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# ECONOMIC AND FINANCIAL ANALYSIS OF PAYPAL HOLDINGS, INC.

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## 1. INTRODUCTION

The online commerce sector is taking more and more importance in our lives, its growth in recent years has been exponential and some companies have created methods to make money transactions in these markets by working as financial intermediaries, even to have the power of large traditional banks.

The main objective of this study is to carry out a valuation of a company to analyse its evolution over time and the state of its financial accounts, with the intention that this work can serve to improve the organisation or from an investor's point of view to value the company.

The company analysed in this work is PayPal Holdings which is a young company with great growth and great expectations for the future that operates in the online payment sector and, on which a financial and economical analysis will be carried out.

The first part of the study describes the history of the company, its characteristics and the market in which it operates. Next, the balance sheet of the company PayPal Holdings is analysed horizontally and vertically, in such a way that the evolution of the value of each item of the balance sheet in the horizontal analysis and the importance of each of these items with respect to the total value in the vertical analysis can be observed in detail.

In the second part of the work, an analysis is made of the different ratios that determine the financial status of the company, starting with the liquidity ratios to evaluate its ability to face up to short-term debts, followed by the solvency ratios, to see if the company can face up to its debts in general and the profitability ratios that measure the company's ability to generate profits.

In this second part of the work, an analysis of the share price is also carried out to see how the company performs in the stock market.

Finally, a comparative analysis is made between the company PayPal and Visa using the ratios calculated above as a reference.

A financial analysis is a necessary tool for any economic activity, both for the company itself, which can use this data to self-evaluate and improve its decision-making for the future, and for an investor who can use this analysis as a reference to evaluate the state of the company and whether it is advisable to invest in it or not.

## 2. ANALYSIS OF THE INDUSTRY AND HISTORY

Pay Pal is an American company dedicated to online payment services, whose main activity is focused on facilitating individual users and companies in the implementation of digital and mobile payments globally.

It is an alternative to traditional payment methods and is currently one of the largest companies that provide these services, and can be compared with the giants, visa and mastercard, although the competitive threat to this company are the specialized methods of online payment as Alipay or Amazon payments, which are currently still behind PayPal in terms of transaction volume, but are growing rapidly and may compete with this company in the not too distant future.

The main characteristics of this company are the following:

- It processes payments for auction sites, online sellers and individual users, to whom it charges a commission for each transaction performed.
- Provides the necessary tools to create systems for buying and selling goods and services
- Comfort and ease of access to the platform and use without any initial cost.
- It is a safe payment method, since the data of the users are protected at the moment of making transactions.
- Online payments are faster than the usual ones
- Pay Pal also acts as a virtual wallet, so users can keep a certain amount of money.

Main rivals operating in the same industry as PayPal Holdings are Stripe, Amazon payments, Alipay, Google wallet, wepay and also the giants belonging to traditional banking such as visa and mastercard.

### 2.1. History of the company:

The company was founded by Max Levchin, Peter Thiel, Luke Nosek and Ken Howery in 1998 under the name "Confinity".

In 2000 the company merged with X.com, founded by Elon Musk and during this period it acquired the name PayPal. Through a strong marketing campaign, it managed to increase the number of registered users very quickly.

In 2002, when PayPal was already the payment system most used by Ebay users, the company decided to buy this payment system that was competing with its own payment system at that time.

In 2014, PayPal's profits reached almost half of Ebay's total profits and the organization announced the separation between these two companies.

In the summer of 2015, PayPal separates from ebay to form the sole proprietorship PayPal Holdings. After the split the company decided to go back to the stock exchange after more than 10 years without a listing, with a valuation of around \$52 billion.

Since the split with Ebay, the company has continued to operate autonomously until today, with an ever increasing growth year after year.

### 3. BALANCE SHEET ANALYSIS

In this first point of the thesis, the balance sheet of the company is analysed with the objective of knowing which is the structure of the assets (economic structure), of the liabilities (financial structure) and its evolution in the last years.

The study will be carried out on the balance sheets of the company PayPal Holdings between the years 2015 and 2019, both included. The data has been extracted from the website of the "Wall street journal".

The analysis will be performed using vertical and horizontal percentages, both to see the weight of each item in the balance sheet and to see its evolution in recent years.

#### 3.1. Vertical analysis

"Is a technique for analysing the relationships between the items on an income statement, balance sheet, or statement of cash flows by expressing components as percentages" (Wells, 2007, p. 354).

It consists of determining the share of each of the balance sheet accounts in the total assets or liabilities.

Through this analysis the evolution and changes suffered in each of the years analysed can be observed, always taking as a reference the total of the assets or liabilities that we are analysing.

For this purpose, a separate study has been made of the structure of the assets and the structure of the liabilities.

The calculation of the vertical percentages consists of dividing each of the assets and liabilities by the total assets or liabilities, as appropriate, and then expressing it as a percentage.

The following table shows the vertical percentages of the asset structure:

Table 1: Assets vertical analysis

	2019		2018		2017		2016		2015	
	milion \$	% total assets	milion \$	% total assets	milion \$	% total assets	milion \$	% total assets	milion \$	% total assets
Cash & Short Term Investments	10761	21%	9109	21%	5695	14%	4975	15%	3411	12%
Total Accounts Receivable	26934	52%	22907	53%	19839	49%	19925	60%	16582	57%
Other Current Assets	800	2%	947	2%	7111	17%	833	3%	655	2%
<b>Total Current Assets</b>	<b>38495</b>	<b>75%</b>	<b>32963</b>	<b>76%</b>	<b>32645</b>	<b>80%</b>	<b>25733</b>	<b>78%</b>	<b>20648</b>	<b>71%</b>
Net Property, Plant & Equipment	1693	3%	1724	4%	1528	4%	1482	4%	1344	5%
Total Investments and Advances	2863	6%	971	2%	1961	5%	1539	5%	2348	8%
Intangible Assets	6990	14%	7109	16%	4507	11%	4270	13%	4427	15%
Other Assets	896	2%	341	1%	38	0%	58	0%	76	0%
<b>Total non current Assets</b>	<b>12442</b>	<b>24%</b>	<b>10145</b>	<b>23%</b>	<b>8034</b>	<b>20%</b>	<b>7349</b>	<b>22%</b>	<b>8195</b>	<b>28%</b>
<b>Total Assets</b>	<b>51333</b>	<b>100%</b>	<b>43332</b>	<b>100%</b>	<b>40774</b>	<b>100%</b>	<b>33103</b>	<b>100%</b>	<b>28881</b>	<b>100%</b>

Source: own elaboration



As a general analysis of the assets of the company Paypal Holdings, it can be seen in table 1, that the total assets are composed of about 3 quarters of current assets and one quarter of non-current assets. This is mainly due to the fact that the main activity of the company is carried out online and therefore the amount of business premises is minimised and there is no stock of product.

Current assets reach their maximum weight in 2017, with 80% of total assets. But it has been increasing its value every year, going from 20.648 to 38.495 million \$.

The most important asset within the current assets, is receivable accounts, and collects all payment rights of customers in the short term. Its evolution during the 5 years analysed has always been positive and is the main cause of the increase in current assets in the same period.

However, the cash and short-term investments is also of great importance, as it represents more than 15% of total assets.

On the other hand, the company's non-current assets have fallen as a percentage of total assets, but their dollar value has increased, due to the fact that current assets have grown in greater proportion.

The most important item of the non-current assets is the "intangible assets", which represent about 15% of the total assets.

The fact that intangible assets, mainly made up of goodwill, represent such a significant part of the assets means that the company has a great capacity to create a return above the normal or market return.

To proceed with vertical percentage method, the company's liabilities and equity are analysed:

Table 2: Liabilities and equity vertical analysis

	2019		2018		2017		2016		2015	
	million \$	% total	million \$	% total	million \$	% total	million \$	% total	million \$	% total
ST Debt & Current Portion LT Debt	0	0%	1998	5%	1000	2%	0	0%	0	0%
Accounts Payable	24759	48%	21843	50%	19999	49%	15355	46%	12406	43%
Income Tax Payable	73	0%	61	0%	83	0%	64	0%	32	0%
Other Current Liabilities	2087	4%	2002	5%	1781	4%	1459	4%	1179	4%
<b>Total Current Liabilities</b>	<b>26919</b>	<b>52%</b>	<b>25904</b>	<b>60%</b>	<b>22863</b>	<b>56%</b>	<b>16878</b>	<b>51%</b>	<b>13617</b>	<b>47%</b>
Long-Term Debt	4965	10%	0	0%	0	0%	0	0%	0	0%
Deferred Taxes	-307	-1%	-115	0%	-86	0%	1194	4%	1137	4%
Other Liabilities	2431	5%	1933	4%	1908	5%	298	1%	330	1%
<b>Total non current liabilities</b>	<b>7089</b>	<b>14%</b>	<b>1818</b>	<b>4%</b>	<b>1822</b>	<b>4%</b>	<b>1492</b>	<b>5%</b>	<b>1467</b>	<b>5%</b>
Additional Paid-In Capital/Capital Surplus	15588	30%	14939	34%	14314	35%	13579	41%	13100	45%
Retained Earnings	8342	16%	5880	14%	3823	9%	2069	6%	668	2%
Other Appropriated Reserves	-25	0%	184	0%	-105	0%	132	0%	60	0%
Treasury Stock	-6872	-13%	-5511	-13%	-2001	-5%	-995	-3%	0	0%
<b>Total Equity</b>	<b>16929</b>	<b>33%</b>	<b>15386</b>	<b>36%</b>	<b>15994</b>	<b>39%</b>	<b>14712</b>	<b>44%</b>	<b>13759</b>	<b>48%</b>
<b>Liabilities &amp; Shareholders' Equity</b>	<b>51333</b>	<b>100%</b>	<b>43332</b>	<b>100%</b>	<b>40774</b>	<b>100%</b>	<b>33103</b>	<b>100%</b>	<b>28881</b>	<b>100%</b>

Source: own elaboration

As it can be seen in the table 2, the liabilities and net worth of the PayPal Holdings company are composed of approximately 50% of current liabilities and the rest distributed among non-current liabilities, which remained relatively constant until 2019 when it had suffered a significant increase and net worth, which will lose weight as a percentage of the total, while its value increased.

The company's current liabilities are mostly made up of short-term payable accounts, and represent the amount of money the company owes to its suppliers. The rest of the value of current liabilities is made up of "other current liabilities" and in the years 2017 and 2018 there is a portion of short-term debt that coincides with the years of highest proportion of current liabilities compared to total liabilities. The company could face a problem of lack of liquidity due to the high proportion of short-term debt (this will be analysed later by ratios).

Non-current liabilities only represent about 5% of the total, less the last year, where the existence of long-term debt, which had no value in previous years, has caused non-current liabilities to increase from 4% to 14%.

The other item that is part of the non-current liabilities are the tax deferrals, which in the first 2 years were in the liabilities in a positive way, indicating debt, but the following 3 years the value became negative indicating debt repayment.

The company's equity is mostly made up of additional paid-in capital which represents the excess of the amount of money received by a corporation for a stock issue over the stock's par or stated value.

Retained earnings is another important item within equity which is increasing every year, going from 2% over the total amount of liabilities and equity to 19% in the last year analysed. And finally, treasury stock also increases its value in negative, because it represents the purchase of shares by the company itself, going from 0% to -13%.

### 3.2. Horizontal analysis

"Horizontal statement analysis uses percentage comparison from one accounting period to the next". (Wells, 2007, p. 356).

The percentage variation is calculated by the variation of the growth or decrease of the amount divided by the base year amount.

Through this analysis it is always necessary to take into account the value of the item being studied, since it is not the same a 50% increase on a value of 1 billion as on another of 1 million.

With these percentages it is possible to observe the variation of a patrimonial mass respect to the previous year or the total variation during the 5 years analysed.

For the asset accounts, the following result is obtained:

*Table 3: Horizontal assets analysis*

	<b>2015-2019</b>	<b>2018-2019</b>	<b>2017-2018</b>	<b>2016-2017</b>	<b>2015-2016</b>
Cash & Short Term Investments	215%	18%	60%	14%	46%
Total Accounts Receivable	62%	18%	15%	0%	20%
Other Current Assets	22%	-16%	-87%	754%	27%
<b>Total Current Assets</b>	<b>86%</b>	<b>17%</b>	<b>1%</b>	<b>27%</b>	<b>25%</b>
Net Property, Plant & Equipment	26%	-2%	13%	3%	10%
Total Investments and Advances	22%	195%	-50%	27%	-34%
Intangible Assets	58%	-2%	58%	6%	-4%
Other Assets	1079%	163%	797%	-34%	-24%
<b>Total non current Assets</b>	<b>52%</b>	<b>23%</b>	<b>26%</b>	<b>9%</b>	<b>-10%</b>
<b>Total Assets</b>	<b>78%</b>	<b>18%</b>	<b>6%</b>	<b>23%</b>	<b>15%</b>

*Source: own elaboration*

Firstly, focusing on current assets analysed in the table 3, a positive progression can be seen over all years, with a lower growth from 2017 to 2018 of only 1%. The item with the greatest increase within this part of the balance sheet has been cash and short-term investments, with a total increase over the 5 years of 215%. But it has been the total receivable accounts that have affected more to this rise in current assets, because of its greater value within this.

It should also be noted that from 2016 to 2017, the total accounts receivable remains practically unchanged and the other current assets suffer a disproportionate increase of 754%, and then fall over the next two years. This could be due to a readjustment of short-term investments that do not specifically fall under the other current asset items.

On the other hand, as regards non-current assets, it suffers a 10% decrease from 2015 to 2016, due to a reduction in long-term investments and the loss of 4% of the capacity to create extraordinary profits. This decrease in the first year is recovered during the following years, especially from 2018 onwards, when an increase of 58% in intangible assets, together with an increase of almost 800% in other assets, leads to an increase in non-current assets of 26% with respect to 2017.

In 2019 it should be noted that it has continued to increase, but due to an increase in long-term investments such as a free market investment made by the company during that year.

In general, all the components of non-current assets have increased over the last five years, leading to an increase of 52%.

The total assets have increased during all the years with a lower growth in 2018, but with a total increase during these 5 years of 78%. This is an indicator of the prosperous growth of the company which has almost doubled its assets in 5 years.

For the liabilities accounts, the following result is obtained:

Table 4: Liabilities and equity horizontal analysis

	2015-2019	2019	2018	2017	2016
ST Debt & Current Portion LT Debt	0%	-100%	100%	0%	0%
Accounts Payable	100%	13%	9%	30%	24%
Income Tax Payable	128%	20%	-27%	30%	100%
Other Current Liabilities	77%	4%	12%	22%	24%
<b>Total Current Liabilities</b>	<b>98%</b>	<b>4%</b>	<b>13%</b>	<b>35%</b>	<b>24%</b>
Long-Term Debt	100%	100%	0%	0%	0%
Deferred Taxes	-127%	167%	34%	-107%	5%
Other Liabilities	637%	26%	1%	540%	-10%
<b>Total non current liabilities</b>	<b>383%</b>	<b>290%</b>	<b>0%</b>	<b>22%</b>	<b>2%</b>
Additional Paid-In Capital/Capital Surplus		4%	4%	5%	4%
Retained Earnings	1149%	42%	54%	85%	210%
Other Appropriated Reserves	-142%	-114%	275%	-180%	120%
Treasury Stock	100%	25%	175%	101%	0%
<b>Total Equity</b>	<b>23%</b>	<b>10%</b>	<b>-4%</b>	<b>9%</b>	<b>7%</b>
<b>Liabilities &amp; Shareholders' Equity</b>	<b>78%</b>	<b>18%</b>	<b>6%</b>	<b>23%</b>	<b>15%</b>

Source: own elaboration

Firstly, looking at table 4, it should be mentioned that the most important item within current liabilities is accounts payable, which has increased during all the years analysed, doubling its value from 2015 to 2019. This is directly reflected in the total value of current liabilities with an increase of 98% in the same period. This increase could pose a problem for the company when dealing with short-term debts and will be analysed later using the solvency ratio. Changes in the other accounts do not have such an impact on the total value of current liabilities, except in 2018 when short-term debts are doubled and in the following year when those debts are settled to the same nil value as in the first two years. Secondly, non-current liabilities vary greatly in percentage terms, but are of relatively low importance in terms of total liabilities due to their low value. It is worth noting an increase in long-term liabilities in 2017 of 540% compared to 2016, which leads to an increase in non-current liabilities of 22%.

But above all, the most important change in this item is the increase in long-term debt which is not reflected in this analysis because there is no other value to take as a basis, but this increase in the last year causes a total increase of 290%. This could be due to a restructuring of the debt from short to long term.

In general, non-current liabilities have increased by 383% in these five years.

Finally, as for the company's total equity, it should be mentioned that the treasury stock item is in negative value, therefore, a percentage increase of it, is reflected as a decrease in total equity. Taking this into account, the surplus capital item maintains a regular growth of around 4 - 5% during all the years, accumulating an increase of 19% in total. Then, retained earnings is the item that most affects total equity because of its great increase during all the years, especially in 2016 increasing by 210% and reaching a total increase of 1149% during the 5 years. The other reserves have a lot of variation during all the years, but with little effect on the total because of their low value.

## 4. LIQUIDITY ANALYSIS

The ratios are tools that serve to analyse the financial situation of a company, are used to see if the company is being properly managed, also can make future projections based on reliable foundations, thereby improving decision making.

“Ratios allow the user to summarise and analyse related data to provide meaningful information for making decisions” (.Singh & Schmidgall, 2002, p. 201).

Liquidity ratios are an interesting tool for evaluating the state of the company's cash flow and determining the company's ability to meet its obligations in the short term.

Next, 3 ratios related to the company's liquidity will be analysed:

- Current ratio
- Acid test
- Cash Ratio

### 4.1. Current ratio

This ratio indicates the company's ability to cover its financial obligations in the short term. Indicates the capacity of the company to generate, with the achievable in the short term, sufficient liquid resources to meet its commitments of payment recorded in current liabilities.

It must have a value greater than 1, the higher the positive result of this ratio, the greater the company's ability to meet its short-term debts.

The following formula is used for the calculation:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Table 5: Current ratio

	2019	2018	2017	2016	2015
Current Assets	38495	32963	32645	25733	20648
Current liabilities	26919	25904	22863	16878	13617
<b>Current Ratio</b>	<b>1,43</b>	<b>1,27</b>	<b>1,43</b>	<b>1,52</b>	<b>1,52</b>

Source: own elaboration



It can be seen in table 5 that the reference values of the liquidity ratio of PayPal Holdings are for all years above 1, thus indicating that the company will be able to meet its short-term debts with its short-term receivables.

The maximum values reached by this ratio occur during the first 2 years, exceeding the value of 1.5 indicating that the company has no apparent liquidity problem during these years. The minimum value is reached in the year 2018 with 1.27 which continues to be a very positive value for the company, therefore, this ratio indicates that during all the years analysed, the company has not had any liquidity problem to face the obligations in the short term.

#### 4.2. Acid test

The acid test allows us to analyse the company's ability to meet its short-term obligations with the current assets as in the previously calculated liquidity ratio, but excluding stocks from this calculation. These are excluded because there could be any inconvenience in transforming this item into cash and thus the result is more reliable.

In this case, as the company is engaged in online payments, it does not have any stock, so the result of this ratio is the same as the liquidity ratio.

The following formula is used for its calculation:

$$\text{Acid test ratio} = \frac{\text{Current Assets} - \text{Stocks}}{\text{Current Liabilities}}$$

#### 4.3. Cash Ratio

The cash ratio measures the company's ability to meet its obligations as quickly as possible in the short term, without the need to sell any assets. It is a more conservative ratio, since it only takes into account money available at the moment excluding assets that will be collected in the future.

To calculate this ratio, the company's cash is compared with its current liabilities, where the result should be around 1 to indicate a good coverage for short-term obligations.

The following formula is used for its calculation:

$$\text{Cash ratio} = \frac{\text{Cash \& Cash equivalents}}{\text{Current Liabilities}}$$

*Table 6: Cash ratio*

	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Cash & short term investments	10761	9109	5695	4975	3411
Current liabilities	26919	25904	22863	16878	13617
<b>Cash ratio</b>	<b>0,40</b>	<b>0,35</b>	<b>0,25</b>	<b>0,29</b>	<b>0,25</b>

*Source: own elaboration*

As can be seen in the table 6, the cash ratio is far below the optimal level for covering debts with the company's available cash alone. In the years 2015 and 2017, it only covered 25% of short-term obligations, reaching its maximum level in the year 2019 with 0.4.

As the company does not have sufficient liquidity, it should collect part of the debts it has with its clients.

## 5. SOLVENCY ANALYSIS

Solvency ratios are used to evaluate a company's long-term financial position. They measure the ability to meet obligations in the long term and are used by investors to make a decision on whether to invest in the organization under consideration in the long term.

It should be noted that the higher the shareholder funds compared to the company's liabilities, the greater the solvency of the company.

Next, 4 ratios related to the solvency of the company will be analysed:

- Debt ratio
- Debt to equity ratio
- Financial leverage
- Interest coverage ratio

### 5.1. Debt ratio

This ratio serves to determine the proportion of total assets that are financed by the company's debt by indicating the external financing available to the company.

The optimal value of this ratio should be between 40% and 60%, a higher value would assume that the company would be leaving too much financing to third parties generating a possible high interest burden. In contrast, a lower value would mean that the company has a high level of equity.

$$\text{Debt Ratio} = \frac{\text{Total Debts}}{\text{Total assets}}$$

*Table 7: Debt ratio*

	2019	2018	2017	2016	2015
Total Assets	51333	43332	40774	33103	28881
Total Liabilities	34008	27722	24685	18370	15084
<b>Debt ratio</b>	<b>0,66</b>	<b>0,64</b>	<b>0,61</b>	<b>0,55</b>	<b>0,52</b>

*Source: own elaboration*

As it can be seen in the table 7, during the first two years the company has a debt ratio slightly above 50% but within the optimum values of this ratio. On the other hand, the

following 3 years analysed, they present a value higher than 60%, which could indicate that the organization has an excessive volume of debts and the company is losing autonomy in front of third parties, this could be a problem for the company if it has financial needs in the future, but as can be seen in the industry, the value of this ratio is similar to the average, so the company is not incurring in excessive debt.

## 5.2. Debt to Equity ratio

The debt-to-equity ratio of the company measures the ratio of debt to equity. It is used to quickly find out how the equity structure of the company is formed and if it is efficient. It represents everything the company borrows in relation to what the shareholders have invested.

the optimal value for this ratio should be between 0.4 and 2. Above 2 the company could have a problem with excessive leverage and below 0.4, the company is very conservative and does not take risks with debt.

The following formula is used for its calculation:

$$\text{Debt to Equity Ratio} = \frac{\text{Total liabilities}}{\text{Total shareholders' equity}}$$

*Table 8: Debt to equity ratio*

	2019	2018	2017	2016	2015
Total Liabilities	34008	27722	24685	18370	15084
Total Equity	16929	15386	15994	14712	13759
<b>Debt-Equity ratio</b>	<b>2,01</b>	<b>1,80</b>	<b>1,54</b>	<b>1,25</b>	<b>1,10</b>

*Source: own elaboration*

As can be seen in the table 8, the values of PayPal Holdings for this ratio are among the recommended values during the first 4 years analysed and always between the value 1 and 2, except in the year 2019, where it reaches the value of 2.01.

The ratio of debt about equity is increasing during all the years analysed, therefore, the company is adopting a position with a higher level of leverage.

This increase in the value of the ratio is due to an increase during the 5 years analysed of more than 100% in total liabilities while the equity of the company increases only by 23%.

In the last year the company could have an excess of risk by having a high degree of leverage, but the company is not incurring in too much expense on debt, as can be seen in the next ratios, so it can be concluded that the company should not have problems even if this ratio is a little high in the last period.

### 5.3. Financial leverage

This ratio represents the ratio of owner's funds to total assets on the company's balance sheet. It shows the effectiveness of financing asset requirements without using debt.

The optimal value for this ratio should be around 0.5, indicating that half of the assets are owned by the shareholders and the rest are made up of other types of shares and credit loans.

The higher the result of this ratio, it indicates that the company is less leveraged and more conservative, on the contrary, a value lower than 0.5 indicates that the organization is financed more with debt than with equity.

$$\text{Financial leverage} = \frac{\text{Total Equity}}{\text{Total Assets}}$$

*Table 9: Financial leverage*

	2019	2018	2017	2016	2015
Total Assets	51333	43332	40774	33103	28881
Total Equity	16929	15386	15994	14712	13759
<b>Financial leverage</b>	<b>0,33</b>	<b>0,36</b>	<b>0,39</b>	<b>0,44</b>	<b>0,48</b>

*Source: own elaboration*

As can be seen in the table 9, the result of this ratio during the 5 years analysed is always below 0.5 indicating that the company has a high degree of leverage, since the company is financed more with external resources than with its own resources, and it represents a greater interest burden for the organisation.

The result has been decreasing over the years from 0.48 in 2015 to 0.33 in 2019, this is due to the large increase in value of total assets, almost 80% compared to the increase in total equity of only 23%.

Taking this ratio into account, investors had less incentive to invest in this company, as it represents a higher risk

#### 5.4. Interest coverage ratio

The interest coverage ratio serves to report on the company's ability to pay the interest generated by the debt. It reflects the number of times the EBIT is higher than the financial expenses showing how far or close the company is to incurring losses.

The optimal value of this ratio should always be above 1, around 2 and 3, otherwise the company would incur losses and if it is equal to 1, the profits would be completely used to cover expenses.

$$\text{Interest coverage ratio} = \frac{\text{EBIT}}{\text{Interest expenses}}$$

Table 10: Interest coverage ratio

	2019	2018	2017	2016	2015
EBIT	2552	2533	2242	1467	1327
interest expense	115	77	0	0	0
<b>Interest coverage ratio</b>	<b>22,19</b>	<b>32,90</b>	-	-	-

Source: own elaboration

As can be seen from the table 10, PayPal Holdings company's interest coverage index has no value during the first 3 years, since the organization does not incur interest expenses during this period.

In contrast, in the last 2 years, a number of very small interest expenses appear compared to earnings before interest and taxes.

The ratio indicates that the company has sufficient profits to cover interest expenses 33 and 22 times in 2018 and 2019 respectively, so it can be said that the company has no problem in meeting interest payments.

## 6. PROFITABILITY ANALYSIS

Profitability ratios are a form of financial measurement used to evaluate a company's ability to generate profits in relation to its income, balance sheet assets and shareholder equity. Data from a specific point in time is used for this calculation.

“Profitability ratios throw light on how the firm is organising its activities in a profitable manner. The owners expect reasonable rate of return on their investment” (Ramachandra, A., 2007, p.14)

The company must generate sufficient revenues not only to meet the expectations of shareholders, but also to finance growth and expansion activities

### 6.1. Gross profit margin

The gross profit ratio shows the relationship between gross income and total sales revenue, in other words, it expresses gross profit as a percentage of income.

Gross profit is the amount remaining after deducing the cost of goods sold or direct costs of earning revenue from revenue.

The value obtained from this ratio should be the higher the better, since this means that the organization has more funds to invest or cover other expenses. A high ratio also indicates that the company is being efficient in converting raw materials into income.

The investors look for it to have an idea about the returns they are going to receive on their capital.

$$\text{Gross profit ratio} = \frac{\text{Gross Income}}{\text{Revenue}}$$

Table 11: Gross profit ratio

	2019	2018	2017	2016	2015
Gross Income	9166	7670	6575	5508	4715
Sales/Revenue	17534	15481	13077	10723	9066
<b>Gross profit ratio</b>	<b>0,52</b>	<b>0,50</b>	<b>0,50</b>	<b>0,51</b>	<b>0,52</b>

Source: own elaboration

As can be seen in the table 11, the value of the gross profit margin is around 50% every year, so the company is able to transform 50% of the total revenue into profit.

Taking into account the result obtained, we can say that the management of the company is considered to be good and effective. This high value in the gross profit margin, is also

due to the fact that the production costs of the organization are low, working online and not with physical products.

## 6.2. Accounts receivable turnover and Debtors collection period

The accounts receivable turnover rate is a measure used to evaluate a company's effectiveness in collecting debts from its customers. It shows the company's ability to manage the credit provided to customers and the time it takes customers to pay their debt to the company. It is necessary to maintain an adequate follow-up of the realization of the debts, since a bad management of this, would suppose in a negative effect for the performance of the company. The most successful companies keep a strict list of debtors, with information on when and how much to collect the debts.

$$\text{Accounts receivable turnover} = \frac{\text{Credit Sales}}{\text{Average debtors}}$$

Table 12: Accounts recivable turnover

	2019	2018	2017	2016	2015
<b>Accounts receivable turnover</b>	6.5	6.8	6.6	5.4	5.5

Source: own elaboration

The result of this ratio in the table 12 indicates the frequency with which a company effectively collects its receivables during the year.

Taking into account the result obtained, we can say that the company charges its customers between 5.4 and 6.8 times a year during the 5 years analysed, so we can say that it collects every little time and, therefore, the quality of its credit and receivables sales is high.

To better analyse this ratio, it is necessary to calculate the debtor collection period, which indicates the exact number of days it takes the company to collect the receivables from the debtors. The way to calculate it is by dividing the 365 days of the year by the ratio of accounts receivable turnover as shown in the following formula:

$$\text{Debtor collection period} = \frac{365}{\text{Accounts receivable turnover}}$$



Table 13: Debtors collection period

	2019	2018	2017	2016	2015
365 days	365	365	365	365	365
Accounts receivable turnover (%)	6,5	6,8	6,6	5,4	5,5
<b>Debtors collection period</b>	56	54	55	68	66

Source: own elaboration

Looking at the table 13 results, it usually takes the company about 60 days to collect the debts from the debtors, which is about every 2 months, so the company is quite efficient in collecting from its customers. In addition, it should be noted that this period is being reduced from 2015 to 2019, so the company is improving in this area.

### 6.3. Accounts payable turnover ratio and creditors payment period

The Accounts Payable Turnover Index is an indicator that determines the number of times the company pays its debts to its suppliers in a given period of time, in this case 1 year (365 days).

$$\text{Accounts payable turnover ratio} = \frac{\text{Average accounts payable}}{\text{Total credit purchases}}$$

Table 14: Accounts payable turnover

	2019	2018	2017	2016	2015
Accounts payable turnover ratio	5,26	6,35	6,25	5,68	5,13

Source: own elaboration

As can be seen in the table 14, this ratio indicates that the company pays its suppliers a total of between 5 and 6 times a year, so it can be concluded that the company is quite fast and reliable when it comes to making payments.

To calculate the exact time in days that it takes the company to pay its suppliers, it is necessary to calculate the creditors payment period, dividing the total number of days in the year by the number of times the company pays its suppliers in a year.

$$\text{Creditors payment period} = \frac{365}{\text{Accounts payable turnover ratio}}$$

*Table 15: Creditors payment period*

	2019	2018	2017	2016	2015
Creditors payment period	69	57	58	64	71

*Source: own elaboration*

As can be seen in the table 15, the time taken by the company to pay its suppliers is around 2 months and, as mentioned above, the company takes relatively little time to pay its suppliers.

To better analyse the debtors collection period and the creditors payment period, they must be evaluated together, since for the company to act correctly, the time it takes to collect should be equal to or less than the time it takes to pay, in order to have the necessary liquidity. As can be seen in the tables 13 and 15, in all the years analysed the company takes more time to pay than to collect, so it would have no problems dealing with these payments, with the exception of 2016, when the company takes a little longer to collect than to pay, although the difference is practically insignificant.

#### 6.4. Return on equity (ROE)

The return on equity (ROE) is an indicator of a company's profitability through the relationship between net profit and equity. It is a ratio that determines the return of the company on its own resources and is one of the most relevant parameters for investors, since calculating this ratio indicates the capacity of the company to create profits for its shareholders.

It is very useful to compare companies, but always and when they belong to the same sector.

The higher the ROE, the higher the profitability that the company can offer.

The way to calculate the return on equity is the following:

$$\text{Return on equity (ROE)} = \frac{\text{Net income}}{\text{Shareholder's equity}}$$

*Table 16: Return on equity*

	2019	2018	2017	2016	2015
Net Income	2469	2057	1795	1401	1228
Shareholders Equity	16929	15386	15994	14712	13759
<b>ROE (%)</b>	<b>15%</b>	<b>13%</b>	<b>11%</b>	<b>10%</b>	<b>9%</b>

*Source: own elaboration*

To interpret the result obtained in the table 16, it must be taken into account that some reference is needed to compare these percentages with some other company or investment. As far as the value calculated in this ratio is concerned, we can say that the company obtains a high profitability with respect to its capital as well as increasing this yield year after year during all the years analysed.

For example, we could buy the result obtained with the yield of the Spanish 5-year bond, which always offered an interest between 0,2% and 0,5%, even in the last year they were offered at a negative interest rate of -0.2%. In contrast, Pay Pal Holdings' return on equity is between 9% and 15% during the years analysed, indicating that for an investor the return during this time would have been much better by investing in this company.

#### 6.5. Return on assets (ROA)

Return on assets (ROA) is a financial indicator that serves to measure the profitability of a company by comparing total assets with total earnings before interest and taxes and is used to measure the efficiency of total assets regardless of the sources of financing used.

The higher this result is, the better for the company, as it represents the profitability it provides for each euro invested in the company.

It is a tool widely used by investors to compare companies, provided that they are in the same sector, as a company that requires a very high initial investment is not the same as a service company where the labour factor predominates. Furthermore, it facilitates the comparison between companies from different countries, since by using the net profit before interest and taxes as part of the calculation, it is not affected by the different tax burdens.

For the calculation of this financial indicator we will use two different formulas:

Firstly, the general formula of the ROA, which compares the profit before interest and tax with the total assets of the company.

$$\text{Return on assets} = \frac{\text{Earnings before interest and taxation}}{\text{total assets}}$$

Table 17: Return on assets

	2019	2018	2017	2016	2015
Net Income	2459	2057	1795	1401	1228
Total assets	51333	43332	40774	33103	28881
<b>ROA (%)</b>	<b>4,79%</b>	<b>4,75%</b>	<b>4,40%</b>	<b>4,23%</b>	<b>4,25%</b>

Source: own elaboration

As can be seen in the table 17, the company's return on assets is between 4% and 5%, this value being higher during the last 2 years, which means that the company is increasing its return on total assets. The result obtained also tells us that for every euro invested, the company is able to generate between 4 and 5 cents of profit.

On the other hand, there is another method of calculating ROA, through margin and asset turnover. This allows us to separate the initial formula from the calculation and break it down into two parts which together indicate the return on total assets.

The margin is the profit before interest and taxes divided by the total sales of the year and allows us to know the margin obtained for each monetary unit sold.

Turnover relates sales to total assets and indicates the number of times the value of sales in the period reaches the value of the asset.

Table 18: ROA decomposed

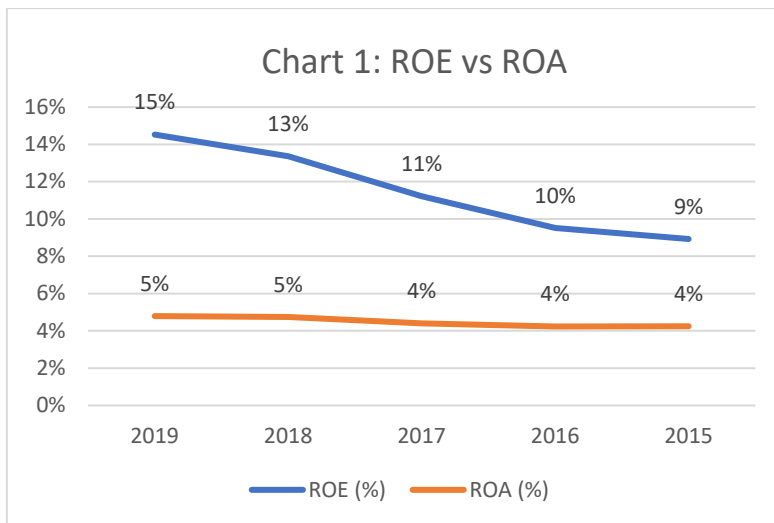
	2019	2018	2017	2016	2015
Margin(%)	14%	13%	14%	13%	13%
Rotation	0,3462	0,3566	0,3211	0,3275	0,3202
<b>ROA (%)</b>	<b>4,79%</b>	<b>4,75%</b>	<b>4,40%</b>	<b>4,23%</b>	<b>4,25%</b>

Source: own elaboration

With regard to the results shown in the table 18, firstly, it serves to check that the calculation of the ROA with the previous formula was correct, and secondly to evaluate separately the different components that affect this financial indicator.

We can observe that the margin is high during all the years, varying between 13% and 14%, so we can affirm that the margin affects the result of the ROA very positively. The high result is due to the fact that this organisation has no financial debt.

On the contrary, Pay Pal Holdings' asset turnover is very low and negatively affects the ROA result. However, it is worth noting that this value is reduced because the money on account and, above all, the payments to be received, cause a very considerable increase in the total assets.



*Source: own elaboration*

The chart 1, represents the evolution of the ROA and ROE during the 5 years analysed and we can see that the ROE has always been much higher than the ROA. This allows us to conclude that the company has a positive financial leverage, so it is advisable for the company to get into debt from a financial profitability point of view. Since positive leverage occurs when the economic return on assets is greater than the interest rate paid to the bank for the debt.

## 7. Stock analysis

This section of the thesis is going to be focused on the analysis of the company's shares, as well as a prediction of the value of the shares in the future in order to know if the company has growth expectations.

First of all, it should be noted that PayPal Holdings does not yet distribute dividends among its shareholders and, for that reason, we cannot carry out an analysis of the returns offered by the stock, but it is possible to calculate the price to earnings ratio by comparing the earnings per share with the price at which the share is traded in each time period.

### 7.1. Price to earnings ratio

For the calculation of this ratio, the earnings per share at the end of each year are divided by the value at which it is quoted on the stock exchange at the end of the same corresponding period. The share price depends on market expectations, but the profit per share is determined by the company. It is a widely used indicator by investors when assessing whether a share is over or undervalued.

*Table 19: Price to earnings ratio*

	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Share value	108,17	84,09	73,62	39,47	36,14
Earning per share	2,07	1,71	1,47	1,15	1
<b>Price-earning ratio</b>	<b>52,3</b>	<b>49,2</b>	<b>50,1</b>	<b>34,3</b>	<b>36,1</b>

*Source: own elaboration*

The results obtained for this ratio in the table 19, are between 34.3 and 52.3, the lowest in 2016 and the highest in 2019.

According to the data extracted, this is a company that is overvalued on the stock exchange and this is mainly due to the company's growth expectations that lead to a high value of the shares. On the other hand, taking into account the relative youth of this company and its expansion, it can be concluded that this high ratio is due to the fact that it is a company with a high current growth and that it is not yet stabilized in the market.

## 7.2. Price/book value

Therefore, the second indicator that we are going to analyse is the price of the company's share during the years analysed, comparing it with the book value of the share to determine whether or not this share was overvalued on the stock market at any given moment in time.

Table 20: Price/book value

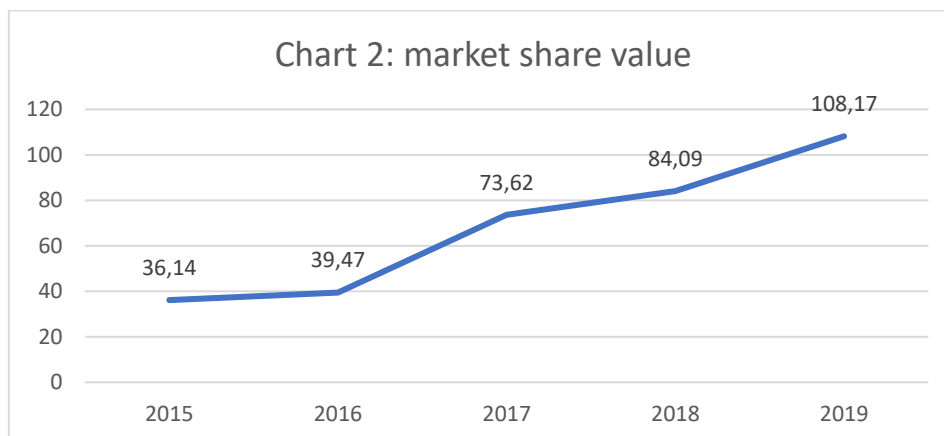
	2019	2018	2017	2016	2015
shares value	108,17	84,09	73,62	39,47	36,14
shares book value	14,43	13,12	13,64	12,54	11,73
<b>price/book value</b>	<b>7,50</b>	<b>6,41</b>	<b>5,40</b>	<b>3,15</b>	<b>3,08</b>

Source: own elaboration

To calculate the book value of the shares, the net assets at the end of each of the years listed have been divided by the total number of outstanding shares held by the company, which is 1.173 billion.

It should be noted that the book value follows valuation criteria based on the time at which it is calculated, as it is calculated on the basis of the annual balance sheet and does not take into account future expectations, so that normally the book value and the share price do not coincide.

In the case of PayPal Holdings, it can be seen in the table 20 that the book value is always well below the value at which it is quoted and this is because the company's growth expectations are very positive by increasing its stock market value.



Source: own elaboration

With regard to the evolution of the price of shares on the stock exchange since their listing for the second time in 2015, until 2019, uninterrupted growth can be observed year after year, with the greatest increase from 2016 to 2017 being a 46% increase.

In 2015, with its return to the stock exchange, it ended the year at a price of 36.14 euros per share and in the last year analysed (2019) it reached a price of 108.17 euros per share, which represents a total increase of around 300%.

## 8. COMPARATIVE ANALYSIS

In this last section, a comparative analysis is made between PayPal Holdings, the company analysed, and another company in the sector with more seniority and which has its origins in traditional banking, as is the case with Visa.

To compare these two companies, all the ratios analysed during this work are taken into account, both their values and their evolution over the five years analysed.



*Table 21: Balance sheet comparison, year 2019.*

	<b>total assets</b>	<b>total liabilities</b>	<b>total equity</b>
<b>PayPal</b>	51333	34404	16929
<b>Visa</b>	72574	37890	34684

*Source: own elaboration*

These two companies are characterised by the fact that they are financial intermediaries operating worldwide and the table 21 shows the value of the items that make up the balance sheet of these two companies in the last year analysed (2019).



It can be seen that Visa has a higher value than PayPal in all these items, and this is due to the fact that the company we are analysing is relatively young and is developing in a sector that is on the rise, such as the online market.

### 8.1. Liquidity ratios

*Table 22: Current ratio comparison*

		2015	2016	2017	2018	2019
Current ratio	PayPal	1,52	1,52	1,43	1,27	1,43
	Visa	1,87	1,78	1,9	1,61	1,56

*Source: own elaboration*

*Table 23: Cash ratio comparison*

		2015	2016	2017	2018	2019
Cash ratio	PayPal	0,25	0,29	0,25	0,35	0,4
	Visa	1,33	1,24	1,44	1,17	1

*Source: own elaboration*

The table 22 shows the current ratio, which measures the company's ability to meet its short-term debts with its current assets.

In both companies this value is always above 1, so it can be concluded that neither company had problems in dealing with its short-term debts. Taking this ratio into account, the Visa company had a higher coverage of its debts since the result is higher than the company that was liquidated in all the years.

The second ratio to be compared within the profitability ratios is the cash ratio, which indicates the company's ability to meet its debts with the cash or cash equivalents available to the company.

As can be seen in the table 23, the Visa company has sufficient cash to meet its debts in all the years analysed, unlike PayPal, which should collect its customers' debts in the short term to be able to meet this debt. It should also be noted that a ratio of much higher than 1, as is the case in 2017 for Visa, is not advisable either because an excess of cash may represent an opportunity cost for the company.

## 8.2. Solvency ratios

*Table 24: Debt ratio comparison*

		2015	2016	2017	2018	2019
debt ratio	PayPal	0,52	0,55	0,61	0,64	0,66
	Visa	0,26	0,48	0,52	0,51	0,52

*Source: own elaboration*

*Table 25: Debt to equity ratio comparison*

		2015	2016	2017	2018	2019
debt to equity ratio	PayPal	1,1	1,25	1,54	1,8	2,01
	Visa	0,54	0,52	0,49	0,49	0,47

*Source: own elaboration*

*Table 26: Financial leverage comparison*

		2015	2016	2017	2018	2019
financial leverage	PayPal	0,48	0,44	0,39	0,36	0,33
	Visa	0,74	0,51	0,48	0,49	0,47

*Source: own elaboration*

The first solvency ratio to be compared is the debt ratio, which determines the proportion of total assets financed by debt.

Looking at the table 24 we can conclude that both companies are within the normal values of between 40% and 60%, but a value of 26% in the first year analysed for the Visa company stands out, which can be explained by a high value of the company's equity.

The second ratio to be compared is the debt to equity ratio, which tells us how the company's equity is structured and whether it is efficient.

The result of this ratio in the table 25 should be between 0.4 and 2 to indicate adequate leverage. Both companies are within the appropriate values, but it should be noted that the values of the Visa company are much more stable and lower, this is because Visa takes less risk when it comes to debt, in contrast, PayPal in the last year has a very high debt compared to what shareholders have invested.

As a final solvency ratio, we will compare the leverage ratio, which indicates the ability or effectiveness of companies to finance their assets without using debt.

The optimum value for this ratio would be around 0.5 and, as can be seen in the table 26, the Visa company is always around this optimum value except in 2015 when the company was less leveraged and was in a more conservative position.

In contrast, PayPal has a lower ratio, so the company is more leveraged, indicating that the company is financing itself more and more with debt than with equity.

### 8.3. Profitability ratios

*Table 27: Gross profit ratio comparison*

		2015	2016	2017	2018	2019
gross profit ratio	PayPal	0,52	0,51	0,5	0,5	0,52
	Visa	0,78	0,78	0,79	0,78	0,79

*Source: own elaboration*

*Table 28: Debtors collection period*

		2015	2016	2017	2018	2019
debtors collection period	PayPal	66	68	55	54	56
	Visa	33	60	50	49	72

*Source: own elaboration*

The first profitability ratio to be compared is the gross profit margin, which serves to compare the result of total sales with the gross income, providing an idea of how efficient the company is.

The higher this ratio is, the better for the company, since it will have more funds to invest or cover expenses.

As we can see in the table 27 both companies have stable and adequate values for this ratio, around 0.5 and 0.8 for PayPal and Visa respectively. According to the results obtained, the Visa company is more efficient when talking about converting income into profits, as it has more capital to invest or cover costs.

The second profitability ratio analysed is the debtors collection period, which indicates the time it takes a company to collect the money owed to it by customers, showing the effectiveness of the organisation in this respect.

As can be seen in the table 28, both companies take relatively little time to collect debts from their customers, we could say around 2 months, but it is worth noting that they follow opposite trends over the 5 years analysed. PayPal took almost 70 days to collect debts during the first two years, but in the last 3 years it managed to reduce the time required to less than 2 months. In contrast, Visa went from taking just one month in 2015 to 70

days in 2019. So, it can be concluded that PayPal is improving this aspect, while Visa is getting worse, but always within adequate values.

*Table 29: Return on equity comparison*

		2015	2016	2017	2018	2019
ROE	PayPal	9	10	11	13	15
	Visa	21,2	22,02	26,6	36,09	41,34

*Source: own elaboration*

*Table 30: Return on assets comparison*

		2015	2016	2017	2018	2019
ROA	PayPal	4,25	4,23	4,4	4,75	4,79
	Visa	16,07	9,35	9,85	14,9	16,65

*Source: own elaboration*

To finish with the profitability ratios, the return on equity and the return on assets of PayPal and Visa are compared, first individually and then jointly.

The ROE represents the company's ability to create profits for its shareholders and, as can be seen in the table 29, both companies have a high return on equity, which makes both companies very attractive to investors. But taking this ratio as a reference, the conclusion is that the return is much higher for the Visa company in all the years analysed, with the value more than double during the whole period.

On the other hand, the return on assets (ROA), which serves to measure the efficiency of the assets without taking into account the sources of financing used and represents the profit provided by each euro invested by the company. The higher this ratio is, the better for the company as it means that it is able to generate more income per dollar invested.

As we can see in the table 30, returns on assets are much higher for the Visa company, while PayPal is able to generate around 5 cents per euro invested in assets, the Visa company generates around 10-15 cents per euro invested. From the point of view of the investor, Visa would be a better opportunity.

Analysing both ratios together, in both companies the ROE is much higher than the ROA, which indicates that they are positively leveraged, which is determined by the fact that the return on assets is higher than the interest paid to the bank for debt. It might be advisable to incur debt, but given the high debt values of both companies, this could lead to a high increase in interest.

#### 8.4. Stock ratios

*Table 31: Price to earnings ratio comparison*

		2015	2016	2017	2018	2019
price-earnings ratio	PayPal	36,1	34,3	50,1	49,2	52,3
	Visa	27,45	30,13	37,27	33,65	28,16

*Source: own elaboration*

The first ratio that is compared in the analysis of the company on the stock market is the price-earnings ratio, which tells us the relationship between the stock market price and earnings per share at the end of each year analysed.

As can be seen in the table 31, both companies have a high ratio and this is due to the high price of the shares on the stock exchange of both companies. In the case of PayPal Holdings, this ratio increases year after year because it increases the price of the shares more than the profit offered per share.

On the other hand, the value offered by this ratio for Visa follows an upward trend in the first few years, but in the last two years the company has considerably increased profits per share, causing the value of this ratio to fall.

*Table 32: shares book value comparison*

		2015	2016	2017	2018	2019
shares book value	PayPal	11,73	12,54	13,64	13,12	14,43
	Visa	12,29	11,31	11,66	12,89	13,12

*Source: own elaboration*

*Table 33: Price/book value comparison*

		2015	2016	2017	2018	2019
Price/book value	PayPal	3,08	3,15	5,4	6,41	7,5
	Visa	5,01	5,23	6,55	8,84	9,73

*Source: own elaboration*

To conclude the comparative analysis, the book value of the shares of both companies is compared and the relationship between the book value and the value of the shares on the stock exchange is assessed.

The book value represents the value of each share taking into account the value of the company in the balance sheet, where the result is obtained by dividing the equity of the company by the number of shares in circulation. As can be seen in the table 32, both companies have very similar book values, with a higher value in the last year analysed, indicating that their value as a company is increasing.

On the other hand, in the table 33 it can be seen the relation between the stock exchange price and the book price of each one of the companies. The greater that value, the greater the difference between the stock market and book price of each company's shares and, it should be noted that both companies have values that are increasing over the years, which allows to conclude that the value of the shares in stocks is increasing more than the value of the company.

## 9. CONCLUSION

The main objective of this study was to carry out a financial analysis to evaluate the state of the company in recent years in order to be used by the company to improve for the future and also by investors who want to bet on this sector of online payments.

As a general data, it can be highlighted that the company has not had any economic difficulties at any time during the period analysed and has followed a very fast and stable growth. The main threats for this company are the other companies that operate in the same sector and do not allow this company to conquer new markets, such as the online payments market in China dominated by Alipay, which is part of the Alibaba group.

"China's Alipay payment service has partnered with Ingenico Group as part of an initiative designed to bring Alipay to European retailers. (Steiner, 2016)

After analysing the company vertically, it can be seen that in both assets and liabilities most of the value is in the short term and this is because the company operates online and the value of its non-current assets is much lower.

On the other hand, in the horizontal analysis, the fact that in the assets the item that has grown the most is the current assets, due to the increase of clients and transactions that the company has supported in these last years, is remarkable, as well as the fact that the assets in general have grown 78% in five years. On the other hand, in the vertical analysis of the liabilities, an inverse tendency can be seen, where the item that has increased the most in the last few years has been the non-current liabilities, indicating that the company is increasing its long-term debts much more than the short-term ones. Taking the company's solvency ratios as a reference, the conclusion is that it has no problems dealing with its debts since it has sufficient assets. In recent years the debt ratio indicates a possible excess of debt over equity, which could mean an excess of interest expenditure, but the interest coverage ratio gives a result that indicates the low expenditure of the company in this respect. The increase in debt has led to a continued increase in the company's leverage indicating that it is taking a riskier position.

Below, the profitability ratios show us a high capacity of the company to convert income into profit. Looking at the time it takes for the company to collect from its customers and pay its suppliers, we can conclude that the company has a reduced collection and payment period (around 2 months), with the collection period normally being shorter than the payment period, so it has no problem paying.

In this section, the return on assets and equity is analysed, which gives us positive and growing results during all the years, indicating that the company obtains high returns in the investment, both in assets and in equity, being the latter the highest. This difference between ROE and ROA indicates that the company has a positive leverage, as previously mentioned.

To finish with the ratios, the price of the shares has been analysed both on the market and on the stock exchange, where the most notable thing is the high growth in market value due to the high expectations of the company and the fact that no dividends are yet distributed to shareholders.

The price in books represents the real value according to the balance sheet and it is much more reduced than the value in stock exchange because this last one does not take into account the expectations in the future. The book value also increases during all the years, indicating a growth of the company in terms of value.

Finally, when comparing the company with Visa, the conclusion is reached that despite being a much younger company, PayPal Holdings has managed to reach market values similar to this giant of traditional banking. It should be noted that in the short term Visa is positioned in a more secure way as it does not depend on its collection rights to meet its closest obligations.

Also important is the fact that PayPal has much higher debts with respect to equity due to a lower value in shareholder equity.

In terms of the profitability of both companies, Visa has a greater capacity to produce profits from sales and both the return on assets and equity is higher in the Visa company due to the higher result in revenues.

The value of the shares is fairly similar in recent years both in the market and on the books and it should only be noted that their expectations are very high for the future, in addition to the fact that Visa has slightly higher earnings per share.

In general both companies have a similar valuation, with the difference that PayPal is younger and still has a lot of market to exploit.



## 10. LIST OF REFERENCES

T.Wells, J., 2017. *Corporate Fraud Handbook: Prevention and detection*. 5<sup>th</sup> edn. New Jersey: John Wiley & Sons, Inc. (353-360).

Singh, A., Schmidgall, R., 2002. Analysis of financial ratios commonly used by US lodging financial executives. *J Retail Leisure Property* **2**, 201–213. Available at: <https://doi.org/10.1057/palgrave.rlp.5090210> [Accessed 15 May 2020]

O'Connell, B., 2020. History of PayPal: Timeline and Facts, *The street*. Available at: <https://www.thestreet.com/technology/history-of-paypal-15062744> [Accessed 18 May 2020]

Racy, A., 2012. *Ratio Analysis Fundamentals: How 17 Financial Ratios Can Allow You to Analyse Any Business on the Planet* (English Edition). 2nd edn. Bidi Capital Pty Ltd.

Ramachandra, A., 2008. *Managerial Economics And Financial Analysis*, 3th edn. McGraw-Hill Education.

Tesoro Público. 2019. *Tipo de interés medio*. Available at: [https://www.tesoro.es/sites/default/files/estadisticas/historico/Historico\\_T.int.medio.xlsx](https://www.tesoro.es/sites/default/files/estadisticas/historico/Historico_T.int.medio.xlsx) [Accessed 10 October 2020]

Catalano, S., 2019, 12 march. *Qué hay detrás de la inversión de USD 750 millones del gigante Paypal en Mercado Libre*. infobae. Available at: <https://www.infobae.com/economia/finanzas-y-negocios/2019/03/12/que-hay-detras-de-la-inversion-de-usd-750-millones-del-gigante-paypal-en-mercado-libre/> [Accessed 12 Oct. 2020]

Krishna, D., & Saito, M., 2015, 20 July. *PayPal returns to market with \$52 billion valuation*. Reuters. Available at: <https://www.reuters.com/article/uk-paypal-hldg-debut-idUSKCN0PU1DF20150720> [Accessed 15 May 2020]

Steiner, I., 2016, 22 August. *Could China's AliPay Pose Threat to PayPal?*. eCOMMERCE BYTES. Available at: <https://www.ecommercebytes.com/2016/08/22/chinas-alipay-pose-threat-paypal/> [Accessed 20 Oct 2020]

Berger, R., 2020, 7 August. *How to understand the P/E Ratio*. Forbes. Available at: <https://www.forbes.com/advisor/investing/what-is-pe-price-earnings-ratio/> [Accessed 20 Oct 2020]

- The databases used for the calculation of the ratios and their verification are the following:

Balance sheet data from the Wall Street Journal: <https://www.wsj.com/market-data/quotes/PYPL>

Balance sheet complementary data from Investing: <https://es.investing.com/equities/paypal-holdings-inc>

Data from ready ratios: [https://www.readyratios.com/sec/PYPL\\_paypal-holdings-inc](https://www.readyratios.com/sec/PYPL_paypal-holdings-inc)

Data for comparison from Macrotrends: <https://www.macrotrends.net/stocks/charts/V/visa/financial-statements>