Table of Contents

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.

BlackBerry Limited
Incorporated under the Laws of Ontario
(United States dollars, in millions)

Consolidated Balance Sheets

	As at	
	February 28, 2021	February 29, 2020
Assets		
Current		
Cash and cash equivalents (note 3)	$ 214	$ 377
Short-term investments (note 3)	525	532
Accounts receivable, net of allowance of $10 and $9, respectively (note 2 and note 4)	182	215
Other receivables	25	14
Income taxes receivable	10	6
Other current assets (note 4)	50	52
	1,006	1,196
Restricted cash equivalents and restricted short-term investments (note 3)	28	49
Long-term investments (note 3)	37	32
Other long-term assets (note 4)	16	65
Operating lease right-of-use assets, net (note 12)	63	124
Property, plant and equipment, net (note 4)	48	70
Goodwill (note 4)	849	1,437
Intangible assets, net (note 4)	771	915
	$ 2,818	$ 3,888
Liabilities		
Current		
Accounts payable	$ 20	$ 31
Accrued liabilities (note 4)	178	202
Income taxes payable (note 6)	6	18
Debentures (note 7)	—	606
Deferred revenue, current (note 13)	225	264
	429	1,121
Deferred revenue, non-current (note 13)	69	109
Operating lease liabilities (note 12)	90	120
Other long-term liabilities (note 4)	6	9
Long-term debentures (note 7)	720	—
	1,314	1,359
Commitments and contingencies (note 11)		
Shareholders' equity		
Capital stock and additional paid-in capital		
Preferred shares: authorized unlimited number of non-voting, cumulative, redeemable and retractable	—	—
Common shares: authorized unlimited number of non-voting, redeemable, retractable Class A common shares and unlimited number of voting common shares		
Issued - 565,505,328 voting common shares (February 29, 2020 - 554,199,016)	2,823	2,760
Deficit	(1,306)	(198)
Accumulated other comprehensive loss (note 10)	(13)	(33)
	1,504	2,529
	$ 2,818	$ 3,888

Figure 1: BlackBerry Consolidated Balance Sheets
Source: BlackBerry Limited Annual Report (2021)

BlackBerry Limited
(United States dollars, in millions, except per share data)

Consolidated Statements of Operations

	For the Years Ended		
	February 28, 2021	February 29, 2020	February 28, 2019
Revenue (note 13)	$ 893	$ 1,040	$ 904
Cost of sales	250	277	206
Gross margin	643	763	698
Operating expenses			
Research and development	215	259	219
Selling, marketing and administration	344	493	409
Amortization	182	194	136
Impairment of goodwill (note 3)	594	22	—
Impairment of long-lived assets (note 3)	43	10	—
Debentures fair value adjustment (note 7)	372	(66)	(117)
Settlements, net (note 11)	—	—	(9)
	1,750	912	638
Operating income (loss)	(1,107)	(149)	60
Investment income (loss), net	(6)	1	17
Income (loss) before income taxes	(1,113)	(148)	77
Provision for (recovery of) income taxes (note 6)	(9)	4	(16)
Net income (loss)	$ (1,104)	$ (152)	$ 93
Earnings (loss) per share (note 9)			
Basic	$ (1.97)	$ (0.27)	$ 0.17
Diluted	$ (1.97)	$ (0.32)	$ 0.00

Figure 2: BlackBerry Limited Consolidated Statements of Operations
Source: BlackBerry Limited Annual Report (2021)

Shopify Inc.
Consolidated Balance Sheets
Expressed in US $000's except share amounts

	Note	As at December 31, 2021 $	December 31, 2020 $
Assets			
Current assets			
Cash and cash equivalents	*4*	2,502,992	2,703,597
Marketable securities	*5*	5,265,101	3,684,370
Trade and other receivables, net	*7*	192,209	120,752
Merchant cash advances, loans and related receivables, net	*8*	470,722	244,723
Income taxes receivable	*21*	5,023	56,067
Other current assets	*9*	103,273	68,247
		8,539,320	6,877,756
Long-term assets			
Property and equipment, net	*10, 23*	105,526	92,104
Right-of-use assets, net	*11*	196,388	119,373
Intangible assets, net	*12*	138,496	135,676
Deferred tax assets	*21*	48,369	52,677
Equity and other investments (including $3,412,166 and $nil, carried at fair value)	*5, 6*	3,955,545	173,454
Goodwill	*13*	356,528	311,865
		4,800,852	885,149
Total assets		13,340,172	7,762,905
Liabilities and shareholders' equity			
Current liabilities			
Accounts payable and accrued liabilities	*14*	456,688	300,795
Income taxes payable	*21*	13,505	19,677
Deferred revenue	*15*	216,792	107,809
Lease liabilities	*11*	15,748	10,051
		702,733	438,332
Long-term liabilities			
Deferred revenue	*15*	162,932	21,006
Lease liabilities	*11*	246,776	144,836
Convertible senior notes	*3, 16*	910,963	758,008
Deferred tax liabilities	*21*	183,427	—
		1,504,098	923,850
Commitments and contingencies	*11, 18*		
Shareholders' equity			
Common stock, unlimited Class A subordinate voting shares authorized, 113,954,492 and 110,929,570, issued and outstanding; unlimited Class B multiple voting shares authorized, 11,942,667 and 11,599,301 issued and outstanding	*19*	8,040,099	6,115,232
Additional paid-in capital		161,074	261,436
Accumulated other comprehensive (loss) income	*20*	(5,974)	8,770
Retained earnings		2,938,142	15,285
Total shareholders' equity		11,133,341	6,400,723
Total liabilities and shareholders' equity		13,340,172	7,762,905

Figure 3: Shopify Inc. Consolidated Balance Sheets
Source: Shopify Inc. Annual Report (2021)

Shopify Inc.
Consolidated Statements of Operations and Comprehensive Income
Expressed in US $000's, except share and per share amounts

	Note	Years ended December 31, 2021 $	Years ended December 31, 2020 $
Revenues			
Subscription solutions	23	1,342,334	908,757
Merchant solutions	23	3,269,522	2,020,734
		4,611,856	2,929,491
Cost of revenues			
Subscription solutions		264,351	193,532
Merchant solutions		1,866,361	1,194,439
		2,130,712	1,387,971
Gross profit		2,481,144	1,541,520
Operating expenses			
Sales and marketing		901,557	602,048
Research and development		854,383	552,127
General and administrative	10, 11	374,844	245,343
Transaction and loan losses		81,717	51,849
Total operating expenses		2,212,501	1,451,367
Income from operations		268,643	90,153
Other income, net			
Interest income		15,356	23,434
Interest expense	16	(3,493)	(9,085)
Net unrealized gain on equity and other investments	6	2,859,800	135,193
Foreign exchange gain		286	669
Total other income, net		2,871,949	150,211
Income before income taxes		3,140,592	240,364
(Provision for) recovery of income taxes	21	(225,933)	79,145
Net income		2,914,659	319,509
Net income per share attributable to shareholders:			
Basic	22	$ 23.38	$ 2.67
Diluted	22	$ 22.90	$ 2.59
Weighted average shares used to compute net income per share attributable to shareholders:			
Basic	22	124,658,891	119,569,705
Diluted	22	127,364,735	123,463,274
Other comprehensive (loss) income			
Unrealized (loss) gain on cash flow hedges	20	(20,061)	10,510
Tax effect on unrealized (loss) gain on cash flow hedges	20	5,317	(2,786)
Total other comprehensive (loss) income		(14,744)	7,724
Comprehensive income		2,899,915	327,233

Figure 4: Shopify Inc. Consolidated Statements of Operations
Source: Shopify Inc. Annual Report (2021)

Shopify Inc.
Consolidated Balance Sheets
Expressed in US $000's except share amounts

	Note	As at December 31, 2019 $	As at December 31, 2018 $
Assets			
Current assets			
Cash and cash equivalents	*4*	649,916	410,683
Marketable securities	*5*	1,805,278	1,558,987
Trade and other receivables, net	*6*	90,529	41,347
Merchant cash advances and loans receivable, net	*7*	150,172	91,873
Other current assets	*8*	48,833	26,192
		2,744,728	2,129,082
Long-term assets			
Property and equipment, net	*9*	111,398	61,612
Intangible assets, net	*10*	167,282	26,072
Right-of-use assets	*11*	134,774	—
Deferred tax assets	*19*	19,432	—
Goodwill	*12*	311,865	38,019
		744,751	125,703
Total assets		3,489,479	2,254,785
Liabilities and shareholders' equity			
Current liabilities			
Accounts payable and accrued liabilities	*13*	181,193	96,956
Income taxes payable	*19*	69,432	—
Deferred revenue	*14*	56,691	39,180
Lease liabilities	*11*	9,066	2,552
		316,382	138,688
Long-term liabilities			
Deferred revenue	*14*	5,969	1,881
Lease liabilities	*11*	142,641	22,316
Deferred tax liabilities	*19*	8,753	1,132
		157,363	25,329
Commitments and contingencies	*11, 16*		
Shareholders' equity			
Common stock, unlimited Class A subordinate voting shares authorized, 104,518,173 and 98,081,889 issued and outstanding; unlimited Class B multiple voting shares authorized, 11,910,802 and 12,310,800 issued and outstanding	*17*	3,256,284	2,215,936
Additional paid-in capital		62,628	74,805
Accumulated other comprehensive income (loss)	*18*	1,046	(12,216)
Accumulated deficit	*3*	(304,224)	(187,757)
Total shareholders' equity		3,015,734	2,090,768
Total liabilities and shareholders' equity		3,489,479	2,254,785

The accompanying notes are an integral part of these consolidated financial statements.

On Behalf of the Board:

Figure 5: Shopify Inc. Consolidated Balance Sheets
Source: Shopify Inc. Annual Report (2021)

Shopify Inc.
Consolidated Statements of Cash Flows
Expressed in US $000's

	Note	Years ended December 31, 2021 $	Years ended December 31, 2020 $
Cash flows from operating activities			
Net income for the year		2,914,659	319,509
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization and depreciation		66,308	70,060
Stock-based compensation	*19*	330,763	246,940
Amortization of debt offering costs	*16*	2,343	8,756
Impairment of right-of-use assets and leasehold improvements	*10, 11*	30,145	31,623
Provision for transaction and loan losses		43,781	27,282
Deferred income tax expense (recovery)	*21, 25*	190,963	(44,801)
Revenue related to non-cash consideration	*25*	(58,380)	(3,814)
Net unrealized gain on equity and other investments	*6*	(2,859,800)	(135,193)
Unrealized foreign exchange loss (gain)		4,570	(1,689)
Changes in operating assets and liabilities:			
Trade and other receivables		(72,300)	(29,146)
Merchant cash advances, loans and related receivables		(266,077)	(112,721)
Other current assets		(50,151)	(11,404)
Non-cash consideration received in exchange for services	*6*	(268,058)	(24,710)
Accounts payable and accrued liabilities		138,175	118,588
Income taxes receivable and payable	*25*	45,263	(103,087)
Deferred revenue	*25*	309,289	69,969
Lease assets and liabilities		2,935	(1,204)
Net cash provided by operating activities		504,428	424,958
Cash flows from investing activities			
Purchase of marketable securities		(7,337,366)	(5,600,207)
Maturity of marketable securities		5,750,224	3,721,405
Purchase of equity and other investments	*6*	(650,233)	(11,051)
Acquisitions of property and equipment		(50,788)	(41,733)
Acquisition of businesses, net of cash acquired	*24*	(59,627)	—
Acquisitions of intangible assets		—	(262)
Net cash used in investing activities		(2,347,790)	(1,931,848)
Cash flows from financing activities			
Proceeds from public equity offerings, net of issuance costs	*19*	1,541,168	2,578,591
Proceeds from the exercise of stock options		108,594	70,809
Proceeds from convertible senior notes, net of underwriting fees and offering costs	*16*	—	907,950
Net cash provided by financing activities		1,649,762	3,557,350
Effect of foreign exchange on cash and cash equivalents		(7,005)	3,221
Net (decrease) increase in cash and cash equivalents		(200,605)	2,053,681
Cash and cash equivalents – Beginning of Year		2,703,597	649,916
Cash and cash equivalents – End of Year		2,502,992	2,703,597
Supplemental cash flow information:			
Cash paid for amounts included in the measurement of lease liabilities included in cash flows from operating activities		26,166	21,753
Lease liabilities arising from obtaining right-of-use assets		118,091	29,820
Acquired property and equipment remaining unpaid		8,052	1,881
Cash (recovered from) paid for income taxes, net		(10,466)	69,534
Cash paid for interest		1,287	—

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 = $\frac{Current\ assets}{Current\ liabilities} = \frac{1{,}006}{429}$ = 2.3

Cash ratio = $\frac{Cash}{Current\ liabilities} = \frac{214}{429}$ = 0.5

Net Working Capital = $\frac{Net\ working\ capital}{Total\ assets} = \frac{(Current\ assets - Current\ liabilities)}{Total\ assets} = \frac{1{,}006 - 429}{2{,}818}$ = 0.2

Shopify

Current ratio = $\frac{Current\ assets}{Current\ liabilities} = \frac{6{,}877{,}756}{438{,}332}$ = 15.7

Cash ratio = $\frac{Cash}{Current\ liabilities} = \frac{2{,}703{,}597}{438{,}332}$ = 6.2

Net Working Capital = $\frac{Net\ working\ capital}{Total\ assets} = \frac{(Current\ assets - Current\ liabilities)}{Total\ assets} = \frac{6{,}877{,}756 - 438{,}332}{7{,}762{,}905}$ = 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 = $\frac{Total\ assets - Total\ equity}{Total\ assets} = \frac{\$2{,}818 - \$1{,}504}{\$2{,}818} = 0.47$

Debt/Equity ratio = $\frac{Total\ debt}{Total\ equity} = \frac{\$1{,}314}{\$1{,}504} = 0.87$

Long-term ratio = $\frac{Long{-}term\ debt}{Long{-}term\ debt + Total\ equity} = \frac{\$885}{\$885 + \$1{,}504} = 0.37$

Long term debt $= \$69 + \$90 + \$6 + \$720$

Shopify

Total debt ratio = $\frac{Total\ assets - Total\ equity}{Total\ assets} = \frac{\$7{,}762{,}905 - \$6{,}400{,}723}{\$7{,}762{,}905} = 0.18$

Debt/Equity ratio = $\frac{Total\ debt}{Total\ equity} = \frac{\$438{,}332 + \$923{,}850}{\$6{,}400{,}723} = 0.21$

Long-term ratio = $\frac{Long{-}term\ debt}{Long{-}term\ debt + Total\ equity} = \frac{\$923{,}850}{\$923{,}850 + \$6{,}400{,}723} = 0.13$

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 = $\frac{Sales}{Total\ Asset} = \frac{893}{2{,}818}$ = 0.31

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

NWC Turnover Ratio = $\frac{Sales}{NWC} = \frac{893}{577}$ = 1.54

Average Capital Employed=$\frac{(T.Assets - C.Liabilities)\ +\ (T.Assets - C.Liabilities)}{2} = \frac{(2{,}818-429)+(3{,}888-1{,}121)}{2}$ = 2,578

Capital Employed Turnover Ratio = $\frac{Sales}{Avr\ Capital\ Employed} = \frac{893}{2{,}578}$ = 0.35

Shopify

Total Asset Turnover Ratio = $\frac{Sales}{Total\ Assets} = \frac{4{,}611{,}856}{2{,}929{,}491}$ = 1.57

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

NWC Turnover Ratio = $\frac{Sales}{NWC} = \frac{4{,}611{,}856}{6{,}439{,}424}$ = 0.72

Average Capital Employed=$\frac{(T.Assets - C.Liabilities)\ +\ (T.Assets - C.Liabilities)}{2} = \frac{(7{,}762{,}905-438{,}332)+(2{,}744{,}728-316{,}382)}{2}$ = 4,876,459.5

Capital Employed Turnover Ratio = $\frac{Sales}{Avr\ Capital\ Employed} = \frac{4{,}611{,}856}{4{,}876{,}459.5}$ = 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 = $\frac{Net\ Income}{Sales} = \frac{(1{,}104)}{893}$ = -1.2363 or -123.63%

Return on Assets (ROA) = $\frac{Net\ Income}{Total\ Assets} = \frac{(1{,}104)}{2{,}818}$ = -0.3918 or - 39.18%.

Return on Equity (ROE) = $\frac{Net\ Income}{Total\ Equity} = \frac{(1{,}104)}{1{,}504}$ = -0.7340 or -73.40%

Shopify

Profit Margin Ratio = $\frac{Net\ Income}{Sales} = \frac{2{,}914{,}659}{4{,}611{,}856}$ = 0.1091 or 10.91%

Return on Assets (ROA) = $\frac{Net\ Income}{Total\ Assets} = \frac{2{,}914{,}659}{13{,}340{,}172}$ = 0.0411 or 4.12%

Return on Equity (ROE) = $\frac{Net\ Income}{Total\ Equity} = \frac{2{,}914{,}659}{11{,}133{,}341}$ = 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) = $\frac{Net\ income}{Shares\ Outstanding}$ = $\frac{110{,}400{,}000}{561{,}305{,}000}$ = -1.9668

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

Price- earning ratio = $\frac{Price\ per\ share}{Earnings\ per\ share}$ = $\frac{8.34}{-1.9668}$ = -4.24

Book value per share = $\frac{Total\ Equity}{Number\ of\ shares\ outstanding}$ = $\frac{1504*10^6}{561{,}305{,}000}$ = 2.6795

Market to book value = $\frac{Price\ per\ ratio}{Book\ value\ per\ ratio}$ = $\frac{8.34}{2.6795}$ = 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 = $\frac{Enterprise\ Value}{EBITDA}$ = $\frac{5{,}461{,}283{,}700}{-925000000}$ = -5.90

Shopify

Earning per share (loss) = $\frac{Net\ income}{Shares\ Outstanding}$ = $\frac{31{,}950{,}900}{119{,}569{,}705}$ = 0.27

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

Price - earning ratio = $\frac{Price\ per\ share}{Earnings\ per\ share}$ = $\frac{469.32}{0.27}$ = 1,756.3341

Book value per share $= \frac{Total\ Equity}{Number\ of\ shares\ outstanding} = \frac{6400723*1000}{119{,}569{,}705} = 53.53$

Market to book value $= \frac{Price\ per\ ratio}{Book\ value\ per\ ratio} = \frac{469.32}{53.53} = 8.7672$

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 $= \frac{Enterprise\ Value}{EBITDA} = \frac{54{,}325{,}751{,}950.6}{310{,}424{,}000} = 772.77$

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.

References

BlackBerry Limited Annual Report (2021, February 28). Annual Report. BlackBerry. Retrieved from https://www.blackberry.com/content/dam/blackberry-com/Documents/pdf/financial-reports/2021/q4y2021/blackberry-annual-report-10k-q4fy21.pdf

Bloomenthal, A. (2022, February 25). How do you calculate the debt-to-equity ratio? Investopedia. Retrieved from https://www.investopedia.com/ask/answers/062714/what-formula-calculating-debttoequity-ratio.asp

CFI. (2022, February 1). *Market to book ratio*. Corporate Finance Institute. Retrieved from https://corporatefinanceinstitute.com/resources/knowledge/valuation/market-to-book-ratio-price-book/

Debt to asset ratio. Corporate Finance Institute. (2022, May 8). Retrieved from https://corporatefinanceinstitute.com/resources/knowledge/finance/debt-to-asset-ratio/

Fernando, J. (2021, October 21). *Current Ratio*. Retrieved from Investopedia: https://www.investopedia.com/terms/c/currentratio.asp

Fernando, J. (2022, June 3). *Price-to-earnings (P/E) ratio*. Investopedia. Retrieved from: https://www.investopedia.com/terms/p/price-earningsratio.asp

Furhmann, R. (2022, May 29). How to calculate return on equity (ROE). Investopedia. Retrieved from https://www.investopedia.com/ask/answers/070914/how-do-you-calculate-return-equity-roe.asp

Hargrave, M. (2022, March 5). Return on assets (ROA). Investopedia. Retrieved from https://www.investopedia.com/terms/r/returnonassets.asp

Indeed Editorial Team. (2021, September 16). What is a negative profit margin and how to calculate it.

Indeed Career Guide. Retrieved from https://www.indeed.com/career-advice/career-development/negative-profit-margin#:~:text=What%20is%20a%20negative%20profit%20margin%3F,not%20a%20sustainable%20business%20model

Kenton, W. (2022, May 20). *Cash Ratio*. Retrieved from Investopedia: https://www.investopedia.com/terms/c/cash-ratio.asp

Maverick, J. (2021, May 31). *What Is Considered a Good Working Capital Ratio?* Retrieved from

Investopedia: https://www.investopedia.com/ask/answers/010915/what-proper-ratio-between-working-capital-current-assets-and-current-liabilities.asp

Maverick, J. B. (2022, April 10). *What is considered a healthy EV/EBITDA ?*. Investopedia. Retrieved from https://www.investopedia.com/ask/answers/072715/what-considered-healthy-evebitda.asp#:~:text=The%20enterprise%20value%20to%20earnings,earnings%20less%20non%2Dcash%20expenses

Murphy, C. B. (2021, September 21). *How can a company have a negative gross profit margin?* Investopedia. Retrieved from: https://www.investopedia.com/ask/answers/101314/what-are-main-reasons-why-there-could-be-negative-gross-profit-margin-and-what-does-it-mean.asp

Pajovic, S. (2022, January 23). *23 revealing shopify statistics that matter in 2022*. Review Moose. Retrieved from https://reviewmoose.ca/blog/shopify-statistics/

Shopify Inc Annual Report (2021). Annual Report. Shopify. Retrieved from https://s27.q4cdn.com/572064924/files/doc_financials/2021/q4/99a0d08d-4015-4a0a-a8fb-fe6ec66553c4.pdf

The Investopedia Team. (20302, December 23). *Can stocks have a negative price-to-earnings ratio?*. Investopedia. Retrieved from https://www.investopedia.com/ask/answers/05/negativeeps.asp#:~:text=A%20negative%20P%2FE%20ratio,out%20of%20the%20company's%20control.

Venketas, W. (n.d.). *Market value ratios and how traders can use them*. DailyFX. Retrieved from https://www.dailyfx.com/education/understanding-the-stock-market/market-value-ratios.html

White, C. B. (2022, May 5). *How to calculate return on assets (ROA) with examples*. Investopedia. Retrieved from: https://www.investopedia.com/ask/answers/031215/what-formula-calculating-return-assets-roa.asp