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Part A.

History

Sainsbury's is one of the large chain supermarkets in United Kingdom, created in 1869 by John James Sainsbury. The vision and the goal is the same for whole this years they want to offering great quality and service for a good price every day and make the customer live easier.

In 2016 the strategy was built strengths and great business with fear price and quality products, that make the strong value to the company. From 2015 deflation in food and retail price made them more competitive, for this reason drive the market by lower commodity and prices. The shopping habits start to change rapidly, we have a disruptive. In that year the company improve the quality of 3000 own- brand products. In that year the company investing in infrastructure.

In this year Sainsbury start to engage with the environment and made recycling packaging and innovation in reduce weight of the products and keep it fresh.

Keeping customers and colleagues safe are principles. of the company.

This year the food and grocery sales have been improving trend, the strategic investments in our customer offer and reducing price and the customer are most satisfying. (Sainsbury, 2016)

In 2017 the company is growth in all the sector and it is the biggest market chain in UK to offer food, merchandise & clothing and finance. The company start to work online and the customer can make the shopping via digital channel wherever they are.

The company in that year acquired of Home Retail Group plc, owner of Argos including in Financial Services. (Sainsbury, 2017)

The focus on 2018 was to driving shareholder value and In April Sainsbury and Asda Group Limited will work together as a new UK retail business. The combination if theses business Sainsbury, Asda and Argos made that customer find the best price, quality and developing more flexible ways to shop. (Sainsbury, 2018)

New chairman Martin Scicluna start in 2019 in Sainsbury's with the integration of Nectar more fully into the business and support strategy of knowing their customer. The clothes sales market declint due to the competitive market. Online bussines is continuing grow across the UK and Ireland. To be a multy-brand and multy-business make the company strong. (Sainsbury, 2019)

Keeping customers and colleagues safe are principles of the company in 2020. This year the food and grocery sales have been improving trend, the strategic investments in our customer offer and reducing price and the customer are most satisfying. (Sainsbury, 2020)

The covid-19 pandemic has had a significant impact on Sainsbury business since March. It is impossible to predict the financial impact in sales; cash flow and profit could be impacted in the future periods of lockdown. An impact of Covid-19 change in the economy, the demand for banking product has reduced while the risk arising due to rise unemployment.

One of the consequences of the Covid-19 was, toy sales drop 2.9 per cent but sales online grew 12 per cent and finance service grew 47 per cent, the clothes sales have

declined and they have overstock. Also, a Loyalty programs the biggest in the UK with 18 million members.

Reducing cost by £500 million over 5 years because the parentship Argos and Sainsbury and they have new program digital for delivery customer experience and efficient benefits.

Part B

The Company that we are going to analysis in this study is Sainsbury's in the last 5 year and the direct competitor Morrison.

Both of them are supermarket chain. Morrison actually have in UK over 500 stores and home delivery service. The strategic for this company is the fresh food and low price in the products.

The different ratios are used as a tool to analyses the financial statement in the company, and the investor will monitor the performance of the firm.

With the ratio analysis we can understand better company financial performance and we can compare them between period.

Tab. 1 Sales and market share of Sainsbury's (2016 -2020) and Morrisons (2020)

Sainsbury's	2016	2017	2018	2019	2020	Morrisons 2020
Sales (exc VAT)m £	23506	26224	28456	29007	28993	17536
Sales Growth (%)	-0,01	11,56	8,51	1,9	-0.00048	-0,01
Gross profit	1456	1634	1882	2288	2294	629
Operating Profit	700	642	518	601	650	521

In the tab above we can see how are the sales and gross profit in Sainsbury's and Morrison and how was the evolution of Sainsbury's sales for 5 years.

In 2016 because of the market conditions Sainsbury's obtained less depend of the supermarket by purchasing catalogue retailer Argos. For now, on the supermarket will have food and not food, the expectation was In that year Argos open 90 stores, after 2016. (plc, 2016)

In 2016 the sale growth is decline because of the pricing pressure and food price deflation. The price was up and the sale for consequence was down.

The Sales Growth increase in 2017 by 11,56% that is due to the company include home retail and Argos Service Financial that provide customer with new products and services at Sainsbury's Bank which increase customer demand.

In April 2018 Asda and Sainsbury's made the agreement to create a new UK retail business. That investment gives to Sainsbury more opportunity to grow and have profit in the market.

In 2019 the sale is increase by only 1,9% the market have a lot of option and so many accesses to a variety of shopping channels, sales decline as the online participation grow. The competitor is growing massive scale.

In 2020 both companies had negative sales growth, it is due to consequence of the pandemic. Sainsbury's sales clothes and financial product consequence of the country lockdown this type of products the sales decrease drastically.

The operation profit indicates that the profit a company generates from its core business. deduction or interest and taxes is excluded from the calculation, this ratio show the business's potential profitability but it is not a guarantee because in that ratio is not show for example a high debt load or extraneous costs. In Sainsbury's from 2016 to 2020 the amount is increase

We can see in the tab that Sainsbury's have more sales that Morrison that is because Sainsbury's in the last few years acquire Argos and Asdan. It did Sainsbury's increase the products and services offer.

Tab. 2 Profitability ratios of Sainsbury's (2016- 2020) and Morrison (2020)

Sainsbury's	2016	2017	2018	2019	2020	Morrisons 2020
Operation Profit Margin	3,0	2,4	1,82	2,0	2,3	2,9
Groos profit Margin	0,061	0,062	0,066	0,078	0,079	0,035
Net profit Margin %	1,98	1,43	1,08	0,75	0,52	1,40
Return on equity %	7,39	5,48	4,16	2,58	1,95	8,98

In this table we can see the Profitability ratios, to measure the ability of a company to generate income, wealth for the owner of the company, with this ratio we can express the profit made in relation with other business resource.

The Operation Profit Margin reflect the percentage of profit from the total revenue. So how we can see in 2018 is very weak performance compare with other years.

Operation Profit Margin, the result is that £1 of sales revenue an average of £0,182 it is low because of the operation profit. (Atrill, 2011)

Morrisons has the best ratio they make profitability sales that Sainsbury, there is a different margin in the products that they make it. (Anon., n.d.)

The Gross Profit Margin represent the different all the product that the company is selling goods or services before the other expensive and the cost of the sales (Atrill, 2011) in that ratio Morrison have almost 50% the different with Sainsbury's that can be due to Morrison management efficiently generate revenues.

From 2016 to 2020 in Sainsbury's the Gross profit Margin ratio increase 18% because the cost of the product is less and the sales of the company is increasing, only the sales was less in 2020 but the ratio is still up because the cost of the production are less.

The net profit margin include total expensive of the company and it is the most closely scrutinized. (Maverick, 2021) it ratio represent how the company is successful producing profit over and above its cost. Net profit margin is a indicator of a company's financial health. Retails margin are moderately low because the price are competitive.

Sainsbury in that ratio is lower after 2017 it is consequence that Sainsbury is growing and normally if the company sell high volume of products will generally post lower profit margin that lower volume store.

Return on equity is essential measure of the profitably of a corporation in relation to stockholders. It measures exactly the profit made per each pound from shareholders. (CFI, 2021)

Return on equity show how much after- tax income a company earned and how efficiently the company is handing their money. If the company have a high return of equity is profitable, if the ratio is low indicates that a company reinvesting earning into unproductive assets (Kennon, 2020)

In this ratio Sainsbury's profitability decreases, this indicates that the company is not good for making investments as the ratio has decreased. On the contrary, Morrison has a good percentage of profitability in this ratio due to the fact that it has some profit margin, so for an investor it would be more profitable to invest in Morrison. It is important in retail companies such as Sainsbury and Morrison to calculate this ratio annually because if we do in big holiday season it could be influenced, for example, with the massive Christmas sales.

Tab. 3 Efficiency ratios of Sainbury's (2016-2020) and Morrisons (2020)

Sainsbury's	2016	2017	2018	2019	2020	Morrisons 2020
Asset Turnover	1,400	1,324	1,293	1,035	1,037	1,605
Fixed Asset turnover	2,407	2,620	2,874	2,987	3,253	2,453

The Efficiency ratio measure the liability internally and how the company ability is used to generate income, also can be used to analyses the performance of commercial. In this tab is analyses asset turnover that a ratio helps to average assets (Kenton, n.d.) The ratio needs to be compared with the same industry and we can identify witch firm have better management relative to others.

One of the most use ratio is Asset Turnover mean the company use its assets efficiently.

Fixed asset turnover indicates how the is effectively is a company generate sales using its fixed assets.

When the company has a high ratio that its competitor its exhibit that the company is manager its fixed assets to have sales better than its competitors and that the management is using its fixed assets more effectively.

The Tab.3 shows how the ratio Fixed Asset Turnover of Sainsbury has grown during the five consecutive years this is due to the absorption of the different companies and as the managers have known it generates profits, although Morrison has an approximate ratio of how Sainsbury It was in 2016, which means that Sainsbury has used its fixed assets more effectively that Morrison.

Tab. 4 Liquidity ratios of Sainsbury's (2016- 2020) and Morrisons (2020)

Sainsbury's	2016	2017	2018	2019	2020	Morrisons 2020
Current Ratio	0,660	0,736	0,762	0,637	0,629	0,388
Quick Ratio	0,516	0,529	0,586	0,475	0,485	0,45
Cash Ratio	0,170	0,126	0,167	0,094	0,082	0,099

Liquidity ratio prove that the company can repay its debts or other obligations in short terms, this ratio compared liquid assets with current liability. It a measure of depth and we can identify if the company have strong liquidity, if the ratio of less than one indicate that the company struggle to pay debts when they are due. (Marsh, 2012) the company need to ensure that collects cash from own debtor or sales to cover the creditors payment, if a company has a very high ratio compared to their competitor, it means that management may not be using their assets efficiently.

The all three ratios below the more conservative is the cash ratio because exclude all other current assets beside cash, also quick ratio is conservative because it does not include unsold inventory.

Current ratio is used to the company short term, normally the company ability to generate enough cash to pay off when the ratio is from 1,5 to 3 is considered healthy but supermarket chain has low ratios as they hold only fast-moving inventories and all of sales are made for cash immediately, also they start to offer to the client their products for sale without immediate payment. In that case the supermarket does not

have big ratio because they make cash in short time and the ratio check the company at short term.

Quick ratio is an indicator of the liquidity position and measures a company's ability. (Seth, 2021) The quick ratio is more conservative because it excludes inventory and other current assets, which are generally more difficult to turn into cash, quick ratio considers only assets that can be converted to cash in short period.

Liquidity crisis can get up even at healthy companies one of the circumstances that make it difficult is to meet short – term obligations as repaying loans and paying their employees or suppliers, this situation happened when in 2007- 2009 was the global credit crunch.

For the health of the firm the ratio need to be high, we can see how Sainsbury keep for the last years the same amount if we compare with Morrison we see that this ratio is low that means that Morrison has less liquidity, this situation could be affected because Sainsbury has more kind of products in the range.

This ratio can be overgeneralization and can have lack of tendering information.

Tab. 5 Gearing and investment ratios of Sainsbury's (2016- 2020) and Morrisons (2020)

Sainsbury's	2016	2017	2018	2019	2020	Morrisons 2020
Gearing ratio (%)	19,95	16,41	6,88	7,82	3,89	22,90
Debit equity ratio	1,67	1,87	1,97	1,78	2,59	1,41

The business is normally financed at least in part, for this reason, is important to analyze the risk by Financial gearing.

The borrow can increase the risk of the company and becoming insolvent, so that the company need to involves taking on a commitment to pay interest charges and make capital repayments.

Every business normally has a borrowing the reason is that the owner has not sufficiently found to run the company adequately. A company that never borrows might be missing out on an opportunity to grow business.

The gearing is use by the owners to increase the return, so this return to shareholders become more sensitive to changes in operating profit. The interest rate use for borrowing are low by comparison with the return that the typical business can earn, so that make the borrow interest quite cheap.

Gearing and investment ratios are financial ratios which compare some form of owner's equity to debt. Gearing is a measurement financial risk, it is the risk associated between equity and debt financing.

The higher gearing ratio confirm that the firm is more vulnerable to an economic downturn but it is not a indicator that the company is poor in financial condition.

Low gearing ratio means that the firm has a small proportion of debt versus equity.

The gearing ratio in Sainsbury's company is decrease from 19,95% to 3,89% it is because the company in that years is growing with other company even have its own financial services for its clients where the client can borrow money and make the payment, this service give the company more money because of the interest that the client pay for the borrow.

Morrison in 2020 have financial risk high that 2019 where the company had 22,11% it can be for the pandemic they have less sales and this affects the capital.

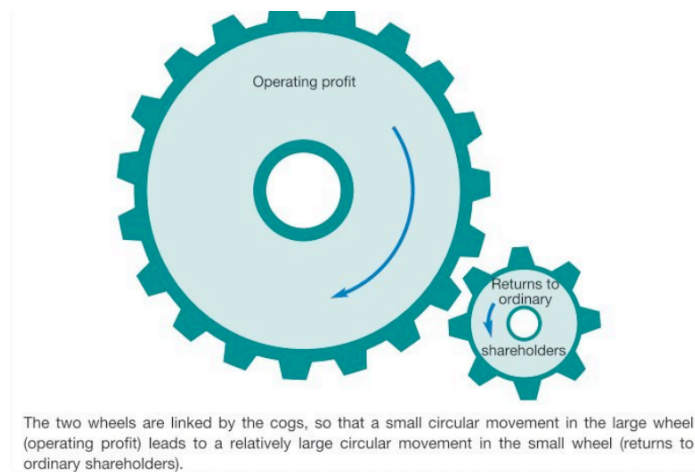
The gearing ratio is high in Morrison it is associated more risk is associate with the business operations. However, this ratios is not measure the Morrison health but it is a part of the financial studies. It reflects the ability of the shareholder equity to coverall outstanding debit of a business downturn.

Sainsbury debt equity ratio is growth by the year because the company is growing every year

The debt to equity ratio is a particular gearing ratio, is a important metric used in corporate finance. It is a measure operation through debt versus wholly-owned funds.

This ratio shows to the company, the quantity of debt that the firm use to growth. If the cost of the debt is high to the profit the share value may decline in that situation.(markets, 2020)

Fig 1: The effect of financial gearing



Limitations of ratios

Every company should be following a technique of ratios analysis, it is useful if the manager wants to see how is the health of the company, however this technique has limitation and before take some decision the managers cannot lost sight.

Ratios are calculated from the financial statement; however, the financial statement suffer from a number of limitations that can affect the quality of the ratios and does not reflect current condition of the company. (Pant, 2020)

The owner and manager is always concerned with the overall profitability, for this is optimum utilization of the assets of the firm.

Conclusion

In conclusion we can see how due to its investments Sainsbury is growing in sales since 2016 the acquisition of Asda and Argos helped the expansion of the company in the market.

Morrison is smaller in proportion to Sainsbury but manages its profits better in product sales, this is because they make their products and get a higher margin from them than Sainsbury. Although Sainsbury continues to grow in its profit margin, as we can see in the ratios, this is possible because it is trying to reduce its costs every year; or, this is reflected in the annual reports.

If we talk about the liquidity ratios of the two companies, we can see that they are good since they are supermarket and they have a fast way of making cash.

In this type of supermarket chain, the liquidity ratio is small, or because these companies have an easier time making cash since it has a fairly high inventory turnover. In this case, the two companies have good liquidity ratios.

The gearing ratio decreases in Sainsbury, which indicates that the company is using less debt for its growth, it is also supported throughout these 5 years, or by all the investments made. As an investor and after the analysis of both companies, it is more profitable to buy shares in Sainsbury because despite the pandemic and other difficulties, it is continuously growing.

Part C

The essential feature of investment decisions is time, the investment decision have to be of profound important because the firm use large amount of resources and difficult and expensive to bail out of an investment once it has been undertaken. (Atrill, 2011)

The firm needs to have a plan in every investment project to create a successful business. The company require that the cash invest in a project comes back as soon as possible (Weetman, 2013) because company should be have cash to be able the company function, a lack of liquidity can kill the company.

The money in the future is not worth as much as the money held today. It is because the money that the firm have today can be invested into and making a return.

(Cinnamon, 2006)

These three techniques are used to evaluating specific investment decisions.

Year Projected Cash Flows.

	A	B
0	-85	-90
1	10	25
2	20	30
3	40	35
4	55	40

Cost of capital is currently at 10,5 per cent.

1 - Payback Period (PBP)

Payback period is the amount of time it take to recover the cost of an investment, it is when an investment reaches a breakeven (Kagan, 2020) The decision rule using the payback period is to minimize the time taken for the return of investment, Payback is used measured in terms of years and months. The attractive project is witch give the early return of the investment. This is because the Payback Period does not involve discounting cash flows (Ardalan, 2012)

The limitation of this method is that pay no attention to the interest cost when the cash is borrowed. (Weetman, 2013).

This interest cost is the time value of money, it means that the money you have in real time have more value that the same amount will have in the future, any amount of money is worth more the sooner it is received. One can use the Discounted payback Period that can reject this disadvantage.

The Payback method not consider normal business scenarios because is so simple. Every investment in the company is not just one-time investment and the projects have irregular cash flow and it is difficult to manage.

Also, the profitability can be ignoring because with a shorter payback period is no guarantee that it will be profitable, the cash flow can be reducing or stop after payback period ends.

The advantages of that method is to very simple to use and the manager can have a quick decision of the projects sometime the firm have limited resources for this reason this method is very important.

This method give preference for liquidity because that information is extremely crucial for small business with limited resources as they need quick recovery for the investment.

When the company have rapid technological changes and the future is such uncertainty make it difficult to project the future annual cash flows for this reason PBP help in reducing the probably for the loss.

The relevant information in this method could be ignore for example the cash flow arising after PBP are ignored.

The payback period method in conclusion is work when evaluating small projects because for them liquidity is more important than profitability and the project need to have consistent cash flows.

Project A

In years 3 cumulate cash flow is $10 + 20 + 40 = 70$

The company needs other $85 - 70 = 15$

It will take the company more than 3 years, but less than 4 years to breakeven.

$15 / 55 = 0,27$ cpm

The payback period is therefore $3 + 0,27 = 3,27$ years.

Project B

In 3 years, cumulate cash flow is $25 + 30 + 35 = 90$

The payback period is 3 years

In the payback period method, we chose the project that have short payback period because we will have our project finished before but the reality is that we do not study the risk of the project. So, one of the most important risk that this method not include is the demand of the product and the amount of the project is not linked with the cost like promotion increase and benefit of the project (Atrill, 2010)

The Payback period for project B is 3 years, it has the fastest pay-back because the payback period of project A is 3,27 year for this reason the firm should take project B.

2 – Accounting Rate of Return (ARR)

This method compares profits after depreciation with original investment, this like other methods are powerful tools and they help your business to be success and proper your company growth strategy. This tool gives to the company high level overview and is helpful in annual percentage rate of return of a project.

We need to deduce two amounts of information of every project;

- The annual average operating profit
- The average investment

ARR use to accounting profit to measuring performance over the life of a project. This measure is appropriate for relatively small period such as a year or half year.

The Advantage for this method is very simple and easy to understand, also, give the picture of the profitability of a project.

ARR is interesting for the owner since they are much interested in return on investment.

The limitation of this method doesn't consider the time value of money. Also, it ignores the external factor and cash inflow which are important because can affecting the profitability of the project.

This method cannot be applied in a situation when the investment in a project to be made in parts and does not consider the life period of the various investment

ARR is not a good method when is considering competing investment. (Atrill, 2010)

Project A

Total cash inflows $10 + 20 + 40 + 55 = 125$

Cash spending 85

Total profit $125 - 85 = 40$

Annual average profit $40 / 4 = 10$

Initial investment is 85, average investment $(85+0)/2 = 42,5$

ROCE 1 : $10 / 42.5 = 0.235$ 2.35%

ROCE 2 : $10 / 85 = 0.117$

Project B

Total cash inflows $25 + 30 + 35 + 40 = 130$

Cash spending 90

Total profit $130 - 90 = 40$

Annual average profit $40 / 4 = 10$

Initial investment is 90, average investment $(90+0)/2 = 45$

ROCE 1 : $10 / 45 = 0.222.$ 2.22%

ROCE 2 : $10 / 90 = 0.111$

In that case we chose the Project A with 2.35% that means that the project is expected to earn 2.35 penny per every pound invested per year.

This method is the most commonly used of investment appraisal. (Marsh, 2012) NPV is a wholly logical approach. Money change value over time and NPV for this reason cash flows received short term is always better than the money that is invested and the return to the company over the years also, NPV the firm can have all the cash flows involved through the life of the project.

The Advantages of this methods estimates wealth creation from the potential investment in today given the applied discount rate. Also, uses cash flows rather than net earnings.

One of the disadvantages is the calculation form because is very sensitive to the initial investment cost. (Riley, 2017)

Net Present Value need to have positive result to assumed an investment, if the calculation of the NPV is negative the firm have a result in a net loss. Therefore, the firm only should invest in investment with positive NPV.

Year 3 40 = $40/(1+0.105)^3 = 29.646$

$$\text{Year 4 } 55 = 55/(1+0.105)^4 = 36.890$$

$$\text{NPV} = -85 + 9.049 + 16.379 + 29.646 + 36.890 = 6.964$$

Project B

$$\text{Year 0 } 90$$

$$\text{Year 1 } 25 = 25/(1+0.105)^1 = 22.624$$

$$\text{Year 2 } 30 = 30/(1+0.105)^2 = 24.569$$

$$\text{Year 3 } 35 = 35/(1+0.105)^3 = 25.940$$

$$\text{Year 4 } 40 = 40/(1+0.105)^4 = 26.829$$

$$\text{NPV} = -90 + 22.624 + 24.569 + 25.940 + 26.829 = 9.962$$

Net present value

$$\text{NPV} = -C_0 + \sum_{t=1}^n \frac{C_t}{(1+i)^t}$$

After made the calculation of both project with that method. The firm should take Project B it is the highest amount of return

4- Internal rate of return

The internal rate return use time value of money but the result is express by percentage the calculates using is the same concept as NPV. It is a discount rate that makes the net present value of all cash flows equal to zero in a discounted cash flow analysis.

The advantage of this method is time value of money when evaluating a project, also, is simple to understand for managers.

The finance manager should be choosing the project, the IRR is not completely base but when if IRR is far from the estimated required rate of return the manager can make the decision in both sides.

The hurdle rate is no requirement for finding out the IRR, so the risk of a wrong determination of the hurdle rate is diminished.
if a project has a low IRR, reinvestment is a low rate of return and vice versa.
So, the project is under evaluation the finance manager will try to find another project more profitable. Normally the finance manager study more than one project, the manager challenge is to see which are the best and more profitable for the company.
(Management, 2020)
A project is acceptable only when the internal rate return is more than the cost of capital (Weetman, 2013) The investment with high IRR will considered the best.
(Fernando, 2020)
The difference between IRR and Rate of Return is minor only for long term investment decision makes the big impact.

Conclusion

We need to study cost and profit of each investment opportunity and make allowance for the timing that the firm need to recover for the investment.
After study three methods, the best project is the option B, Payback period and Net Present Value chose it.
Net present value is the most effective and appropriate investment appraisal method by which to guide us in choosing the project in this case because it takes account about time value of money.
Also, the Payback Period method support the Net Present Value decision with the project B considering that the investment is quick in this project.

Result:

Payback period- project B
Account rate return – project A
Net Present Value – project B

Appendix A - Formulas

Tab. 1 Sales and market share of Sainsbury's (2016 -2020) and Morrisons (2020)

Sales Growth = $\frac{\text{sales (exc VAT) in the year Y1} - \text{Sales (exc VAT) in year Y0}}{\text{Sales (exc VAT) in the year Y0}}$

Tab. 2 Profitability ratios of Sainsbury's (2016- 2020) and Morrison (2020)

Operating Margin = $\frac{\text{operating income}}{\text{sales}}$

Net Profit Margin = $\frac{\text{net income}}{\text{sales}}$

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

Tab. 3 Efficiency ratios of Sainbury's (2016-2020) and Morrisons (2020)

Asset turnover = $\frac{\text{sales}}{\text{total asset}}$

Fixed asset turnover = $\frac{\text{sales}}{\text{total asset}}$

Tab. 4 Liquidity ratios of Sainsbury's (2016- 2020) and Morrisons (2020)

Current ratio = $\frac{\text{current assets}}{\text{current liabilities}}$

Quick ratio = $\frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$

Cash ratio = $\frac{\text{cash}}{\text{current liabilities}}$

Tab. 5 Gearing and investment ratios of Sainsbury's (2016- 2020) and Morrisons (2020)

Gearing ratio = $\frac{\text{total debit}}{\text{total shareholder}}$

Debit equity ratio = $\frac{\text{total debt}}{\text{total equity}}$

Debt to capital ratio = $\frac{\text{total debt}}{(\text{total equity} + \text{total debt})}$

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