paradigm shift.

Business, Technology and Finance 2025 – New Content Added for 2025 Workbook

Please note that some chapters do not have any new content for 2025 so the omission of certain chapters in our review below is not an error.

This document is not intended to cover all points in the relevant sections: instead, we just want to give you an overview of the main points.

If you have also purchased access to our Certificate Level subscription package, don't forget to make use of the online quick-fire questions on these 2025 syllabus updates which are provided as part of our Business, Technology and Finance course: the quick-fire questions will get you working with the following content in an active way, which is always the best way to learn!

Chapter 1   Introduction to business

4.3   Environmental, social and governance (ESG)

- SG is frequently used in corporate and investment communities

- There are two relationships between ESG factors and business: how ESG factors impact the business and enterprise value, and how the business impacts ESG factors

- Environmental:
  - Environmental relates to the quality and functioning of natural environments and systems

  - Organisations' activities can be affected by natural environmental issues such as severe weather events, water shortages, and pollinator decline, which can impact supply chains, operations, and financial performance

  - Poor environmental practices can lead to fines, restricted access to resources, and reputational damage

  - Organisations can directly impact the environment, contributing to biodiversity loss, greenhouse gas emissions, climate change, resource depletion, pollution, ozone depletion, land-use changes, ocean acidification, and nitrogen/phosphorus cycle changes

- Social:
  - Social relates to the rights, wellbeing and interests of people and communities

  - Organisations are impacted by labour standards, laws, and attitudes surrounding child, slave, and bonded labour, workplace safety, health and medicine access, and freedom of expression and association

  - Social issues are influenced by how organisations manage human capital, diversity, relations with local communities, their role in conflict zones, their stance on human rights, and by selling controversial products (e.g., weapons or products harmful to health)

- Governance:
  - Governance relates to how companies and their investee entities are managed

  - Organisations are impacted by governance rules regarding board structure, size, diversity, skills, independence, executive pay, shareholder rights, stakeholder interaction, and information disclosure

  - Key governance topics include business ethics, bribery, corruption, internal controls, risk management, and the relationship between management, boards, shareholders, and stakeholders

  - Governance also encompasses business strategy, including how strategy affects environmental and social issues and how it is implemented

  - Organisations can influence governance, either actively through lobbying or inadvertently through behaviour that leads to increased regulation

6.5.1 Impact of business activity on the environment

- Business activity can harm the environment in several ways

- Resource depletion: Caused by manufacturing products or using non-sustainable materials (e.g., single-use plastics that cannot be reused or recycled). The impact can be reduced by switching to reusable materials

- Pollution: Agriculture, manufacturing and transport can lead to air, water, and soil pollution. Chemicals like fertilisers and pesticides can remain in the soil or run-off into waterways, causing pollution in rivers and seas. An example is the Gulf of Mexico dead zone, where nutrient run-off has led to low oxygen levels, harming marine life. This can be addressed by limiting nutrient run-off and removing nutrients from wastewater

- Climate change: Greenhouse gas emissions from production contribute to climate change. This can be reduced through more efficient technologies and the use of filters

- Waste generation: Businesses contribute to waste by sending materials to landfill

- Loss of biodiversity: Business activities like habitat destruction, exploitation, pollution, and climate change can lead to a loss of biodiversity. Causes include land-use changes, deforestation, urbanisation, and introduction of invasive species. Solutions include restricting land-use changes, protecting habitats and species, reducing pollution, and controlling greenhouse gas emissions

6.5.2 Impact of environment on business

- Environmental changes can affect businesses through physical risks and transition risks

- Physical risks: Arising from environmental degradation such as storms, wildfires, extreme temperatures, and flooding. Such events can disrupt operations, damage assets, and potentially threaten employee safety. Pollution can also reduce the availability of safe raw materials, such as through contamination by microplastics or heavy metals

- Transition risks: Social and economic shifts towards environmental sustainability can impact businesses. These include changes in policy, regulations, technology, and markets. Depending on the scale and speed of these shifts, transition risks can result in varying levels of financial and reputational risk. Compliance with stricter regulations may lead to higher costs, and non-compliance can result in fines. Reputational damage can occur if businesses fail to engage in sustainable practices, leading to decreased sales, recruitment difficulties, or disruptions caused by activist groups

- Opportunities: As the environment evolves, businesses can innovate to capture new markets. The production of low-carbon physical products can appeal to consumers and lead to cost savings through increased resource efficiency in manufacturing processes

Chapter 3   Organisational and business structures

2.5   Impact of remote working

- Remote working has caused significant changes in how organisations are managed and structured

- The feasibility of remote working was demonstrated during the COVID-19 pandemic, though questions remain about its long-term effects on organisations

- Technology, especially cloud computing (explored further in Chapter 14), has eliminated many logistical barriers to remote working, allowing employees to access systems and resources from remote locations just as they would in an office

- Remote working allows employers more flexibility in hiring, as geographic location is no longer a limiting factor (within the same country due to tax and legal issues). Employers can choose the best candidates from a wider area

- Organisations can reduce costs by saving on office space rent

- Employees may experience reduced stress from not commuting, and during the post-pandemic period of high inflation, saving on travel costs may have increased employee satisfaction

- Managers may find it harder to identify struggling employees since they miss physical cues such as visible stress or employees regularly working late

- Projects leading to career promotions may be awarded to those spending more time in the office, potentially causing poorer outcomes for the organisation if the best people are not given challenging tasks

- Demotivation among remote workers may arise, along with the potential for increased gender inequality, as women were significantly more likely to apply for remote work according to a LinkedIn survey in 2022

Chapter 6 The finance function and financial information

1.1 The tasks of the finance function

- Cloud accounting allows collaboration among team members working from different locations

- Real-time data can be made available to users as it is recorded, enabling more efficient use of resources

- Teams with excess capacity can provide support to teams in different geographical areas

- Cloud accounting solves data storage capacity issues associated with traditional network systems

- Real-time updates provided by cloud accounting systems can be accessed remotely via laptops and smart devices

- Cloud accounting systems can integrate with other systems to gather useful information on raw material prices, competitor prices, transport costs, and other variables to support better decision-making

- Cloud accounting supports tax reporting, including submissions to HM Revenue and Customs (HMRC) in the UK through systems integrated with HMRC's Make Tax Digital system

- Day-to-day working capital management, such as inventory, receivables, and payables, can be optimised through cloud accounting systems by providing real-time financial data

Chapter 7   Business finance

3.1   Money market financial instruments

- The main benchmark interest rate for sterling is the Sterling Overnight Index Average (SONIA)

- SONIA is based on the actual average interest rate that banks pay to borrow sterling overnight from other lenders

- Financial businesses and institutions use SONIA to set the interest rates they offer to their customers

Chapter 8   The accountancy profession

2.2   **The public interest**

- ICAEW members and firms are required to report acts of misconduct

- Members or firms do not need to determine whether it is in the public interest to make a report

- ICAEW is responsible for making the public interest assessment

Chapter 9   Governance and ethics

5.1   Natural capital, sustainability and ESG

- The environmental, social, and governance (ESG) approach focuses on sustainability-related issues from the perspective of the business itself

- ESG considers the impact of sustainability risks on business and enterprise values, rather than on society as a whole

- ESG is a frequently used terminology within corporate and investment communities

7.2   Principles-based approach to governance structures

- Institutional investors, stock markets, and intermediaries should be provided with sound incentives throughout the investment chain

- The framework should encourage stock markets to function in ways that promote good corporate governance

- Companies and investors should be incentivised to make decisions and manage risks to enhance the sustainability and resilience of the company

8.2   What are business ethics?

- The social aspect of ESG covers issues related to the rights, well-being, and interests of people and communities

- Key issues include:
    - Human rights
    - Labour standards in the supply chain
    - Child, slave, and bonded labour
    - Workplace health and safety
    - Freedom of association and freedom of expression
    - Human capital management and employee relations
    - Diversity
    - Relations with local communities
    - Activities in conflict zones
    - Health and access to medicine
    - HIV/AIDS
    - Consumer protection
    - Controversial weapons

Chapter 10   Corporate governance

2.4.1   Provisions

- The board has the authority to determine the suitable level of maturity required for non-financial controls

- Non-financial controls may not be, or need to be, as mature as financial controls

Chapter 13   Data analysis

6.3   Data bias and representative samples

- Data bias occurs when the data is not representative of the population being analysed

- Bias can be inherent in the data or introduced during the analysis process

6.4   Type I and type II errors

- A null hypothesis is the default assumption that there is no effect or no difference between groups or variables

- The null hypothesis remains true until there is sufficient evidence to suggest otherwise

- For example, when introducing a new IT system, the null hypothesis could be that the system will not impact productivity

- An alternative hypothesis would be that the system introduction will affect productivity

7.5.1   Data storytelling

- Data storytelling conveys the results of data analysis in a manner that enables users to understand and absorb the message

- It promotes higher quality discussions around insights from the analysis and supports better decision making

- A story provides context, meaning to the data, and can inspire emotions, contributing to meaningful action

- The story should begin with a problem or question and then explore the data to explain what is happening and why it is important, ending with a solution

- The narrative must be tailored to the audience, considering what will engage them and what actions can be taken from it

- The narrative should remain clear and concise, presenting a complete picture of the data even if some data might not fit the narrative

- Data must be presented coherently, both in terms of order and style

- The data visualisations should align with the narrative, possibly using consistent colour palettes to highlight risks, such as red indicating danger

9.5.6   Open data

- Open data refers to data that anyone can access or share, and it must be clearly licensed as open and published in an easy-to-use format

- Public data, such as governmental information on the economy, environment, and demographics, can often be freely accessed and used

- Open data is a subset of public data that is machine readable and clearly marked as open

- Most open data is generated by public bodies or academic research

- There is a current movement supporting the idea that all data should be open, as it benefits society

- During the COVID-19 pandemic, the World Health Organisation (WHO) called for open data access to help inform responses to the crisis

- In the UK, the government's COVID-19 dashboard was used not only by public agencies but also by individuals assessing their personal risk levels

- Open data principles are also evident in open banking, where users can share their financial data with third parties to access services that simplify financial management, such as loan or credit card applications

Chapter 14   Developments in technology

1.1   Cloud computing

- Cloud computing refers to on-demand internet access to computing resources such as applications, servers, data storage, development tools, and networking capabilities hosted at a remote data centre managed by a cloud services provider (CSP)

- The three approaches to cloud computing are Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS)

- IaaS provides virtual computing resources over the internet, allowing businesses to rent servers, storage, and networking without owning physical infrastructure, while the user manages operating systems, storage, and applications

- PaaS offers a development and deployment environment over the internet for building, testing, and deploying applications without managing underlying infrastructure, supporting software development kits, databases, and development tools

- SaaS allows users to access software applications over the internet, hosted and maintained by external providers, with a subscription-based model commonly used for email, customer relationship management (CRM), and collaboration tools

- Cloud accounting refers to the use of cloud computing software for accounting tasks, often as a SaaS model

- Advantages of cloud computing include cost-effectiveness, flexibility (scaling capacity as required), accessibility (data available globally via internet), availability (suitable for both large and small organisations), and automatic software updates from providers

- Risks of cloud computing include data security (control given up to cloud service provider), potential accessibility issues due to outages or internet access problems, and cost (usage-based pricing, difficulty migrating, and potential for increasing costs as growth occurs)

1.4   Distributed ledger technology

- Distributed ledger technology (DLT) encompasses decentralised database systems where transactions are recorded and validated across multiple sites without relying on a central authority, enhancing transparency and reducing the need for audits

- While blockchain is a specific form of DLT, other forms may organise data differently and provide varying degrees of access and privacy

1.5   Blockchain

- Blockchain is a type of distributed ledger technology that records data in a decentralised, immutable manner across multiple nodes, creating a tamper-proof system that enhances security by eliminating single points of failure

- Blockchain is often public, enabling anyone to verify data, but private configurations also exist for specific organisational needs

- Blockchain technology supports cryptocurrencies and other applications such as supply chain oversight, digital identity, and secure voting

1.6 Fintech

- Algorithmic stock trading involves using complex mathematical algorithms to make decisions or assist in decision making related to stock market trades

1.7 Cryptocurrencies

- Cryptocurrency is a digital asset designed to function as a medium of exchange and store of value, operating through a decentralised computer network independent of a central authority like a central bank

- Cryptocurrencies use blockchain technology to ensure decentralisation, transparency, and immutability, setting them apart from traditional monetary systems and financial assets

- Under IFRS, cryptocurrencies are not recognised as cash or financial instruments but may be accounted for as intangible assets or inventory depending on the context

1.8 Artificial intelligence, machine learning and automation

- **Cognitive technologies**: These technologies enable machines to analyse data, extract patterns, derive new information, and identify strategies to act on the results of their analysis

- **Artificial Intelligence (AI)**: AI refers to creating advanced computer systems to perform tasks that require human intelligence, including learning from data, reasoning and decision-making, understanding sensory inputs, processing language, and recognising patterns. AI systems can adapt, operate autonomously, and make informed decisions

- **Machine learning**: Machine learning allows computer systems to learn and make decisions based on large datasets, without being explicitly programmed. It typically uses supervised learning (trained on labelled data) or unsupervised learning (trained on unlabelled data)

- **Automation**: Automation involves using technology to monitor and control the production and delivery of products/services

- **Robotic Process Automation (RPA)**: RPA is a software solution that replicates business processes by following 'if this, then that' instructions. It works alongside existing applications rather than replacing them

1.8.2 Artificial intelligence

- AI can perform human-like tasks such as learning from data, recognising patterns, and making decisions

- Types of AI include Machine Learning, Natural Language Processing, Computer Vision, Speech, Robotics, and Generative AI

1.8.3 Machine learning

- **Supervised learning**: Refers to algorithms trained on labelled data to predict future outcomes. Used by streaming services for recommendations and fraud detection systems

- **Unsupervised learning**: Refers to algorithms trained on unlabelled data to identify patterns independently, useful for sales forecasts or marketing insights

- **Reinforcement learning**: A learning model where the agent learns to maximise reward through feedback from the environment, used in pricing strategies and inventory management

- **Deep learning**: A data processing method that mimics the human brain's neural networks, used in fields such as computer vision and natural language processing

1.8.4 Natural Language Processing (NLP)

- NLP allows machines to understand, interpret, and generate human language. It combines linguistics and computer science to enable translation, sentiment analysis, and voice-activated services

- Applications include virtual assistants like Amazon Alexa, which facilitate home automation, information access, and purchases via voice commands

1.8.5 Computer vision

- Computer vision enables extracting information from images and videos. It includes Optical Mark Recognition, Optical Character Recognition (OCR), and automatic number plate recognition systems

- Used in security applications like facial and iris recognition to grant access to devices and spaces

1.8.6 Speech

- Speech AI involves two main functions: speech recognition (converting human speech into text) and Text-to-Speech (turning written text into spoken words)

1.8.7 Generative AI

- Generative AI is designed to create new content such as images, text, audio, or video based on patterns learned from training data

- Generative AI applications include chatbots, image/sound/video generation, and are used across industries like customer service, marketing, healthcare, and entertainment

- Risks include the creation of deepfakes, the phenomenon of 'hallucinations,' and ethical concerns regarding data privacy and potential reinforcement of outdated societal values

1.8.8 Robotic process automation (RPA)

- RPA involves software robots automating routine tasks, greatly improving speed, efficiency, consistency, and reducing staff costs

- RPA can be combined with AI for more advanced automation, such as customer service chatbots that simulate natural interactions using NLP

- Chatbot: A software application designed to simulate conversation with human users, powered by natural language processing

1.9 Digital transformation

- Transformative technology: This refers to integrating digital technologies into business processes, products, and strategies, enabling radical change in how industries operate and providing competitive advantages through innovation

- Technologies such as AI, Machine Learning, RPA, and blockchain are changing the accounting industry by streamlining audit processes, improving data analysis, and enhancing audit quality

- While these technologies offer significant benefits, they also present challenges, including data privacy risks and the need for accountants to upskill in using these tools

- Cloud computing has lowered barriers to entry for setting up accountancy practices, contributing to digital transformation within the profession

2   Technology developments and business and the accountancy profession

- Enhanced data analysis: AI's ability to rapidly analyse large volumes of data enables accountants to investigate business areas more efficiently, providing deeper insights and having a greater impact on the business. For auditors, AI supports risk assessment and audit planning

- Error and fraud detection: AI can analyse vast amounts of transactions to identify anomalies or suspicious patterns. This allows accountants and auditors to have greater confidence in the integrity of financial data and reduces the time spent detecting potential errors

- Forecasting: AI can process large amounts of historical data, both internal and external, to make highly accurate predictions about the future. This enables businesses to rapidly make informed decisions, for example, changing suppliers or raw materials based on forecasts. AI can also perform scenario and sensitivity analysis to provide insights into risks associated with the forecast

- Risks of AI: While AI brings many benefits such as increased productivity by automating time-consuming tasks, it also introduces risks, including the possibility of sensitive financial data being accessed by unauthorised individuals

- AI hallucinations: AI can generate insights or analysis that do not reflect the underlying data, a phenomenon known as AI hallucinations. This is a poorly understood issue, and its prevalence in AI outputs remains unclear

6.1   Cyberattack and threats to computer systems

- Cyberattack: A cyberattack is an attempt by individuals or groups to breach the cybersecurity of a specific organisation or individual

- It involves unauthorised access, manipulation, or damage to computers, networks, digital systems, or data

- Cyberattacks aim to steal, alter, or destroy information or disrupt the operation of systems and services

- Common forms of cyberattacks include phishing, malware, ransomware, denial of service (DoS), and advanced persistent threats (APTs)

6.5   Importance of cybersecurity

- Cybersecurity: Cybersecurity encompasses tools, policies, security concepts, safeguards, guidelines, risk management approaches, actions, training, best practices, assurance, and technologies for protecting an organisation's and user's assets from cyberattacks

6.6   Technical controls for cybersecurity

- AI can be a vulnerability in cybersecurity through attacks that manipulate generative AI to produce offensive results, reveal confidential data, or provide inaccurate or biased responses

- AI can also enhance cybersecurity by analysing large datasets to identify anomalous patterns and detect potential cyber threats, similar to how it is used to identify fraud

6.7 Cyber-resilience

- Ransomware: Data is stolen from the victim's system, files are encrypted, and a ransom is demanded. If unpaid, the data may be published on a website. The number of ransomware attacks has risen significantly in recent years

- Supply chain attacks: These attacks exploit vulnerabilities in the digital supply chain. Organisations may lack control or full visibility over the cyber security measures of suppliers, creating a significant risk to access control of primary systems

- Social engineering: Attackers use social media platforms to gather information about individuals to stage attacks. This includes tactics like creating fake recruiter profiles to engage job seekers, sometimes building trust over months before launching an attack

- Other threats: Various additional threats exist, including attacks on websites, social media profiles, and email systems. These may be driven by criminal intent, malicious actors, or hacktivism for political purposes. Non-cyber threats such as fires, hardware failure, and burglary also pose risks to system access

Glossary

Artificial intelligence (AI): AI involves advanced computer systems performing tasks requiring human intelligence, such as learning from data, reasoning, problem-solving, sensory understanding, and language processing. AI adapts to new environments and can make decisions autonomously. AI often involves machine learning but not exclusively

Blockchain: A decentralised form of distributed ledger technology recording data immutably across multiple nodes, making it tamper-proof and highly secure. Blockchain supports cryptocurrencies and is employed in areas like supply chain management, digital identity, and secure voting

Chatbot: A software application that simulates conversation with human users by using natural language processing to interpret and respond to user queries

Cloud computing: The remote provision of computing resources such as software, servers, data storage, tools, and networking capabilities through an internet connection, primarily managed by a cloud services provider (CSP)

Cryptocurrency: A decentralised digital asset functioning as a medium of exchange and store of value, which operates independently of central banks. Cryptocurrencies mainly use blockchain technology for decentralisation and immutability, and are treated under IFRS as intangible assets or inventory rather than cash or financial instruments

Cyberattack: An unauthorised attempt to breach the cybersecurity of an organisation or individual, aiming to steal, alter, destroy information, or disrupt systems. Common types of attacks include phishing, malware, ransomware, denial of service (DoS), and advanced persistent threats (APTs)

Cybersecurity: A collection of tools, policies, safeguards, risk management approaches, best practices, and technologies that aim to protect organisational and user assets from cyberattacks

Data bias: Occurs when data is not representative of the broader population being analysed, which could stem from the data collection process or be introduced by the analysts

Distributed ledger technology (DLT): A decentralised database system where transactions are recorded and validated across multiple nodes. DLT enhances transparency and reduces audit requirements. Blockchain is a prominent type of DLT, though other formats exist with varying data organisation and privacy features

ESG (Environmental, Social, and Governance): An approach that focuses on how sustainability-related risks impact a business's value. ESG is primarily used in corporate and investment contexts

Generative AI: A type of AI designed to create new content, such as images, text, audio, or video, based on patterns learnt from existing data. Unlike predictive AI, generative models produce entirely new data samples

Machine learning: Computer systems' ability to learn from large datasets and make decisions or predictions without explicit programming. Supervised learning involves labelled data, teaching the system through known outcomes, while unsupervised learning involves unlabelled data, allowing systems to identify patterns on their own

Robotic Process Automation (RPA): Software that automates repetitive business processes by following conditional instructions (e.g., "if this, then that"). RPA works with existing applications and is usually deployed to replace manual tasks

Transformative technology: The integration of digital technologies into business processes, products, or strategies to fundamentally change ways of working and increase competitiveness through innovation