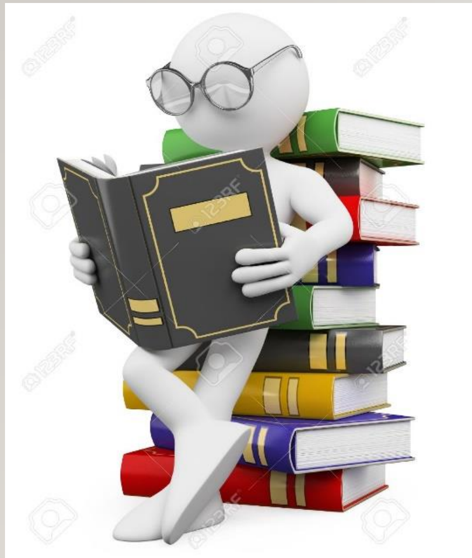
Lecture 4 – Tuesday 14 May 2024

- 17:30hrs to 19:30hrs – online
- Interpretation of financial statements
  - Analysis and appraisal of the performance and position of an entity using ratios
  - Alternative performance measures
  - Forensic Accounting
- Question time

RATIO ANALYSIS AND THE INTERPRETATION OF FINANCIAL STATEMENTS



THE IMPORTANCE OF RATIO ANALYSIS AND INTERPRETATION

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- Accounting ratios are an important tool used by accountants and others for interpreting accounting statements.

- Ratio analysis is used to evaluate various aspects of a company's operating and financial performance such as its efficiency, liquidity, profitability and gearing.

LET'S KEEP IN MIND SOME IMPORTANT POINTS

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- Consider a range of indicators to understand the organisation's overall financial performance or position
- The importance of different ratios vary from industry to industry
- Trends over time tell us more than the statements for one financial year only
- Performance should be analysed in the context of industry benchmarks and organisations of a similar size, maturity or geographical spread

RED FLAGS ON FINANCIAL STATEMENTS

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- Financial statements can sometimes contain **red flags**
  - signals of potential problems or hidden irregularities.
- Knowing what these red flags look like is key to making informed decisions about investing or doing business with a company.

EXAMPLES OF RED FLAGS

- Sudden, Unexpected Revenue Growth
- Unexplained Changes in Accounting Policies
- Lack of Auditor Opinion or Qualified Opinion
- Rapid Increase in Accounts Receivable
- Rising Debt Levels
- Declining Retained Earnings
- Heavy Reliance on Short-Term Financing to Fund Operations
- Pending Litigation or Major Contingencies
- Lack of internal controls

FINANCIAL ANALYSIS SUMMARY

https://www.farsons.com/en/financial-analysis-summary

https://rizzofarrugia.com/wp-content/uploads/2021-IHI-Financial-Analysis-Summary-June.pdf

PROFITABILITY RATIOS

- **Return on capital employed** = $\dfrac{\textbf{Operating profit}}{\textbf{Capital employed}}$ **x 100**

ROCE should be compared with:

- previous years' figures – provided there have been no changes in accounting policies, or suitable adjustments have been made to facilitate
- the company's target ROCE
- other companies in same industry – care is required in interpretation, because of the possibility of different accounting policies, ages of assets, etc.

The ratio also shows how efficiently a business is using its resources.

PROFITABILITY RATIOS

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- **Operating Profit Margin = $\frac{\text{Operating profit}}{\text{Sales revenue}} \times 100$**

If the gross profit margin has remained static but the operating margin has changed consider the following possibilities: -

- changes in employment patterns (recruitment, redundancy etc)
- changes to depreciation due to large acquisitions or disposals
- significant write-offs of irrecoverable debt
- changes in rental agreements
- significant investments in advertising
- rapidly changing costs

PROFITABILITY RATIOS

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- **Net asset turnover =** $\dfrac{\textbf{Sales revenue}}{\textbf{Capital employed}}$ **x 100**

It measures management's efficiency in generating revenue from the net assets at its disposal. The higher the ratio the more efficient the business is.

Both ROCE and asset turnover can be significantly affected by a change in the business structure.

E.g. a manufacturing company buys a significant amount of machinery in a year with the aim to increasing production and therefore sales. The short term effect is that ROCE and asset turnover will initially fall but this does not mean the business is actually performing any worse. It may even be an indication of future gains.

PROFITABILITY RATIOS

Sales – Cost of Sales

- **Gross Profit Margin = <u>Gross Profit</u> x 100**
  Sales Revenue

If gross profit has not increased in line with sales revenue, you need to establish why not. Is the discrepancy due to:

1. increased 'purchase' costs: if so, are the costs under the company's control (i.e. does the company manufacture the goods sold)?
2. inventory write-offs (likely where the company operates in a volatile marketplace, such as fashion retail)? or
3. other costs being allocated to cost of sales – for example, research and development (R&D) expenditure?

PROFITABILITY RATIOS

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$$\text{Return on Equity} = \frac{\text{Profit after tax and after preference dividend}}{\text{Shareholders' equity}}$$

- ROE ratios will vary significantly from one industry group or sector to another
- Compare the ROE with the industry average
- E.g. PC Ltd has maintained a steady ROE of 20% over the past few years compared to the IT industry sector average ROE which was 15%. An investor could conclude that PC's management is above average at using the company's assets to create profits

LIQUIDITY RATIOS

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- **Current ratio = Current assets : current liabilities**
- The current ratio measures the adequacy of current assets to meet liabilities as they fall due.
- A high or increasing figure may appear safe but should be regarded with suspicion as it may be due to:
  - high levels of inventory and receivables (this could mean inventory is unsaleable or that credit control is weak)
  - high cash levels which could be put to better use (e.g. by investing in non-current assets)

LIQUIDITY RATIOS

Current ratio: Also consider: -

- availability of further finance, e.g. is the overdraft at the limit? – very often this information is highly relevant but is not disclosed in the accounts
- seasonal nature of the business – one way of doing this is to compare the interest expense with the overdraft and other loans in the balance sheet; if the interest rate appears abnormally high, this is probably because the company has had higher levels of borrowings during the year
- long-term liabilities, when they fall due and how will they be financed
- nature of the inventory – where inventories are slow moving, the quick ratio probably provides a better indicator of short-term liquidity

LIQUIDITY RATIOS

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Quick ratio = Current assets – inventory : current liabilities

Does the company have sufficient liquid resources (receivables and cash) to settle its liabilities?

Similar to the current ratio it is relevant to consider the nature of the business, e.g. supermarkets will have low quick and current ratios: -

- few trade receivables
- a high level of trade payables
- usually very tight cash control, to fund investment in developing new sites and improving sites

EFFICIENCY RATIOS

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$$\textbf{Inventory turnover period} = \frac{\textbf{Inventory}}{\textbf{Cost of sales}} \times 365$$

- This measures how efficiently management uses its inventory to produce and sell goods.
- An increasing number of days implies that management are holding onto inventory for longer. This could indicate lack of demand or poor inventory control.

The increase in inventory holding could also be due to:

- buying bulk to take advantage of trade discounts
- reducing the risk of "stockouts," or
- an expected increase in orders

- Either way, the consequence is that the costs of storing, handling and insuring inventory levels will also increase. There is also an increased risk of inventory damage and obsolescence

EFFICIENCY RATIOS

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$$\textbf{Receivables collection period} = \frac{\textbf{Trade receivables}}{\textbf{Credit sales}} \times 365$$

- On average, how long does it take to collect cash from credit customers once they have purchased goods?
- Increasing accounts receivables collection period is usually a bad sign suggesting lack of proper credit control which may lead to irrecoverable debts.

It may, however, be due to:

- a deliberate policy to attract more trade, or
- a major new customer being allowed different terms

- Falling receivables days is usually a good sign, though it could indicate that the company is suffering a cash shortage.

EFFICIENCY RATIOS

$$\text{Payables payment period} = \frac{\text{Trade payables}}{\text{Credit purchases}} \times 365$$

- A long credit period may be good as it represents a source of free finance **BUT**
- A long credit period may indicate that the company is unable to pay more quickly because of liquidity problems.

If the credit period is long:

- the company may develop a poor reputation as a slow payer and may not be able to find new suppliers
- existing suppliers may decide to discontinue supplies
- the company may be losing out on worthwhile cash discounts

THE IMPORTANCE OF WORKING CAPITAL

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- **Working capital = current assets – current liabilities**
  - The net current assets available for day-to-day operating activities
- Working capital management is central to the effective management of a business because:
  - ➢ current assets comprise the majority of the total assets of some companies
  - ➢ shareholder wealth is more closely related to cash generation than accounting profits
  - ➢ failure to control working capital, and hence to manage liquidity, is a major cause of corporate collapse.

TIME TO THINK!

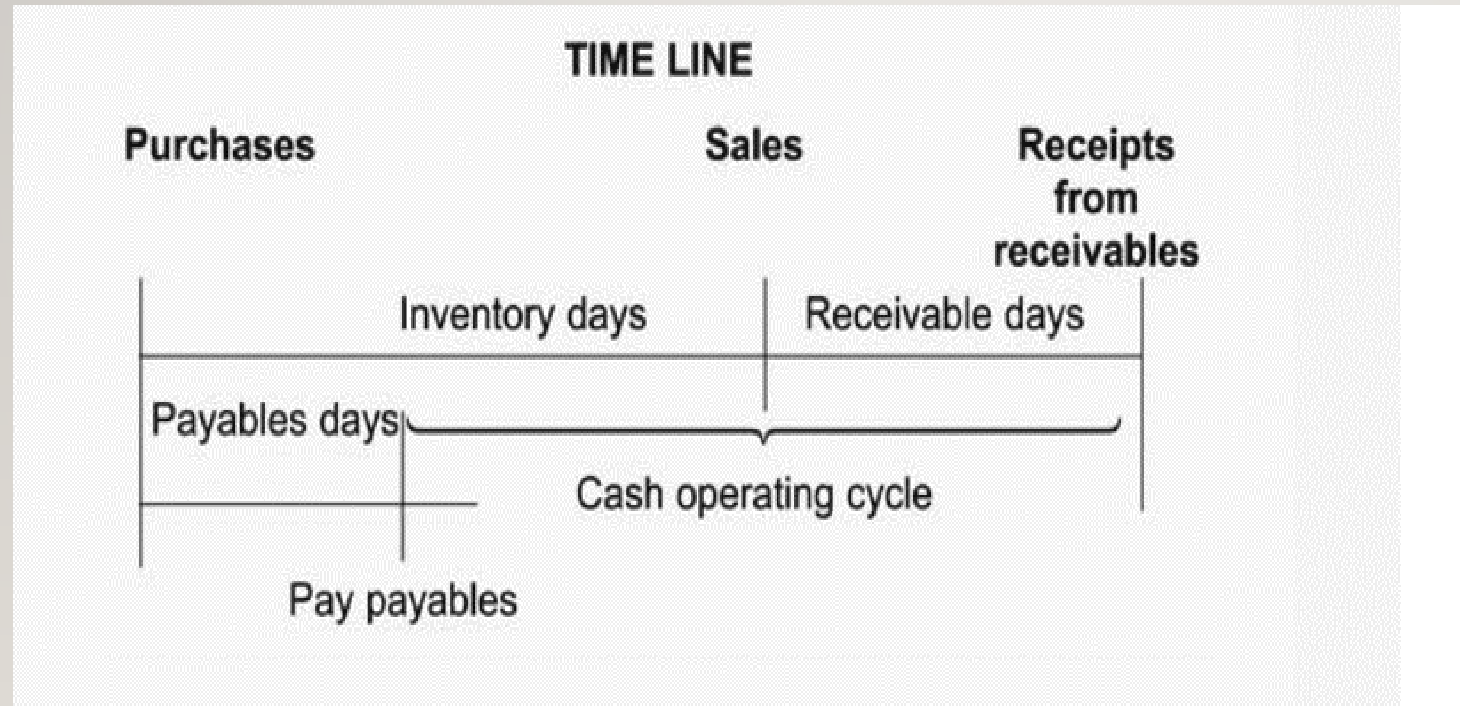
A company extends the credit period it offers to customers in order to increase its sales.

However, the company's cash position will fall due to the longer wait for customers to pay. This can potentially lead to the need for a bank overdraft or an increase in the bank overdraft.

Interest on the overdraft may even exceed the profit arising from the additional sales, particularly if there is also an increase in the incidence of bad debts.

WORKING CAPITAL CYCLE / CASH OPERATING CYCLE

- The time between the cash paid for raw materials, wages and other expenses and the cash received from customers



The shorter the cash operating cycle, the lower the total working capital required and the lower the investment in working capital

WHAT AFFECTS THE LENGTH OF THE WORKING CAPITAL CYCLE?

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- **Nature of the business** – a supermarket chain may have low inventory days, low receivables days. In this case the operating cycle could be *negative*. On the other hand a construction company may have a very long operating cycle due to the high levels of work-in-progress.
- **Industry norms** – if key competitors offer long periods of credit to their customers it may be difficult to reduce receivables days without losing business.
- **Power of suppliers** – an attempt to delay payments could lead to the supplier demanding 'cash on delivery' in future.

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OVERTRADING

- Overtrading (undercapitalisation) occurs when a company has insufficient working capital to support its level of business activity.
  - The company may be faced with liquidity problems as an overtrading company may have insufficient capital to meet its liabilities as they fall due.

Overtrading: -

✓ Is often associated with a rapid increase in turnover. Investment in working capital does not match the increase in sales. This often happens to recent start-ups and rapidly expanding businesses.

✓ Results in more reliance on short-term sources of finance, including overdraft, payables and leasing.

✓ Can also be indicated by decreases in the current ratio and the quick ratio.

TIME TO THINK

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	20X5		20X4	
	$000	$000	$000	$000
Credit sales income		17,100		12,000
Cost of sales		8,550		7,500
Current assets				
Inventory	2,500		2,100	
Trade receivables	2,000		1,000	
		4,500		3,100
Current liabilities				
Trade payables	1,900		1,250	
Overdraft	2,400		850	
		4,300		2,100
Net working capital		200		1,000
Long-term debt		3,000		3,000

The company is overtrading: -

- A rapid increase in sales revenue which is not matched by a corresponding increase in working capital investment.
- Overdraft has increased by 182%
- Trade payables have increased by 52%
- The current ratio of has declined from 1·5 times to 1·05 times

ACCA FM September 2016 Qs 1

FINANCING RATIOS

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Assessing the financial position of a business:

- Main focus is its stability and exposure to risk:
  - typically assessed by considering the way the business is structured and financed: **gearing**.

$$\textbf{Gearing} = \frac{\textbf{Long-term Debt}}{\textbf{Debt + Equity}} \times 100$$

- Long term debt includes non-current loan and redeemable preference share liabilities.
- Equity includes share capital plus reserves (revaluation reserve, retained earnings).

HIGH AND LOW GEARING

Risk

- External debt finance is considered to be risky: - mandatory, fixed repayment obligations. Failure to repay these amounts could lead to insolvency proceedings against the company.
- Equity finance is less risky: failure to pay a dividend would not lead to insolvency proceedings.

Servicing of finance

- The costs of servicing equity finance are generally considered to be higher than servicing external debt
- Equity holders expect a greater return than they could achieve offering a fixed loan to a company. They get no guaranteed returns and they take on considerable risk.
- Lenders receive fixed, mandatory repayments. They also take out security on the assets of a company.

FINANCING RATIOS

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$$\text{Interest cover} = \frac{\text{Operating profit}}{\text{Finance cost}}$$

Interest cover indicates the ability of a company to pay interest out of profits generated:

- low interest cover indicates to shareholders that their dividends are at risk (because most profits are eaten up by interest payments) and
- the company may have difficulty financing its debts if its profits fall
- interest cover of less than two is usually considered unsatisfactory

INVESTORS RATIOS

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Earnings per share = <u>Profit after tax and after preference dividend</u>
Number of shares

- Earnings per share ratio is a fundamental measure of a company's performance
- EPS indicates how much money a company makes for each share and is a widely used metric for estimating corporate value
- A higher EPS indicates greater value because investors will pay more for a company's shares if they think the company has higher profits relative to its share price
- Rather than comparing the EPS of one company with the EPS of another company, it is important **to calculate the growth rate of the EPS** and then compare it with the growth of similar companies.

INVESTORS RATIOS

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$$\text{P/E ratio} = \frac{\text{Market Price per share}}{\text{Earnings per share}}$$

- It shows how many years' worth of earnings are paid for in the share price
  - what the market is willing to pay today for a share based on its past or future earnings.
- A high P/E could mean that a stock's price is high relative to earnings and possibly overvalued. Conversely, a low P/E might indicate that the current stock price is low relative to earnings
- Companies that grow faster than average typically have higher P/Es, such as technology companies
  - A higher P/E ratio shows that investors are willing to pay a higher share price today because of growth expectations in the future.

GROUP ACCOUNTING: A SUBSIDIARY HAS BEEN ACQUIRED IN THE YEAR

- Income, expenses, assets and liabilities are all likely to rise following the consolidation when compared to previous period
- Sub is unlikely to have contributed a full year's results in the P/L
    - affect ratios such as return on capital employed or working capital ratios at the year end, as the full assets and liabilities are included in the balance sheet, but only the post-acquisition income and expenses are included in the P/L.
- The new subsidiary is likely to have different margins to the rest of the group which will impact on the interpretation. It is likely to have different customers, suppliers and inventory, so the working capital cycle is likely to be different.
- Acquisition-related costs may have been included in the current period which will not be repeated in future periods.

GROUP ACCOUNTING: A SUBSIDIARY HAS BEEN DISPOSED OFF DURING THE YEAR

- Any prior year P/L will involve a full year's results from the subsidiary, while the current year will not.
- Any prior year's balance sheet will contain the assets and liabilities relating to the subsidiary, whereas the current year will not.
- The P/L figures may contain the profit or loss on disposal of the subsidiary, and the subsidiary's results up to the date of the disposal.
- The P/L may also contain some one-off costs relating to the disposal of the subsidiary, such as professional costs or redundancies.
- The group may lose benefits from the subsidiary, such as supplies to the group, or skills held by the senior management of the subsidiary.

LIMITATIONS OF RATIO ANALYSIS

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- ✓ Comparative information is essential for any meaningful ratio analysis. A lack of information about either industry averages or previous years' performance will severely limit analysis.
- ✓ Accounting ratios are based on financial statements which are subject to the limitations of historical cost accounting.
- ✓ Ratio analysis helps to build a picture of a company. The richness of the picture depends on the quality of the financial information on which the ratios are based.
- ✓ Past company performance is not necessarily the best indicator of future performance. Indeed, by the time accounts are published and available for analysis they may already be out of date.

ALTERNATIVE PERFORMANCE MEASURES

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INTRODUCTION

- Financial statements are essential to any entity's financial reporting
- Users are demanding more information
- Key performance measures beyond the ones reported in the financial statements add value to users, in particular, to enhance the users' ability to predict future earnings.
- APMs (also known as non-GAAP measures) are an important aspect of entities' communication of financial information
  - can assist users in making investment decisions

IAS 1 PRESENTATION OF FINANCIAL STATEMENTS

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- IAS 1 states that additional disclosure is required in order to comply with certain specific requirements in IFRSs because sometimes these standards are not enough to give a full understanding on the entity's financial position and performance.

"An entity shall clearly identify the financial statements and distinguish them from other information in the same published document." (IAS 1:49)

IFRS 18: DISCLOSURES ABOUT MANAGEMENT-DEFINED PERFORMANCE MEASURES

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- Companies will be required to disclose information about some non-GAAP or Alternative Performance Measures (APM)s such as:
- adjusted operating profit, adjusted profit or loss, adjusted EBITDA, Free cash flow, Return on Equity etc
- in a single note to the financial statements.

WHAT IS AN APM?

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- A financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework (European Securities and Markets Authority - ESMA)
- APMs are usually based on the financial statements, most of the time by adding or subtracting amounts from the figures presented in financial statements
- Subtotals required by IFRSs, such as gross profit and profit before tax, are not APMs.
- APMs are not generally considered to include non-financial measures such as customer numbers, employee numbers or number of stores.

WHAT IS AN APM?

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- Any 'adjusted' earnings measure, however described
- Any other measure based on 'adjusted' earnings, such as adjusted margin or adjusted earnings per share
- Operating profit/earnings before interest and tax (EBIT)
- Earnings before interest, tax, depreciation and amortisation (EBITDA)
- Free cash flow
- Balance sheet or operating gearing
- Net debt
- Same-store sales/constant currency revenue growth
- Value of order book

Alternative performance measures
IFRS in Focus – A practical guide
Deloitte
July 2016

ADDITIONAL PERFORMANCE MEASURES: EBITDA AND EBIT

- EBITDA – earnings before interest, tax, depreciation and amortisation
- EBIT – earnings before interest and tax

2 additional performance measures which assist users in making investment decisions

- EBITDA reflects the company's earnings purely from operations and is commonly used to analyse and compare profitability across companies as it eliminates effects of financing and accounting decisions which vary between companies in its computation
- EBITDA focuses on the financial outcome of operating decisions by eliminating the impact of non-operating management decisions

THE ESMA GUIDELINES

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1. Issuers should define the APM and the basis of calculation adopted.
2. Definitions of all APMs used should be disclosed.
3. APMs should be reconciled to the financial statements.
4. APMs outside the financial statements should be displayed with less prominence. They should be explained to allow users to understand their relevance and reliability.
5. Comparatives for APMs needed, and its definition and calculation should be consistent.
6. If an APM ceases to be used, the issuer should explain its removal and the reasons for the newly defined APM.

https://www.esma.europa.eu/sites/default/files/library/2015/10/2015-esma-1415en.pdf

EXAMPLE: APR

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Financial metrics

Alternative performance measures

Comet uses key indicators defined in the International Financial Reporting Standards (IFRS) in its entire financial reporting, as well as selected alternative performance measures (APMs). These APMs provide useful information on the Group's financial situation and are used for financial management and controllership purposes. As these measures are not defined under IFRS, their definition and calculation may differ from those used by other companies. It should be noted that comparability across companies may therefore be limited.

The key alternative performance measures used in the reporting of fiscal year 2021 are defined as follows:

Key performance measures	Comet definitions
Gross profit, gross profit margin	Gross profit is calculated as net sales less cost of sales. Gross profit margin represents gross profit as a percentage of net sales.
Earnings before interest, taxes, depreciation and amortization (EBITDA)	Operating income as per consolidated statement of income before depreciation on property, plant and equipment & right-of-use assets, amortization of intangible assets and impairment losses.
EBITDA margin	EBITDA as a percentage of net sales.
Net debt	Interest-bearing debt (such as current and non-current debt and lease liabilities) less cash and cash equivalents.
Debt ratio	Net debt divided by EBITDA.
Equity ratio	Total equity attributable to the shareholders of Comet Holding AG divided by total assets.
Free cash flow (FCF)	Sum of net cash flows from operating and investing activities.
Return on capital employed (ROCE)	ROCE is the ratio of operating income less income tax (NOPAT) to total capital employed. Capital employed is defined as net working capital (aggregated amount of net trade receivables, inventories, trade payables, sales commissions and contract liabilities) plus non-current assets employed (aggregated amount of property, plant and equipment, right-of-use assets and intangible assets).

https://reports.comet-group.com/21/en/alternative-performance-measures-apm/

COMMUNICATION OF APMs

- APMs are often found in sections of the annual report outside of the financial statements such as the Chairman's Statement and the Directors' Report. Furthermore, APMs are also often quoted in preliminary results and press announcements.
- These alternative profit figures can appear in various communications, including company media releases and analyst briefings.

https://www.accaglobal.com/in/en/student/exam-support-resources/professional-exams-study-resources/strategic-business-reporting/technical-articles/add-perf-measures.html

FORENSIC ACCOUNTING

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Forensic Accounting

- the whole process of carrying out a forensic investigation, including preparing an expert's report or witness statement, and potentially acting as an expert witness in legal proceedings

Forensic Investigation

- part of a forensic accounting engagement
- the process of gathering evidence so that the expert's report or witness statement can be prepared

Forensic Auditing

- the application of traditional auditing procedures and techniques in order to gather evidence as part of the forensic investigation

APPLICATION OF FORENSIC ACCOUNTING

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- Major applications of forensic accounting: -
  - fraud investigations,
  - negligence cases e.g. when another accountant has breached their duty of care to a client
  - insurance claims e.g. in the case of business interruptions arising from fire or flood
  - expert valuation e.g. when two parties cannot agree on the amount owed by one party to another

A forensic accountant is … an accountant! His/her role is to provide an accountant’s expert opinion or analysis of the facts. They are not the law-enforcer, prosecutor or judge.

https://www.accaglobal.com/ca/en/student/exam-support-resources/professional-exams-study-resources/p7/technical-articles/forensic-accounting0.html

THE ENRON SCANDAL AND ACCOUNTING FRAUD

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- A large energy, commodities, and services company based in Houston, Texas
- Used special-purpose vehicles/entities to hide its debt from investors and creditors
- The price of its shares went from $90.75 at its peak to $0.26 at bankruptcy
- Enron's collapse and financial havoc led to new regulations and legislation to promote the accuracy of financial reporting for publicly held companies
  - The introduction of Sarbanes-Oxley Act which heightened the consequences for destroying, altering or fabricating financial statements

https://www.investopedia.com/updates/enron-scandal-summary/

ANY QUESTIONS?

THANKS

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