Portfolio Project

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RES500: Fundamental of Quantitative Analysis

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May 12th, 2024

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When applying for a loan for a vehicle, home, or to start a new business, having strong knowledge of your finances are an important step to achieve your goal. Applying for a loan is more than just the necessary capital. Financial statements and financial ratios are used to represent the borrower's current and future financial health to determine if they will qualify for the loan. In this essay, I have completed a balance sheet and income statement and used those to calculate financial ratios to determine if I would qualify for a home loan.

Financial Statements

Financial statements are a tool used to display a company or individuals financial health. They are used for budgeting, planning, debt management, and investment decisions.

Balance Sheet

This balance sheet displays a snap shot of my assets and liabilities to help me understand my current financial position. Based on this information, most of my assets are allocated in investments with a relatively large portion in my vehicles value. However, the Toyota's loan would actually decrease my net worth (see Figure 1).

Figure 1

Personal balance sheet defining assets, liabilities, and net worth

Assets			**Liabilities**		
Cash	$	1,667.22	Credit Cards	$	2,967.77
Savings	$	7,131.73	Toyota Loan	$	20,685.88
Stock Investments	$	95,731.69	**Total Liabilities**	**$**	**23,653.65**
401k	$	12,016.12			
Tesla	$	23,875.00	**Net Worth**	**$**	**130,018.11**
Toyota	$	13,250.00			
Total Assets	**$**	**153,671.76**			

Income Statement

This is my income statement over a one month period. My income includes my monthly salary in addition to my annual dividend income divided by 12. My expenses included my fixed expenses, variable expenses, and discretionary expenses (see Figure 2). Currently, my salary is the main source of my income and is primarily used to pay off my expenses.

Figure 2

Personal income statement defining income, expenses, and net income.

Income		
Salary	$	7,083.33
Dividend Income	$	1,427.14
Total Income	**$**	**8,510.47**
Net Income	**$**	**4,386.07**

Expenses		
Rent	$	1,300.00
Student Expenses	$	750.00
Car Insurance	$	292.32
Gas	$	200.00
Groceries/Food	$	400.00
Entertainment	$	600.00
Gym	$	113.00
Subscriptions	$	69.71
Car Loan	$	399.37
Total Expenses	**$**	**4,124.40**

Financial Ratios

By using balance sheets and income statements, financial ratios can be calculated to assess an individual's financial health and to identify areas for improvement. The debt ratio, quick ratio, and debt service ratio are great examples of ratios that can be used to understand my financial position and help determine if I will qualify for a home loan.

Debt Ratio

A debt ratio is a financial ratio that is used to compare total assets to total debt (Colorado State University Global). It quantifies the amount that a company or individual relies on debt to fund their operations and investments. By using my balance sheet, I was able to calculate my debt ratio to be 0.15 by using the calculations below:

$$DebtRatio = TotalDebt/TotalAssets$$

$$0.15 = 23{,}653.65/153{,}671.76$$

A debt ratio greater than 1.0 means that I have more debt than assets. On the other hand, a debt ratio less than 1.0 means that I have more assets than debt. With respect to a loan, a lower debt ratio will indicate a lower financial risk because I will be able to meet debt payments or face higher interest costs. In addition, with less debt I will have more financial stability and have a better position during financial hardships or economic uncertainty.

While low debt ratio is considered good, it can also have negative signs if it’s too low. Since low debt ratio means there is low debt, credit companies can see this as a risk because of insufficient credit history or credit worthiness. In my personal experience when applying for a loan for a car and credit cards, this causes higher interest rates and lower credit limits. Furthermore, a debt ratio that is too low can be seen as a missed opportunity and show that I am not using debt to leverage my investments and yield greater returns.

In this case, I believe that it is ok to have a lower debt ratio because if I do get approved for this home loan, my debt will greatly increase and as a result, my debt ratio will increase.

Quick Ratio

A quick ratio is a financial ratio that is used to assess a company or individuals short-term ability to meet financial obligations by using their liquid assets (Colorado State University Global 2.3). To calculate my quick ratio, I took the information from my balance sheet. I calculated a quick ratio of 4.93 using the calculations below:

$$QuickRatio = (Cash + Receivables)/CurrentLiabilities$$

$$4.93 = (1{,}667.22 + 7{,}131.73 + 95{,}731.69 + 12{,}016.12)/23{,}653.65$$

My cash consisted of my checking and savings account while my receivables consisted of my investments that can be easily liquidated. Quick ratio excludes assets that are considered more difficult to turn into cash. In my case, I did not include my vehicles in this calculation.

A higher quick ratio is beneficial for similar reasons as a low debt ratio. A higher quick ratio indicates that an individual has more financial stability and better emergency preparedness. With respect to a loan, a higher quick ratio will be very favorable because it indicated that there is more opportunity for long-term investments without causing short-term financial struggles.

In my case, my quick ratio is 4.93 which means that I have enough liquid assets to pay off my debt 4.93 times over. Loan officers will be happy to see this because it shows that I will be less of a financial risk if they do decide to approve my loan.

Debt Service Ratio

Debt service ratio (DSR), or debt service coverage ratio (DSCR), is a financial ratio that is used to determine a company or individuals ability to meet debt obligations by using it's available cash flow over a specified period of time (Fernando, J.). By using the calculation below, I have determined that my DSR is 1.30.

$$DSR = NetOperatingIncome/CurrentDebtObligations$$

$$1.30 = (8{,}510.47 - 4{,}124.40)/(2{,}967.77 + 399.37)$$

To determine my net operating income, I subtracted my monthly expenses by my monthly income before taxes. I then calculated my current debt obligations by adding my monthly car loan payments and the amount due on my credit cards.

A DSR over 1 means that the company or individual is able to use their income and cash flow to cover their current debt obligations. A DSR of less than 1 shows that a borrower may have difficulty paying off their debt with their current income.

With my DSR being 1.30, I have the income and cash flow to pay off my debt with some left over. Having a higher DSR tells lenders that I able to pay off my debt obligations which will increase their confidence in approving me for a loan. In addition, with the excess income, I will have more flexibility to make investments and explore other forms of financial growth. I will also be more resilient to economic downturns and financial hardship with is beneficial for me and instill confidence in the loan officers.

Qualifying

Based on my financial statements and financial ratios, I believe that I would qualify for the home loan. My debt ratio shows that I have a large amount of assets compared to my debt and that I am financially stable. Furthermore, my quick ratio and DSR prove that I have the cash flow and income to pay off my current obligations. However, if I were approved for the home loan, I believe I would be given high interest rates because of my low debt ratio and lack of credit history. This may cause lenders to be hesitant and could be seen as more of a risk.

To improve my financial statements, I would like to pay off the loan on my Toyota. Right now it is negatively impacting my net worth by increasing my liabilities.

Conclusion

Using financial statements and ratios are great tools that can be used to evaluate your financial health, stability, and performance. These can provide insight on your current financial situation to help you make investment decisions and plan for the future.

After evaluating my financial statements, I have found three positively correlated actions that I could take that would strengthen my financial position over a three year timeline. By applying positively correlation actions, as the action I take increases, the strength in my financial position will also increase (Colorado State University Global 7.2).

More income streams. The more income streams I have will make my financial position stronger because if I lose one stream of income, I will be able to make up for it with another. To do this, I could get a part time job or invest in real estate, since I have not done so yet.

Diversify investments. As the diversity of my investments increases, the strength in my financial position will increase. By investing in asset classes that I currently do not have a stake in, I lessen the impact of market volatility and economic downturns.

Increase my emergency fund. As my emergency fund increases, I will have more cash on hand in the event that unexpected financial hardships arise. I will continue to contribute to my savings to increase the strength in my financial position and make me more financially resilient.

References

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