

Finance Management & Planning

Financial Ratios – Continued

- Recap of Last week
 - Profitability Ratios - continued
 - Liquidity Ratios
 - Activity Ratios
- This Week
 - Assignment Pointers
 - Leverage Ratios

Finance Management & Planning

Assignment pointers

Assignment Pointers

Thoughts on Sections

Executive Summary

Introduction

Use and Limitation of Ratios

Ratio Analysis

Summary of Findings

Conclusion and Recommendation

Appendices

Thoughts on Sections

Executive Summary

Usually the last thing written as it is the overview and summary of your recommendations and findings.

This is to advise the reader of what the report is about and what your findings are

Introduction

Basic overview of the company - do not spend a lot of words or time on this !!!! This is not a mark rich area of the assignment .

Thoughts on Sections

Use and Limitations of Ratios

Why do we use statements and Ratios

What are the limitations of using them

Ratio Analysis

The outcomes of your calculations

What are they showing show

What changes have happened year on year

Can we link certain Ratio's together for a wider understanding

This is the important bit

Summary of Findings

Critical Analysis of what you are seeing and understanding from the ratios and the wider reading that is informing your decision.

Be conscience of descriptive writing i.e. just explaining

How do we link the findings together ?

Conclusion and Recommendation

What is your decision and how do you back it up with your findings with the information within the report.

This is a Financial review not a personal review.

Appendices

Reference list in Harvard Format

Ratio calculations

The Statements

Where are the marks ?

Engagement with Literature	10 Marks
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- References
- Evidence of wider reading

Knowledge and Understanding	20 Marks
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- Explanation of the use of Ratios and interpretation of the outcomes
- Demonstrate your knowledge

Cognitive and Intellectual Skills	35 Marks
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- Critical Analysis of the information
- Use of the information to explain your decision and conclusion

Practical Skills	20 Marks
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- Calculation of the Ratios

Transferable Skills	15 Marks
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- The above sections will show how these skills will be used

Things to think about

References – ensure you have referenced your wider reading, the reference list is not bibliography .

Descriptive writing versus critical analysis

Validate your conclusion with your findings

Things to think about

Things to consider

How many years are you reviewing ? 2 year is the minimum

Are you going to compare to a competitor?

Trending analysis

Why do we use these statement

Limitations of the use of these

Why do we use Ratios

Advantages and Disadvantages of their use

What are the Chairman / CEO and CFO saying in the report – Key messages

What other information is available

What would you recommend to improve the financial health of the organisation ?

References for wider reading

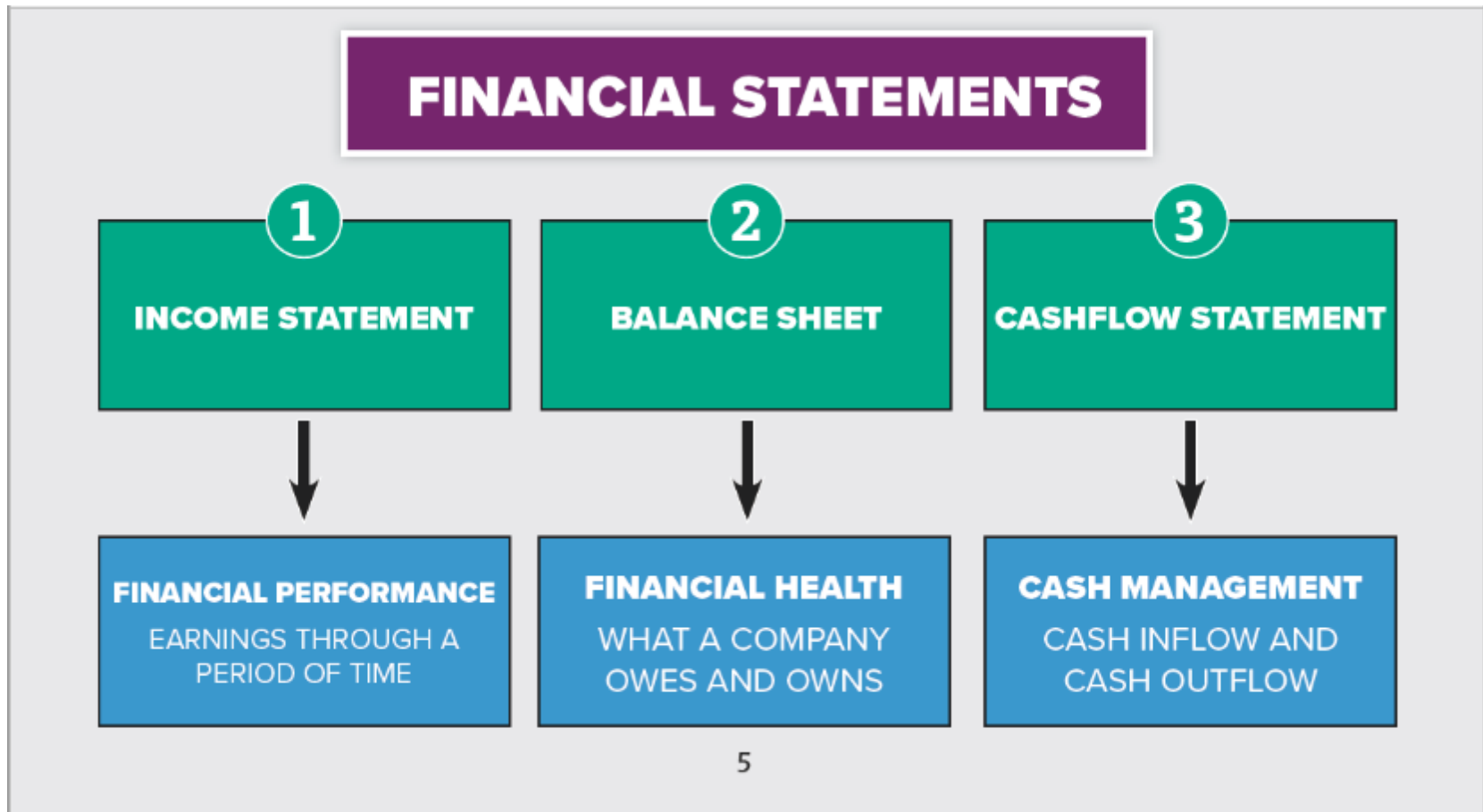
Financial Ratios

Statistical Information within your business



The Financial Statements

Financial statements measure the financial health of the organisation:



- Grouped into categories relating to a particular aspect of financial performance or position.
 - Profitability
 - Efficiency
 - Liquidity
 - Financial Gearing
 - Investment (of more interest to external stakeholders)
- Atrill & McLaney chapter: 6
 - Analysing and interpreting financial statements

Profitability Ratios Formula

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}} \times 100$$

$$\text{Operating Profit Margin} = \frac{\text{Operating Profit}}{\text{Sales}} \times 100$$

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Assets}} \times 100$$

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

Liquidity Ratios

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

$$\text{Quick Ratios (or Acid Test Ratio)} = \frac{\text{Current Assets Less Stock}}{\text{Current Liabilities}}$$

$$\text{Cash Ratio} = \frac{\text{Cash and Cash Equivalents}}{\text{Current Liabilities}}$$

Consider :-

Current Ratio	– Low Test Level
Quick Ratio	– Medium Test Level
Cash Ratio	– High Test Level

Activity Ratios

$$\text{Days Sales Outstanding (DSO)} = \frac{\text{Trade and other receivables}}{\text{Average Revenue per Day}}$$

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory / Stock}}$$

$$\text{Days Payable Outstanding (DPO)} = \frac{\text{Trade and other payables}}{\text{Average COGS per day}}$$

$$\text{Where Average Revenue per Day} = \frac{\text{Annual Revenue}}{365}$$

$$\text{Where Average COGS per Day} = \frac{\text{Annual COGS}}{365}$$

Financial Ratios

Calculate the Activity

	Note	52 weeks to 27 March 2021 £m	52 weeks to 28 March 2020 £m
Revenue	3	2,343.9	2,633.1
Cost of sales		(681.4)	(927.6)
Gross profit		1,662.5	1,705.5
Net operating expenses	4	(1,141.4)	(1,516.8)
Operating profit		521.1	188.7



	Note	As at 27 March 2021 £m	As at 28 March 2020 £m		
ASSETS					
Non-current assets					
Intangible assets	12	237.0	247.0	Days Sales Outstanding (DSO)	= $\frac{\text{Trade and other receivables}}{\text{Average Revenue per Day}}$
Property, plant and equipment	13	280.4	294.9		
Right-of-use assets	14	818.1	834.0	Inventory Turnover	= $\frac{\text{Cost of Goods Sold}}{\text{Average Inventory / Stock}}$
Investment properties		2.4	2.5		
Deferred tax assets	15	137.1	171.5	Days Payable Outstanding (DPO)	= $\frac{\text{Trade and other payables}}{\text{Average COGS per day}}$
Trade and other receivables	16	45.0	53.7		
		1,520.0	1,603.6		
Current assets					
Inventories	17	402.1	450.5		
Trade and other receivables	16	276.9	252.1		
Derivative financial assets	18	2.2	6.7		
Income tax receivables		39.7	50.4		
Cash and cash equivalents	19	1,261.3	928.9		
		1,982.2	1,688.6		
Total assets		3,502.2	3,292.2		
LIABILITIES					
Non-current liabilities					
Trade and other payables	20	(99.4)	(102.3)		
Lease liabilities	21	(809.6)	(910.0)		
Borrowings	24	(297.1)	(300.0)		
Deferred tax liabilities	15	(0.8)	(0.1)		
Retirement benefit obligations		(1.0)	(1.9)		
Provisions for other liabilities and charges	22	(31.8)	(28.6)		
		(1,239.7)	(1,342.9)		
Current liabilities					
Trade and other payables	20	(392.9)	(447.5)		
Bank overdrafts	23	(45.4)	(41.6)		
Lease liabilities	21	(210.0)	(215.5)		
Derivative financial liabilities	18	(2.6)	(4.8)		
Income tax liabilities		(27.9)	(7.9)		
Provisions for other liabilities and charges	22	(24.0)	(13.2)		
		(702.8)	(730.5)		
Total liabilities		(1,942.5)	(2,073.4)		
Net assets		1,559.7	1,218.8		

Financial Ratios

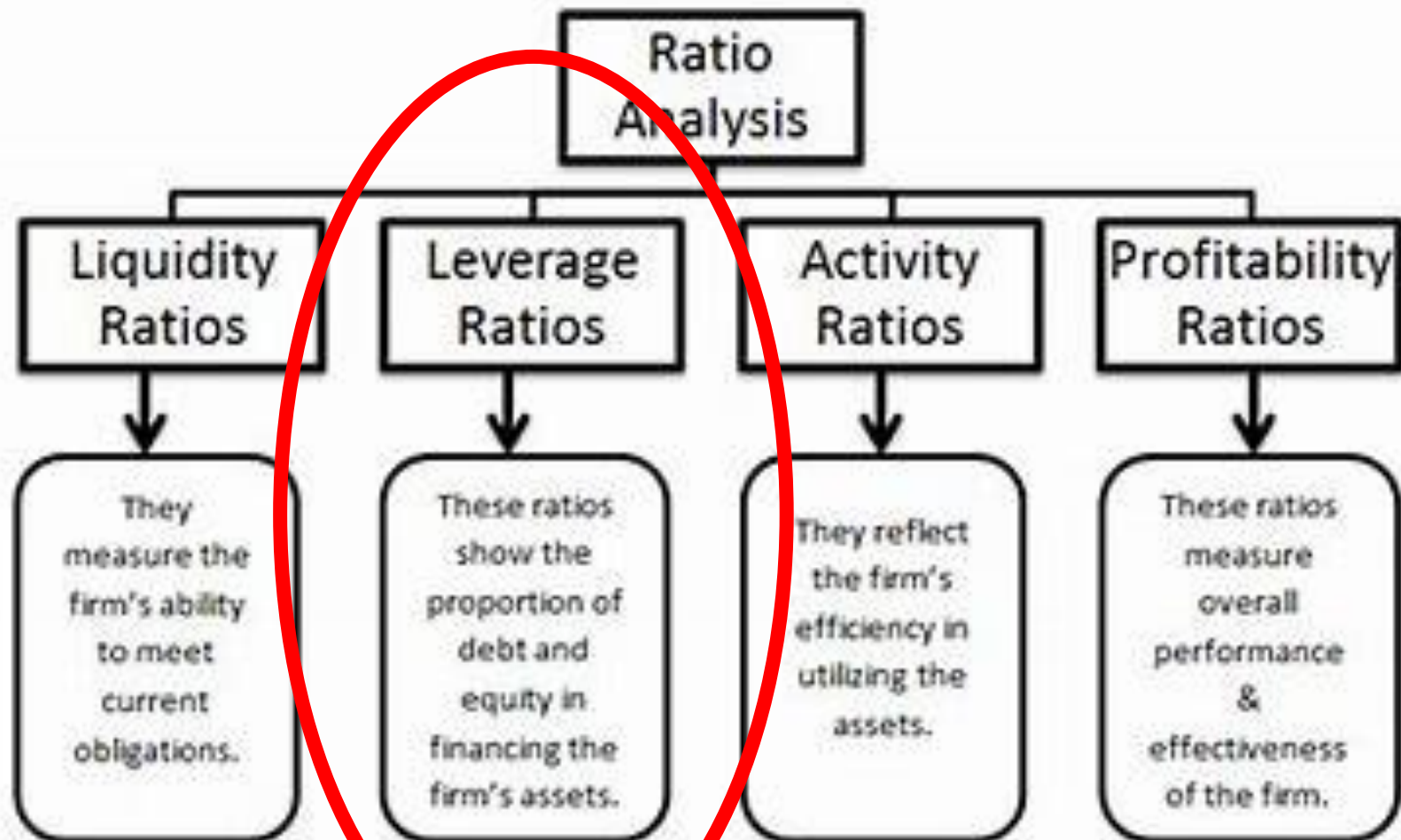
Burberry Financial Ratios

	2021	2020
Revenue	2,343.90	2,633.10
Cost of Sales	681.40	927.60
Gross Profit	1,662.50	1,705.50
Operating Profit	521.10	188.70
Profit for the Year	375.90	121.60
Total Assets	3,502.20	3,292.20
Total Shareholder Equity	1,559.70	1,218.80
Current Assets	1,982.20	1,688.60
Current Liabilities	702.80	730.50
Inventories / Stock	402.10	450.50
Trade and other Receivables	321.90	305.80
Trade and other Payables	492.30	549.80
Cash And Cash Equivalents	1,263.50	935.60

Gross Profit %	71%	65%
Operating Profit %	22%	7%
Net Profit Margin %	16%	5%
Return on Assets	11%	4%
Return on Equity	24%	10%
Current Ratio	2.82	2.31
Liquid Ratio	2.25	1.69
Cash Ratio (With)	1.80	1.28
Cash Ratio (Without)	1.79	1.27
DSO	50.13	42.39
DPO	263.71	216.34
Stock Turns per year	1.60	2.06

Go into Groups and review the information so far and consider the following questions ?

- Business Health improving or weakening ?
- Business Performance improvement or weakening ?
- What is helping you make that decision ?
- What don't we understand ? So what information would help us ?



Definition:

Gearing (otherwise known as "leverage") measures the proportion of assets invested in a business that are financed by borrowing.

- The higher the gearing, the higher the dependence on borrowings and long term financing.
- The lower the gearing ratio, the higher the dependence on equity financing.
- Traditionally, the higher the level of gearing, the higher the level of financial risk due to the increased volatility of profits.

Financial managers face a difficult dilemma. Most businesses require long term debt in order to finance growth, as equity financing is rarely sufficient.

On the other hand, the introduction of debt and gearing increases financial risk. But the company dependant on equity financing alone may be unable to sustain growth.

The question is how much debt can a company take on before the benefits of growth are overtaken by the disadvantages of financial risk?

Some companies borrow heavily, for example to make an acquisition, or else to invest in developing a fast-growing part of their businesses. If this pays off, it may increase a company's turnover and profits more rapidly than if it had not borrowed any money. This in turn should bolster its market value.

That's the theory.....but it carries risk!!

Pros

It provides the potential to increase the value of any of your own money that you invested in your business.

It increases the liquidity of the business, which can be used to buy new equipment/assets that can increase operational efficiency.

It allows the business to raise cash without giving equity to anybody or diluting ownership of the company.

Cons

If the value of the investment made with financing fails to rise above the cost of financing, it can lead to business losses.

If the value of an asset purchased with the loan falls, it could become worth less than the loan (meaning you'd be stuck with debt even if you sold the asset).

If payments are not made, any assets used as collateral may be seized by the bank.

Leverage Ratios

$$\text{Gearing Ratio} = \frac{\text{Non Current Liabilities}}{\text{Equity Plus Non Current Liabilities}} \times 100\%$$

$$\text{Debt / Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Stockholders Equity}} \times 100\%$$

$$\text{Long Term Debt / Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Stockholders Equity}} \times 100\%$$

$$\text{Interest Coverage} = \frac{\text{Operating Profit}}{\text{Interest Charge}} \times 100\%$$

Financial Ratios

$$\text{Gearing Ratio} = \frac{\text{Non Current Liabilities}}{\text{Equity Plus Non Current Liabilities}} \times 100\%$$

Balance Sheet	
Year	2017
Fixed Assets	100,000

Stock	20,000
Cash and Cash Equivalents	20,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000

Total Assets	175,000
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Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000

Net Assets	65,000
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Ordinary Shares	60,000
Retained Earnings	5,000
Shareholders Equity	65,000

$$\text{Gearing Ratio} = \frac{50,000}{115,000}$$

$$\text{Gearing Ratio} = 43.5\%$$

So what does this mean ?

Good and Bad Gearing Ratios

An optimal gearing ratio is primarily determined by the individual company relative to other companies within the same industry. However, here are a few basic guidelines for good and bad gearing ratios:

- **A gearing ratio higher than 50%** is typically considered highly levered or geared. As a result, the company would be at greater financial risk, because during times of lower profits and higher interest rates, the company would be more susceptible to loan default and bankruptcy.
- **A gearing ratio lower than 25%** is typically considered low-risk by both investors and [lenders](#).
- **A gearing ratio between 25% and 50%** is typically considered optimal or normal for well-established companies.

Financial Ratios

Debt / Equity Ratio

$$= \frac{\text{Total Liabilities}}{\text{Stockholders Equity}} \times 100\%$$

Balance Sheet	
Year	2017
Fixed Assets	100,000
Stock	20,000
Cash and Cash Equivalents	20,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000
Total Assets	175,000
Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000
Net Assets	65,000
Ordinary Shares	60,000
Retained Earnings	5,000
Shareholders Equity	65,000

$$\text{Debt / Equity Ratio} = \frac{110,000}{65,000}$$

$$\text{D/E Ratio} = 169.2\% \text{ or } 1.69 \text{ times}$$

So what does this mean ?

Financial Ratios

$$\text{Long Term Debt / Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Stockholders Equity}} \times 100\%$$

Balance Sheet	
Year	2017
Fixed Assets	100,000

Stock	20,000
Cash and Cash Equivalents	20,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000

Total Assets	175,000
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Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000

Net Assets	65,000
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Ordinary Shares	60,000
Retained Earnings	5,000
Shareholders Equity	65,000

$$\text{LT Debt / Equity Ratio} = \frac{50,000}{65,000}$$

$$\text{LT D/E Ratio} = 76.9\% \text{ or } 0.76 \text{ Times}$$

So what does this mean ?

Financial Ratios

$$\text{Interest Coverage} = \frac{\text{Operating Profit}}{\text{Interest Charge}} \times 100\%$$

Year	2017
Revenue	100,000
COGS	80000
Gross Profit	20000
Gross Margin %	20.0%
SG&A	10000
Operating Profit	10000
Operating Profit %	10.0%
Interest	3000
Tax	2000
Net Income	5,000
Net Profit %	5.0%

$$\text{Interest Coverage} = \frac{10,000}{3,000}$$

$$\text{Interest Coverage} = 333.3\%$$

So what does this mean ?

Financial Ratios



Year	2017	2018	2019	2020
Revenue	100,000	150,000	165,000	180,000
COGS	80000	110000	120000	128000
Gross Profit	20000	40000	45000	52000
Gross Margin %	20.0%	26.7%	27.3%	28.9%
SG&A	10000	15000	25000	25000
Operating Profit	10000	25000	20000	27000
Operating Profit %	10.0%	16.7%	12.1%	15.0%
Interest	3000	2800	2500	2500
Tax	2000	7200	5500	8300
Net Income	5,000	15,000	12,000	16,200
Net Profit %	5.0%	10.0%	7.3%	9.0%

Balance Sheet				
Year	2017	2018	2019	2020
Fixed Assets	100,000	90,000	80,000	70,000

Stock	20,000	30,000	50,000	60,000
Cash and Cash Equivalents	20,000	15,000	10,000	8,200
Debtors	30,000	25,000	20,000	30,000
Other Current Assets	5,000	10,000	10,000	10,000
Current Assets	75,000	80,000	90,000	108,200

Total Assets	175,000	170,000	170,000	178,200
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Creditors	50,000	35,000	33,000	33,000
Accruals	10,000	10,000	5,000	2,000
Current Liabilities	60,000	45,000	38,000	35,000
Long Term Liabilities	50,000	45,000	40,000	35,000
Total Liabilities	110,000	90,000	78,000	70,000

Net Assets	65,000	80,000	92,000	108,200
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Ordinary Shares	60,000	60,000	60,000	60,000
Retained Earnings	5,000	20,000	32,000	48,200
Shareholders Equity	65,000	80,000	92,000	108,200

Calculate the below ratio for 2018,2019 & 2020.

$$\text{Gearing Ratio} = \frac{\text{Non Current Liabilities}}{\text{Equity Plus Non Current Liabilities}} \times 100\%$$

$$\text{Debt / Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Stockholders Equity}} \times 100\%$$

$$\text{LT Debt / Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Stockholders Equity}} \times 100\%$$

$$\text{Interest Coverage} = \frac{\text{Operating Profit}}{\text{Interest Charge}} \times 100\%$$

Financial Ratios

Ratios Calculated

Year	2017	2018	2019	2020
Revenue	100,000	150,000	165,000	180,000
Gross Margin %	20.0%	26.7%	27.3%	28.9%
Operating Profit %	10.0%	16.7%	12.1%	15.0%
Net Profit %	5.0%	10.0%	7.3%	9.0%
Return on Assets	2.9%	8.8%	7.1%	9.1%
Return on Shareholder Equity	7.7%	18.8%	13.0%	15.0%
Current Ratio	1.25	1.78	2.37	3.09
Quick Ratio	0.92	1.11	1.05	1.38
Cash Ratio	0.33	0.33	0.26	0.23
Days Sales Outstanding	109.50	60.83	44.24	60.83
Inventory Turns	4.00	4.40	3.00	2.33
Days Payable Outstanding	228.13	116.14	100.38	94.10
Gearing Ratio	43.5%	36.0%	30.3%	24.4%
Debt / Equity Ratio	169.2%	112.5%	84.8%	64.7%
LT Debt / Equity Ratio	76.9%	56.3%	43.5%	32.3%
Interest Coverage	333%	893%	800%	1080%

Exercise

ZZZZ Ltd

Year	2019	2020
Revenue	750,000	1,000,000
COGS	600,000	840,000
Gross Profit	150,000	160,000
SG&A	50,000	80,000
Operating Profit	100,000	80,000
Interest	10,000	20,000
Tax	19,800	13,200
Net Income	70,200	46,800

Balance Sheet

Year	2019	2020
Fixed Assets	150,000	250,000
Stock	90,000	200,000
Cash and Cash Equivalents	0	10,000
Debtors	125,000	250,000
Other Current Assets	10,000	2,000
Current Assets	225,000	462,000
Total Assets	375,000	712,000

Cash and Cash Equivalents	14,800	0
Creditors	120,000	300,000
Accruals	10,000	15,000
Current Liabilities	144,800	315,000
Long Term Liabilities	100,000	170,000
Total Liabilities	244,800	485,000
Net Assets	130,200	227,000
Ordinary Shares	60,000	110,000
Retained Earnings	70,200	117,000
Shareholders Equity	130,200	227,000

Calculate the following Ratios

Gross Margin %
Operating Profit %
Net Profit %
Return on Assets
Return on Shareholder Equity
Current Ratio
Quick Ratio
Days Sales Outstanding
Inventory Turns
Days Payable Outstanding
Gearing Ratio
Interest Coverage

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DSO	50.13	42.39
DPO	263.71	216.34
Stock Turns per year	1.60	2.06

Update Burberry for the following Leverage Ratios

Gearing ratio
Interest Coverage Ratio

Use Finance Expenses for Interest for this example from the Income Statement.

Financial Ratios

Burberry Financial Ratios

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Liquid Ratio	2.25	1.69
Cash Ratio (With)	1.80	1.28
Cash Ratio (Without)	1.79	1.27
DSO	50.13	42.39
DPO	263.71	216.34
Stock Turns per year	1.60	2.06
Gearing Ratio	44.3%	52.4%
Interest Coverage	1686%	934%

Next Week

Investor Ratio's
Annual Report Review