,799)	(4,237)	(4,353)	(3,605)	(5,357)	(6,995)	(8,804)	(10,310)	(11,269)	(12,981)	

Appendix 4

Valuation

DCF										
In millions US dollars										
Year	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
	1	2	3	4	5	6	7	8	9	10
Unlevered CF	6,799	4,237	4,353	3,605	5,357	6,995	8,804	10,310	11,269	12,981
@ WACC	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%	8.17%
= Levered EV	197,021	208,887	221,607	236,114	250,055	263,497	276,230	288,497	300,807	
= Value Financial Debt	5,824	7,712	7,025	7,915	8,992	10,046	10,356	10,836	11,679	12,532
+ Levered EV	197,021	208,887	221,607	236,114	250,055	263,497	276,230	288,497	300,807	-
+ Value Financial Debt	5,824	7,712	7,025	7,915	8,992	10,046	10,356	10,836	11,679	12,532
= Value of Equity	202,845									

Inputs

Perpetuity growth rate	4%
------------------------	----

Shares outstanding (in millions)

1174

Checks	DCF
Levered EV	197,021
Value of Equity	202,845
Price per Share (implied)	\$167.82

Expected overall growth

Expected overall growth		Source: Bloomberg, retrieved on 3.1.2020
Price / Sales (Geometric average) in 2020	234	
Expected capital gain	-28%	
Shareholders Cash in/Cash out per share	5.99	
Expected Cash gain	2.6%	
Total shareholder return	-26%	

Disclosures and Disclaimers

Report Recommendations

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 Giedre Malinauskaite and Sara Ristivojevic, Master in Finance students of Nova School of Business and Economics (“Nova SBE”), within the context of the Field Lab – Equity Research.

This report is issued and published exclusively for academic purposes, namely for academic evaluation and master graduation purposes, within the context of said Field Lab – Equity Research. It is not to be construed as an offer or a solicitation of an offer to buy or sell any security or financial instrument.

This report was supervised by a Nova SBE faculty member, acting merely in an academic capacity, who revised the valuation methodology and the financial model.

Given the exclusive academic purpose of the reports produced by Nova SBE students, it is Nova SBE understanding that Nova SBE, the author, the present report and its publishing, are excluded from the persons and activities requiring previous registration from local regulatory authorities. As such, Nova SBE, its faculty and the author of this report have not sought or obtained registration with or certification as financial analyst by any local regulator, in any jurisdiction. In Portugal, neither the author of this report nor his/her academic supervisor is registered with or qualified under COMISSÃO DO MERCADO DE VALORES MOBILIÁRIOS (“CMVM”, the Portuguese Securities Market Authority) as a financial analyst. No approval for publication or distribution of this report was required and/or obtained from any local authority, given the exclusive academic nature of the report.

The additional disclaimers also apply:

USA: Pursuant to Section 202 (a) (11) of the Investment Advisers Act of 1940, neither Nova SBE nor the author of this report are to be qualified as an investment adviser and, thus, registration with the Securities and Exchange Commission (“SEC”, United States of America’s securities market authority) is not necessary. Neither the author nor Nova SBE receive any compensation of any kind for the preparation of the reports.

Germany: Pursuant to §34c of the WpHG (*Wertpapierhandelsgesetz*, i.e., the German Securities Trading Act), this entity is not required to register with or otherwise notify the *Bundesanstalt für Finanzdienstleistungsaufsicht* (“BaFin”, the German Federal Financial Supervisory Authority). It should be noted that Nova SBE is a fully-owned state university and there is no relation between the student’s equity reports and any fund raising programme.

UK: Pursuant to section 22 of the Financial Services and Markets Act 2000 (the “FSMA”), for an activity to be a regulated activity, it must be carried on “by way of business”. All regulated activities are subject to prior authorization by the Financial Conduct Authority (“FCA”). However, this report serves an exclusively academic purpose and, as such, was not prepared by way of business. The author - a Master’s student - is the **sole and exclusive responsible** for the information, estimates and forecasts contained herein, and for the opinions expressed, which exclusively reflect his/her own judgment at the date of the report. Nova SBE and its faculty have no single and formal position in relation to the most appropriate valuation method, estimates or projections used in the report and may not be held liable by the author’s choice of the latter.

The information contained in this report was compiled by students from public sources believed to be reliable, but Nova SBE, its faculty, or the students make no representation that it is accurate or complete, and accept no liability whatsoever for any direct or indirect loss resulting from the use of this report or of its content.

Students are free to choose the target companies of the reports. Therefore, Nova SBE may start covering and/or suspend the coverage of any listed company, at any time, without prior notice. The students or Nova SBE are not responsible for updating this report, and the opinions and recommendations expressed herein may change without further notice.

The target company or security of this report may be simultaneously covered by more than one student. Because each student is free to choose the valuation method, and make his/her own assumptions and estimates, the resulting projections, price target and recommendations may differ widely, even when referring to the same security. Moreover, changing market conditions and/or changing subjective opinions may lead to significantly different valuation results. Other students’ opinions, estimates and recommendations, as well as the advisor and other faculty members’ opinions may be inconsistent with the views expressed in this report. Any recipient of this report should understand that statements regarding future prospects and performance are, by nature, subjective, and may be fallible.

This report does not necessarily mention and/or analyze all possible risks arising from the investment in the target company and/or security, namely the possible exchange rate risk resulting from the security being denominated in a currency either than the investor’s currency, among many other risks.

The purpose of publishing this report is merely academic and it is not intended for distribution among private investors. The information and opinions expressed in this report are not intended to be available to any person other than Portuguese natural or legal persons or persons domiciled in Portugal. While preparing this report, students did not have in consideration the specific investment objectives, financial situation or

particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in any security, namely in the security covered by this report.

The author hereby certifies that the views expressed in this report accurately reflect his/her personal opinion about the target company and its securities. He/ She has not received or been promised any direct or indirect compensation for expressing the opinions or recommendation included in this report.

The content of each report has been shown or made public to restricted parties prior to its publication in Nova SBE's website or in Bloomberg Professional, for academic purposes such as its distribution among faculty members for students' academic evaluation.

Nova SBE is a state-owned university, mainly financed by state subsidies, students tuition fees and companies, through donations, or indirectly by hiring educational programs, among other possibilities. Thus, Nova SBE may have received compensation from the target company during the last 12 months, related to its fundraising programs, or indirectly through the sale of educational, consulting or research services. Nevertheless, no compensation eventually received by Nova SBE is in any way related to or dependent on the opinions expressed in this report. The Nova School of Business and Economics does not deal for or otherwise offer any investment or intermediation services to market counterparties, private or intermediate customers.

This report may not be reproduced, distributed or published, in whole or in part, without the explicit previous consent of its author, unless when used by Nova SBE for academic purposes only. At any time, Nova SBE may decide to suspend this report reproduction or distribution without further notice. Neither this document nor any copy of it may be taken, transmitted or distributed, directly or indirectly, in any country either than Portugal or to any resident outside this country. The dissemination of this document other than in Portugal or to Portuguese citizens is therefore prohibited and unlawful.