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**Introduction of the companies**

BlackBerry Limited was founded in 1984 under Research in Motion (RIM) in Waterloo, Canada. After developing and launching one of the first smartphones in the early 2000s, the company successfully operated in the mobile communications industry. However, due to the increasing competition, RIM lost market share, which resulted in a significant decline in share price and financial position. In 2013, Research In Motion changed its name to Blackberry Limited and repurposed its business to provide security software and services for companies and governments (BlackBerry Limited Annual Report, 2021). The company is now traded on both the New York and Toronto Stock Exchange under the symbol BB.

Shopify was founded in 2006 in Ottawa, Ontario. Merchants may use Shopify to create and design an online store and sell in a variety of settings, such as the web, mobile, in-person, brick-and-mortar locations, and pop-up shops, as well as through numerous channels, such as social media and online marketplaces (Shopify Inc., n.d.). More than 1.7 million businesses from 175 countries have generated billions of dollars since Shopify launched in 2016. But, more crucially, Shopify facilitated the entry of innumerable independent enterprises into online trading. Shopify merchants together employ the most people. They have had a global financial impact of US$307 billion in only 2020. When combined, Shopify merchants would be the world's seventh-largest firm by revenue, ahead of BP, Apple, and Volkswagen (Pajovic, S. 2022).

**Ratio calculation and analysis**

In this section, we will show the Consolidated Balance Sheet of Blackberry (figure 1) and its Consolidated Statements of Operations (figure 2). Also, the Consolidated Balance Sheet of Shopify (figure 3) and its Consolidated Statements of Operations (figure 4). Thus, the analysis of the financial ratios will consider the values of Blackberry on February 28, 2021 compared to December 31, 2020 for Shopify.

Table

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Figure 1: BlackBerry Consolidated Balance Sheets

Source: BlackBerry Limited Annual Report (2021)

Table

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Figure 2: BlackBerry Limited Consolidated Statements of Operations

Source: BlackBerry Limited Annual Report (2021)

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Table

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Figure 3: Shopify Inc. Consolidated Balance Sheets

Source: Shopify Inc. Annual Report (2021)

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Figure 4: Shopify Inc. Consolidated Statements of Operations

Source: Shopify Inc. Annual Report (2021)

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Figure 5: Shopify Inc. Consolidated Balance Sheets

Source: Shopify Inc. Annual Report (2021)

Table

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Figure 6: Shopify Inc. Consolidated Statements of Cash Flows

Source: Shopify Inc. Annual Report (2021)

## Short term Solvency / Liquidity

|  |  |  |
| --- | --- | --- |
| **Ratio** | **Blackberry** | **Shopify** |
| **Current ratio** | 2.3 | 15.7 |
| **Cash ratio** | 0.5 | 6.2 |
| **Net Working Capital** | 0.2 | 0.8 |

**Blackberry**

Current ratio = = = 2.3

Cash ratio = = = 0.5

Net Working Capital = = = = 0.2

**Shopify**

Current ratio = = = 15.7

Cash ratio = = = 6.2

Net Working Capital = = = = 0.8

For the Current Ratio, we can observe that for both companies the ratio is higher than 1 having Shopify with $15.7 and Blackberry with $2.3 in current assets for every $1 dollar in current liabilities, meaning that they would be able to pay their short-term obligations in less than a year using their assets (Fernando, 2021). Further, the Cash ratio for Shopify and Blackberry are 6.2 and 0.5, respectively. In this case, only Shopify could pay its current liabilities using only cash or equivalents (Kenton, 2022). Furthermore, Shopify has a NWC ratio of 0.8 and Blackberry of 0.2 so the higher the ratio, the higher is their level of liquidity (Maverick, 2021).

Blackberry and Shopify with a current ratio higher than 1 shows that the companies have enough cash to stay solvent in the near term. However, because the current ratio is only a snapshot at any one moment, it is rarely a thorough picture of a company's short-term liquidity or long-term solvency (Fernando, 2021). There are more current obligations than cash and cash equivalents for Blackberry so it suggests there isn't enough cash on hand to pay off short-term debt but this may not be a negative thing if the company's financial sheets are skewed by factors like long credit terms with suppliers, well-managed inventory, and limited credit offered to consumers (Kenton, 2022). In terms of NWC, both companies are in a good position being Shopify, the one with more advantage. However, it might seem that it is not using its excess cash flow efficiently, for example reinvesting in the future growth of the company (Maverick, 2021).

## Long term Solvency / Leverage

|  |  |  |
| --- | --- | --- |
| **Ratio** | **Blackberry** | **Shopify** |
| **Total debt ratio** | 0.47 | 0.18 |
| **Debt/Equity Ratio** | 0.87 | 0.21 |
| **Equity Multiplier** | 1.87 | 1.21 |
| **Long-term debt ratio** | 0.37 | 0.13 |

**BlackBerry**

Total debt ratio =

Debt/Equity ratio =

Long-term ratio =

Long term debt

**Shopify**

Total debt ratio =

Debt/Equity ratio =

Long-term ratio =

The total debt ratio shows the percentage of assets financed by debt (Corporate Finance Institute, n.d.). Shopify uses 18% debt, whereas Blackberry uses 47% debt to finance its assets. It is usually preferable to invest in companies with a lower total debt ratio, as it measures the ability of a firm to pay off its Debt. Although Shopify uses way less Debt to finance its operations, Blackberry's total debt ratio is still considered acceptable because it is under 50%, meaning that half of the assets are owned by the company's shareholders.

Regarding the Debt/Equity ratio, Shopify has $.21 in Debt for every $1 in Equity. On the other hand, Blackberry has $.87 in Debt for every $1 in Equity. From these results, we observe that Blackberry uses more Debt in proportion to Equity to finance its growth than Shopify. However, we can also conclude that both companies have a higher proportion of Equity over Debt, which implies that both firms would be able to fulfill obligations to creditors with shareholder's Equity if their businesses decline (Bloomenthal, 2022).

The long-term debt ratio excludes those debt obligations lasting less than a year. We observe that Blackberry (37%) doubles Shopify's (13%) Long-Term Debt ratio. When comparing the two companies, potential shareholders might consider BlackBerry a riskier investment, as it uses Debt more extensively as a source of finance than Shopify. Therefore, in financial distress, BlackBerry can be more susceptible to insolvency.

Overall, Shopify has shown lower Financial Leverage Ratios than Blackberry. It means that Blackberry uses more Debt than Shopify to finance its growth. Potential stockholders can interpret a higher Financial Leverage as risky; therefore, when comparing two companies, they might prefer to invest in the company showing the lowest debt ratios, Shopify. However, to assess the results of companies correctly, potential stockholders might want to compare the obtained results to the industry standards.

## Asset Utilization

|  |  |  |
| --- | --- | --- |
| **Ratio** | **Blackberry** | **Shopify** |
| **Total Asset Turnover Ratio** | 0.31 | 1.57 |
| **NWC Turnover Ratio** | 1.54 | 0.72 |
| **Capital Employed Turnover Ratio** | 0.35 | 0.95 |

**Blackberry**

Total Asset Turnover Ratio = = = 0.31

NWC = Current Assets - Current liabilities= 1,006 - 429 = 577

NWC Turnover Ratio = = = 1.54

Average Capital Employed== =

Capital Employed Turnover Ratio = = = 0.35

**Shopify**

Total Asset Turnover Ratio = = = 1.57

NWC= Current Assets - Current liabilities= 6,877,756 - 438,332 = 6,439,424

NWC Turnover Ratio = = = 0.72

Average Capital Employed== = 4,876,459.5

Capital Employed Turnover Ratio = = = 0.95

We can see that in the Total Assets Turnover Ratio Blackberry has 0.31, while Shopify has 1.57. These ratios have a big difference between each other. This formula shows the efficiency of how a company is using its assets to generate revenue for them. We can see that Shopify 5 times more than Blackberry which gives us the conclusion that they are more efficient in generating revenue concerning all the assets they have.

The Working Capital Turnover Ratio tells how efficient the companies are in the investment in working capital concerning the total amount of sales they do. For these two companies, we can conclude that BlackBerry had better efficiency because their NWC Turnover ratio was 1.54 compared to the 0.72 that Shopify had.

Moreover, we can see that Shopify used the Capital they had in the sales they made; this is what Capital Turnover Ratio explains. We can see that Shopify had a 0.95 Turnover Ratio, while Blackberry had a 0.35 ratio.

## Profitability

|  |  |  |
| --- | --- | --- |
| **Ratio** | **Blackberry** | **Shopify** |
| **Profit Margin Ratio** | 1.24 | 0.63 |
| **Return on Assets (ROA)** | 0.39 | 0.22 |
| **Return on Equity (ROE)** | 0.73 | 0.26 |

**Blackberry**

Profit Margin Ratio = = = -1.2363 or -123.63%

Return on Assets (ROA) = = = -0.3918 or - 39.18%.

Return on Equity (ROE) = = = -0.7340 or -73.40%

**Shopify**

Profit Margin Ratio = = = 0.1091 or 10.91%

Return on Assets (ROA) = = = 0.0411 or 4.12%

Return on Equity (ROE) = = = 0.0499 or 4.99%

Profit margin ratio reflects what percentage of sales has turned into profits by measuring how much revenue remains from sales after a company has paid off all its operating expenses (Indeed Editorial Team, 2021). According to the profit margin ratio that we have calculated for BlackBerry Limited and Shopify inc., we found that the profit margin is -123.63% and 10.91% respectively. A negative profit margin ratio happens when the operating costs are more than the total revenue, which means BlackBerry Limited spent more money than what the company was able to generate during the financial year of 2021( Murphy, 2021). Since Blackberry's profit margin is negative, it indicates that BlackBerry's business model is not sustainable, and in order to pay off its operating expenses, Blackberry will have to find another way to pay off its expenses, such as by taking loans or reaching out to more investors. On the other hand, Shopify Inc.’s profit surpassed its overhead costs, which means the core operation of Shopify Inc. is able to generate profit as per its profit margin ratio. A profit margin of $10.91% indicates that Shopify Inc. managed to retain $0.1091 from every dollar of sales generated. Therefore, it is safe to say that Shopify was highly profitable during the financial year of 2021 and a good indicator for investors that the company is in a healthy financial standing.

Return on assets (ROA) is a profitability ratio that measures how profitable a company is in comparison to its total assets. ROA can be used by corporate executives, analysts, and investors to determine how effectively a company uses its assets to generate a profit (Hargrave, 2022). Based on the ROA that we have calculated, it shows that BlackBerry Limited has a negative 39.18% return on assets ratio while Shopify Inc. has a 4.12% return on assets. A Negative ROA indicates that BlackBerry is not able to use its assets to generate income. In contrast, Shopify Inc. has done exceptionally well in managing its assets and can generate profit out of them. According to White (2022), the higher the return on assets, the better the financial position the company is currently in because it shows that the company is able to earn more money with a smaller investment. The ROA of Shopify Inc. tells investors that the company can effectively convert the money invested into net income and therefore, a favourable company to invest on.

Return on equity (ROE) is another profitability ratio that is used to assess a company’s return on investment. ROE gives insights to investors on how efficient a company is in terms of handling the money that shareholders have invested in, which can be used to measure the profitability of a company in proportion to shareholders’ equity (Furhmann, 2022). Thus, a company with a higher ROE is more efficient at generating income from equity financing. Based on the ROE that we have calculated, it shows that BlackBerry Limited has a negative 73.40% return on equity ratio, which indicates that the shareholders of BlackBerry Limited are losing value on investment rather than gaining, which is very unfavourable for investors while Shopify has a 4.99% return on equity ratio which indicates that for every dollar of shareholders’ equity, Shopify Inc managed to generate $ 0.0499 in profit. Thus, we can say that Shopify Inc. is very attractive in the eyes of the investors because the company can efficiently use its capital to generate profit for the investors.

## 

## Market Value

**Blackberry**

Earning per share (loss) = = = -1.9668

Price per ratio = 8.34 (TSX, 29 May 2022)

Price- earning ratio = = = -4.24

Book value per share = = = 2.6795

Market to book value = = = 3.1126

Market Value of Interest bearing debt = 178,000,000+90,000,000+6,000,000+720,000,000

= 994,000,000

Cash & Cash Equivalents = 214,000,000

Market value of Equity = Number of shares outstanding \* Market value per share

= 561,305,000 \* 8.34 = $4,681,283,700

Enterprise Value = 4,681,283,700 + 994,000,000 - 561,305,000

= 5,461,283,700

EBITDA = EBIT + Depreciation + Amortization = 1,107,000,000 + 182,000,000 = -925000000

EV/EBITDA = = = -5.90

**Shopify**

Earning per share (loss) = = = 0.27

Price per ratio = 469.32 (TSX, 29 May 2022)

Price - earning ratio = = = 1,756.3341

Book value per share = = = 53.53

Market to book value = = = 8.7672

Market Value of Interest bearing debt = (10051+144836+758008)\*1000

= 912,895,000

Cash & Cash Equivalents = 2,703,597,000

Market value of Equity = Number of shares outstanding \* Market value per share

= 119,569,705 \* 469.32 = $56,116,453,950.6

Enterprise Value = 56,116,453,950.6 + 912,895,000 - 2,703,597,000

= 54,325,751,950.6

EBITDA = EBIT + Depreciation + Amortization = 240,364,000 + 70,060,000 = 310,424,000

EV/EBITDA = = = 772.77

The price-to-earnings ratio is a valuation ratio that compares a company's current share price to its earnings per share (EPS) (Fernando, 2022). According to the price-to-earnings ratio the ratio for Blackberry and Shopify are -4.24 and 1,756.3341 respectively. A negative P/E ratio implies that the company is losing money or has negative earnings (The Investopedia Team, 2020). Which means Blackberry is losing $4.24 per stock. While on the other hand, Shopify is expecting $1,756.3 growth per stock.

The market to book value ratio compares a company's current market value to the book value. If the ratio is greater than 1 that means the company’s stock is overvalued and if it is less than one that means that the value is undervalued (CFI, 2022). The ratio that we have for Blackberry and Shopify are 3.1126 and 8.7672 respectively. According to our results, we can say that Blackberry’s stock is valued 3.11 times its actual value and for shopify its stock is valued approximately 8 times its actual value.

The enterprise value to earnings before interest, taxes, depreciation, and amortisation (EV/EBITDA) ratio compares a company's worth (debt included) to its cash profits less non-cash costs (Maverick, 2022). This means that for blackberry for each 925,000,000 dollars the investors are currently ready to pay negative 5.90 times of EBITDA. Whereas, for shopify the investors are ready to pay 772.77 times of the 310,424,000 EBITDA.

Overall, Shopify has shown greater Market value ratios than Blackberry. These ratios are used to analyze the current stocks and suggest potential investment ideas (Venketas, 2022). By seeing the low ratios of Blackberry, the investors can observe that it will result in loss for them if they invest in Blackberry. Whereas, if they invest in Shopify, they can earn a good return. Based on the market value ratios, Shopify Inc. is a better investment option for investors because it has higher market value ratios, which indicates that the company has performed well.

# Conclusion

As we discussed, financial analysis made to Shopify and Blackberry show us different results. However, for most of them Shopify had an advantage over BlackBerry in the analyzed terms. For investors, Shopify is a healthier and more profitable company and could become a better investment than BlackBerry. Financially, Shopify has better capacities to respond to debts as we could see in the short and long-term financial obligations. They have a lot of money in cash to meet these debts and bankruptcy does not represent a risk for Shopify. Also, the profitability ratios of Shopify are positive when generating profits in the last period of analysis while the income of blackberry was negative. Moreover, Shopify is more efficient in using its assets to generate profitability and as a financial institution or investor, would be better to make the decision or assumption on selecting Shopify over BlackBerry.

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