NOVEMBER 2021 PROFESSIONAL EXAMINATION
STRATEGIC CASE STUDY (PAPER 3.4)
CHIEF EXAMINER'S REPORT, QUESTIONS & MARKING SCHEME

GENERAL COMMENTS AND STANDARD OF THE PAPER

The standard of the paper was good and the questions were clear. The case study was about the telecommunication industry in Ghana. It provided information about the telecommunication industry that is past, present and, future and market leader COM Group Limited. The coverage was broad and within the scope of the syllabus. Marks allocation followed the weightings in the syllabus and was fairly allocated to each sub-question.

PERFORMANCE OF CANDIDATES

The overall performance was average. Most of the candidates did not attempt questions seven and eight. Those who answered could not do the necessary computations/ analysis required. It appears most of the candidates did not prepare well for the examination as a good number of them scored zero for most of the questions. However, a pass rate of 30.85% attained was better than the 22.66% attained during the May 2021 diet.

NOTABLE STRENGTHS & WEAKNESSES OF CANDIDATES

Strengths

There was no notable strength.

Weaknesses

The candidates had a problem answering questions in Section B indicating their deficiencies in dealing with questions based on the additional information provided in the case. A few of the candidates appeared not to have prepared well for the paper.

THE TELECOMMUNICATIONS INDUSTRY IN GHANA

INTRODUCTION

The Ghanaian economy has not been spared the devastating consequences of the global pandemic, Covid-19. In some jurisdictions, the global pandemic began in December 2019, but the first case was reported in Ghana in March 2020. On 30 March 2020 Government announced two weeks of lockdown in Greater Accra and Greater Kumasi, which was further extended by one week. The country's borders – air, land and sea were all closed. There were restrictions on mass gathering of people; church and mosque activities, conferences, funerals and wedding programmes were all banned. Most organisations directed their workers to work from home, resulting in high demand for online systems such as Zoom, Microsoft Teams and Google Meet. There has been a general trend in the shift from voice to data since the pandemic started.

Although there have been significant investments in Ghana's telecommunications or telecom sector since the liberalisation, the state of the infrastructure in terms of reach and modernisation remains relatively lower compared to most middle-income countries on the African continent, such as Kenya, South Africa and Egypt. The 5G mobile network has been launched in South Africa and Kenya, while Ghana is yet to roll it out to consumers. As a result, there is generally low speed, poor connectivity of the internet, and the average cost of the internet remains very high in Ghana.

Since the assumption of the reins of power in 2017, the new Government started a free education policy at the secondary school level. This has resulted in over double enrollment in secondary schools. It is projected that many more people will be educated within the medium term, and the literacy rate will increase tremendously. This is expected to increase demand for smartphones as literacy is positively correlated to the demand for smartphones. Again, telecommunications industry research reports suggest that the youth of Ghana are showing a higher preference for smartphones.

Electronic waste (e-waste) menace remains a significant source of concern for the Government of Ghana. One of the major contributing factors to surging e-waste in Ghana is the increasing demand for mobile phones, tablets and computers. Therefore, the Government is contemplating raising some revenue through taxing the telecom companies to invest in electronic waste management processing plant and equipment.

TELECOMMUNICATION INDUSTRY – THE PAST, PRESENT AND FUTURE

Ghana's Telecommunications sector has gone through many phases of growth and diversification over the last two decades. As a result, it is presently characterised by vigorous competition and innovative products and services.

The telecommunications sector in Ghana was deregulated in 1994 when the Government announced a five-year comprehensive restructuring of the industry known as the "Accelerated Development Program 1994-2000 (ADP 2000)." The implementation of ADP paved the way for the denationalisation of the telecommunications industry in Ghana. The ADP laid down the following aims and measures: a pricing policy to allow telecommunication operators to recover the full cost of service provision; it was also established in the ADP that customers should be able to access services at competitive and affordable prices. This was in the direction of fostering public accessibility in urban and rural areas through the implementation of payable facilities; universal public access was also planned for the longer term through the installation of payable facilities to every village of a minimum of 250 inhabitants; expanding the coverage of mobile services; liberalisation of value added services; promoting Ghanaian ownership and control of telecommunications companies; and retaining an overall public regulatory control of the sector through the creation of a single and an independent agency to be known as the National Communications Authority (NCA).

The primary vehicle for the realisation of policies contained in an Accelerated Development Program (ADP) for the denationalisation of the industry was the establishment of Ghana Telecom in June 1995. This was to replace the then telecommunications division of the Ghana Post and Telecommunication Operator (PTO). As reported by Ghana Telecom in the year 2000, the newly established operator did not have any positive effects on either the profitability of the company nor its supply of services. Therefore, the setting up of Ghana Telecom can be said to mark the beginning of real and serious denationalisation of the telecommunications industry in Ghana. The Government of Ghana was the sole shareholder of the newly established Ghana Telecom. This ownership structure did not appear attractive to private investors, and therefore it was decided to offer part of Ghana Telecom to a private investor. To attract financial investment for the newly established-telecommunications operator, a 30% share of Ghana Telecom was sold to a consortium led by Telecom Malaysia Berhad.

The Government at the time was concerned with licensing only Ghana Telecom since that was going to result in a monopolistic market situation. Such a situation may also drag the speed of the development of telecommunications infrastructure and the nationwide coverage. To introduce competition, the policy called for a second network operator to create a duopoly. The second network operator, like Ghana Telecom, was supposed to provide services both locally and internationally. The second network operator was also going to have a 20-year initial licence. During the first five years, the two carriers were given nationwide exclusive rights over fixed line telecom services. The licence for the operation of the second network operator was auctioned at the same period when 30% share of the incumbent (Ghana Telecom) was sold to the consortium led by Telecom Malaysia Berhad.

To achieve the central objectives of the reform process as proposed by the ADP, the National Communication Authority (NCA) was established by an Act of Parliament, National Communications Authority Act, 1996 (Act 524). In a bid to accelerate the realisation of the objectives of liberalisation of the telecommunications sector, the NCA was tasked with some critical functions, including licensing of operators, approval of equipment's standards, consumer education and protection, spectrum management and provision of an equal platform for fair competition.

The Ministry of Communications was created in 1997 to facilitate the strategic development and application of the various communications resources - human, material and technological - for effective communications throughout the country. The Ministry (acting on behalf of the Government of Ghana) has since then embarked on a process aimed at formulating a workable national communications policy for Ghana. Ghana may have paved the way in telecoms liberalisation but still faces many challenges getting its telecom infrastructures and facilities up to international standards or to a level where telecommunications can play a significant role in national development.

A duopoly was finally created in December 1997 when WESTEL Ltd paid 10.5 million U.S. dollars for the second network operating licence. This opened a gate for more liberalisation of the cellular markets in Ghana. WESTEL Ltd was licensed as a fixed-line operator while Ghana Telecom operated both fixed-line and cellular telephones. There were further licences granted to cellular operators including Mobitel, Airfon and Celltel between 1997 and 2007. Further, Capital Telecom Ltd was granted a licence to operate rural telephony.

In accordance with the NCA mandate under its law, it awarded licences for the provision of infrastructure (towers) in the country. Radio masts and towers are, typically, tall structures designed to support antennas (also known as aerials) for telecommunications and broadcasting, including television. Tower operators were to build tower infrastructure and rent it out to multiple network operators. The project aimed to reduce the cost of building single infrastructure, leveraging competition among network operators while improving network coverage in remote areas, which under normal circumstances would have been difficult for single operator investment. The first infrastructure licensing was issued in 2010 by NCA. This opened the door for tower business in Ghana. The list of companies that are authorised to own and manage towers in Ghana currently include American Tower Corporation (ATC) Ghana, Eaton Towers Ghana (ETG) Limited, and Helios Tower Ghana (HTG) Managed Services Limited. The total number of towers managed by the three tower companies in Ghana as at the end of 2019 was 4,774, up from 4,102 in 2015.

Some of the network operators' existing tower infrastructure were sold to various tower infrastructure companies operating in the country. Other network operators who had existing towers either signed a long-term agreement (10 years) or entered into a joint venture with tower infrastructure companies to manage and operate those towers. To fully achieve NCA's original intent on introducing infrastructure licensing, licence requests and granting were tied to sharing infrastructure irrespective of a joint agreement with specific tower companies.

Evidence from researchers looking into Tower Company Landscape Changes in Africa and the Middle East by accounting firm KPMG found that the cost of providing network infrastructure has been slashed as operators share some basic facilities. KPMG said that infrastructure sharing is promoted by the emergence of tower companies and has cut infrastructure investment costs by single network operators by as much as 16% to 20%, and the accumulated savings on both capital expenditure and operating expenditure run into billions of dollars.

The major rationale for the emergence of tower companies was that the network operators would focus on what they do best, providing mobile and related services to customers, thus leaving the management of core infrastructure to the experts. Infrastructure sharing will reduce the burden of single infrastructure ownership and accelerate telecommunication services to rural communities.

Another significant development in the telecommunications industry that impacted on competition among the network operators is the introduction of the mobile number portability policy by the regulator. Mobile Number Portability (MNP) is the policy that allows mobile network subscribers to change mobile network service providers while retaining the same mobile phone number. Mobile Number Portability was introduced in Ghana in July 2011. The policy was to put more pressure on the network operators to pay attention to service quality issues and encourage them to spread their coverage. Customers normally port due to quality of service issues or lack of a particular network operator's service in certain areas.

There are a total of four mobile telecommunications operators in Ghana as at September 2021. They are COM, FoneTel, NirTel and Gotel.

The regulator and telecommunications operators are grappling with SIM box fraud activities being criminally perpetrated by unscrupulous individuals. SIM box fraud entails illegally terminating incoming international traffic/calls as local calls. This is achieved by using SIM boxes to bypass authorised international gateway by diverting incoming international calls. SIM box fraud prevents mobile operators from charging the right price, resulting in revenue losses and ultimately affecting the state's tax envelope. In collaboration with mobile operators, the regulator has intensified its monitoring activities to deal with the fraudsters. As a result, there have been some arrests and prosecutions of the perpetrators. The numbers used to perpetrate SIM box fraud are sent to operators to block and provide data to facilitate the geographical location (geolocation) of SIM boxes. NCA has given assurance that it is putting in place a mechanism to stamp out the SIM box fraud menace eventually.

The current telecommunication operators have licences covering 2G, 3G, and 4G, which are expiring at different periods and would have to be renewed. The telecommunications industry in Europe, America and Asia has commenced offering 5G services to mobile users. However, Ghana is yet to acquire the requisite telecom infrastructure to pave the way for 5G services to be provided by the four mobile operators.

One significant benefit of the availability of telecommunications infrastructure in Ghana is the introduction of mobile money services. COM was the first telecom company to launch and pilot mobile money in Ghana in 2009. Subsequently, all the other major telecommunications operators followed the trail blazed by COM. Presently, three of the four telecommunications companies (COM, FoneTel, NirTel) offer mobile money services, which Bank of Ghana regulates under the Electronic Money Guidelines and Agent Guidelines issued by the central bank in July 2015 as well as Payment Systems and Services Act, 2019 (Act 987). In addition, since 2019, two new mobile money services, Zeepay Mobile Money and GCB G-Money, have been launched by Zeepay Ghana Ltd, a Fintech, and GCB Ltd, the largest local bank in Ghana, respectively. It brings to five active mobile money services in Ghana. Mobile money presents significant advantages to the unbanked population as it reduces transaction costs of financial services, especially for people in rural areas. Furthermore, it has created many jobs and saves travel time and costs otherwise required to access financial services in less developed parts of the country.

The introduction of mobile money has accelerated the financial inclusion and cash lite agenda of the Ghana Government. An average Ghanaian has a high preference rate, especially those in the informal sector, for mobile money. In 2012 there were only 345,000 active mobile money accounts in Ghana, and by March 2019, this had grown to 12.7 million, according to Bank of Ghana, Payment System Statistics First Quarter 2019. However, some research suggests that access to mobile money in Ghana has not necessarily been equally distributed. According to Findex (World Bank Report, 2017), in 2017, women were 23 per cent less likely than men to have a mobile money account. Given the evidence of the potential socio-economic benefits of financial inclusion and mobile money use, women exclusion from Ghana's formal financial system is of particular concern. Women's lower rate of mobile money use has been attributed to lower digital skills and literacy, fear of falling victim to mobile money fraud, and skepticism about mobile money in general.

All the telecom companies have incorporated mobile money services as subsidiaries in line with new regulations issued by the Bank of Ghana. Bank of Ghana licenses the newly incorporated mobile money subsidiaries as e-money issuers. This situation subjects the telecoms operators and their subsidiaries to regulation by BoG and NCA, raising regulatory demands on the entities.

The factors militating against further penetration of mobile money include mobile money fraud and poor mobile connectivity or downtime, especially in the remote areas of Ghana where telecommunications infrastructure is not up to scratch. Even in Accra, the nation's capital city, network operators have poor network in certain suburbs such that when a call is made, subscribers get feedback, "the number you are calling cannot be reached", when indeed the phone is on. Several mobile money users have fallen victim to mobile money fraudsters who use illegal means to empty the e-wallet of their victims. Often than not, these fraudsters can get away with their booty without being arrested mainly due to a very poor identity cards system. The fraudsters are able to generate fake identity cards with which they can register SIM cards that are used to perpetuate their criminal activities. With the acceleration of the registration of Ghanaians by National Identification Authority (NIA) and the recent announcement by the Minister of Communications and Digitisation of SIM card reregistration starting October 2021 and ending March 2022, mobile fraud is expected to be reduced significantly, if not completely eliminated.

The mobile network operators provide several telecommunication services to the customers in the industry. The mobile voice solution allows customers to make and receive calls on their mobile handset. Mobile voice penetration rate signifies that an average Ghanaian is using more than one network. The service provides the essential tool for communication and does not require any sophisticated skills on the part of the customer. The fixed-line is a service that allows users to make and receive calls on fixed telephone devices, commonly used by corporate bodies. The next product is data which enables the user to connect to the internet. Data solution comes in two main ways, mobile data and fixed data. The relatively lower data penetration rate compared to mobile voice is due to the low rate of technology savvy of the Ghanaian population. Finally, mobile money service facilitates the exchange of goods and services by providing an electronic solution for receiving and making payments. The solution is available to individuals and businesses.

The summary of industry information on each of the services is presented in the table below.

Telecom Subscription Information										
	Mobile Voice		**Fixed Line**		**Mobile Data**		**Fixed Data**		**Momo Active Accounts**	
	2020	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
TELECOM COMPANY	***'000***	***'000***	***'000***	***'000***	***'000***	***'000***	***'000***	***'000***	***'000***	***'000***
COM	23,144	22,556	1	-	19,147	20,086	14	-	10,075	8,272
FoneTel	8,401	9,122	300	280	3,055	3,539	62	57	3,100	2,545
Nirtel	8,136	8,453	6	8	3,926	4,111	1	1	2,325	1,909
Gotel	781	726	-	-	342	269	-	-	-	-
TOTAL SECTOR	**40,462**	**40,857**	**308**	**289**	**26,470**	**28,006**	**77**	**57**	**15,500**	**12,726**
TOTAL GHANA POPULATION	**30,922**	**30,190**	**30,922**	**30,190**	**30,922**	**30,190**	**30,922**	**30,190**	**30,922**	**30,190**
PENETRATION RATE	**130.85%**	**135.33%**	**0.99%**	**0.96%**	**85.60%**	**92.76%**	**0.25%**	**0.19%**	**50.13%**	**42.15%**

The penetration rate is the ratio of the total subscribers per product/service divided by the estimated population of Ghana in a particular year. This rate is a measure of the average number of Ghanaians using a service.

The increasing growth of Over-The-Top (OTT) services has increased competition in the voice segment. The already price competitive market now faces competition from OTT voice mobile applications (like WhatsApp, Viber, Skype and FaceTime), which are accessible over the internet and in some cases rely on operators' network numbering resources and internet services. Indeed, the future of the telecommunications industry lies in data as more people get educated and become competent with the use of smartphones.

In June 2021, the Bank of Ghana (BoG) issued a notice to all banks and specialised deposit-taking institutions (SDIs) abolishing unfair fees, charges and other practices in the banking sector. Particularly, "account maintenance fees" on savings account charged by SDIs was abolished. Bank of Ghana noted that the practice is detrimental to financial inclusion and negates the gains of the financial literacy programmes geared towards promoting personal savings, which is generally low among Ghanaians. The central bank recognises the fact that banks' ability to create cheap credit necessary to oil the private sector is a function of deposits which include personal savings. In addition, the high fees and charges on traditional bank accounts are one reason why average Ghanaians prefer mobile money. Therefore, the scraping of the bank fees is expected to create an incentive for more Ghanaians to open accounts or resume operating dormant savings accounts.

The telecommunications industry has a number of subsectors that provide solutions rivaling the four mobile operators. These subsectors include mobile network, internet service providers, Broadband Wireless Access Providers (BWAP) and Value Added Service (VAS) providers. The four mobile operator's licence permits them to participate in the other three subsectors. The telecommunication industry data available from the regulator indicates that the mobile operators are competing in all four sectors. However, the number of players stated for each sub-sectors is exclusive of the four mobile operators.

The table below summarises the nature of service provided by each of these segments within the telecommunications industry.

Telecommunications Sub-sectors	**Brief Description of the Sector**	**Number of players**
Mobile Network Operators	This subsector consists of players whose licence permits them to provide fixed and mobile telephony services.	4
Internet Service Providers (ISP)	An ISP is a company that supplies Internet connectivity to home and business customers. ISPs support one or more forms of Internet access, ranging from traditional modem dial-up to DSL and cable modem broadband service to dedicated T1/T3 lines. More recently, Wireless Internet Service Providers or WISPs have emerged that offer Internet access through wireless LAN or wireless broadband networks. The registration of an internet service provider expires after five years from the date of registration. It may be renewed for periods of five years on application by the service provider.	48
Broadband Wireless Access Providers (BWAP)	Wireless broadband (WBB) is high-speed internet and data service delivered through a wireless local area network (WLAN) or wireless wide area network (WWAN). As with other wireless services, wireless broadband may be either fixed or mobile.	3
Value Added Service (VAS)	Value Added Service (VAS) providers offer services that combine applications provided to users with telecommunications but do not include public electronic communications services. It should be noted that Mobile Network Operators (MNOs), per their licences, also provided these VAS. Value added communications services mean; (a)videotext; (b) teletext; (c)tele-action; (d) telecom; (e)tele-alarm; (f)data storage retransmission; (g)teleprocessing and data processing (h)electronic mail service; (i)voice messaging; (j)text messaging; and (k) any other service classified as value added communications services by the Authority.	55

The Ghana Chamber of Telecommunications (GCT) was registered in 2010 and inaugurated in 2011. GCT is an industry association and a private initiative by the mobile network operators in Ghana. It is an advocacy institution established to help direct telecommunications policy, legislation and regulation, and pursue research towards the development of telecommunications. The membership of GCT currently stands at eight since non-mobile operators have become members. Since its establishment, it has been generally successful in shaping and influencing regulatory posture in the industry.

The telecommunications industry globally, including Ghana, depends on suppliers for their software and hardware infrastructure needs. The major long-established players in the telecoms infrastructure sector are Ericsson, Nokia Siemens Networks (NSN), Alcatel-Lucent, Motorola and recently Huawei. After seeing double-digit annual growth rates in recent years, these suppliers now have to adjust to a new environment of declining profit and confidence, leading to reductions in market capitalisation in virtually all established suppliers. One of the main competitive pressures on the telecom infrastructure suppliers is the continued consolidation amongst telecom operators across national borders. This consolidation gives operators increased purchasing volumes by the telecom operators. All the four mobile operators in Ghana are subsidiaries of parent companies who are big mobile operators in different continents of the world.

COM – THE COMPANY

The company was incorporated on 14 April 1994 as a private limited liability company under the Companies Act, with two (2) shareholders (Tele 2 Nornett A/S, a Norwegian company, and Scan Construction Limited, a Ghanaian company). The company trades under the business name COM, which is very popular with an average Ghanaian subscriber. The company's slogan is "COM, everywhere you will go" and this has really caught up with many people. Pursuant to the company's desire to trade its shares on Ghana Stock Exchange, the company was converted into a public limited liability company on 18 October 2016 upon a resolution of the existing shareholders passed in 2016.

Since the incorporation of the company, it has seen a number of changes in its ownership. In 1996, Investcom Consortium (a Lebanese-owned company incorporated in British Virgin Islands) acquired the majority shareholding in the company. The trade name of the company was subsequently changed from "Airfone" to "Greeba". In 2006, the COM fully acquired Investcom Consortium and subsequently changed the company's trade name from "Greeba" to "COM".

The ultimate holding company is COM Group Ltd, incorporated in the Republic of South Africa and listed on the Johannesburg Stock Exchange. COM Group Ltd, through Investcom Consortium, holds 85.40% of total traded shares of COM, representing the largest shareholding. The next top nineteen consists of institutional investors having 10.12% and the rest of the other institutional and individual shareholders hold 4.48%.

In February 2016, COM obtained provisional authorisation from the NCA to establish, maintain and operate mobile broadband services using lot 2 of the 800MHz frequency band. COM commercially launched its 4G LTE services with this authorisation, making it the only mobile network operator to provide 4G LTE services in Ghana. Currently, the company has 4G LTE coverage in all 10 regional capitals of Ghana, key towns and mining areas, and some border towns.

Vision and Mission of COM

The company's vision is "To lead the delivery of a new Digital World to our customers", and the mission is "To make our customers' lives a whole lot better". The company is confident that its purpose as reflected in the vision and mission provides the foundation for the current and future competitive strategy.

Strategy

The company's strategy is known simply as "BRIGHT" strategy. The BRIGHT strategy enables the company to lead the race to connect Africa and its people, towards accelerating and delivering a range of platforms to further digitise the lives of all. "BRIGHT" represents the acronym of the six-prong cardinal elements of the company's strategy for the present and the future. These elements include the following:

a. **Best customer experience** – to be Net Promoter Score (NPS) leader, and ensure market share gains;
b. **Returns and efficiency focus** - return on invested capital, total shareholder returns and adjusted free cash flow yield;
c. **Ignite commercial performance** - Subscriber growth, #1 or #2 in every market and segment, and revenue share and EBITDA growth;
d. **Growth through data and digital** - growth in data subscribers, growth in digital subscribers and sales and service through digital channels;
e. **Hearts and minds** - employee NPS leader, culture survey score and reputation survey score;
f. **Technology excellence** - #1 network NPS, error free billing and charging and quality data sessions.

In brief, "BRIGHT" strategy involves providing best customer experience; earn returns and efficiency focus; ignite commercial performance; Growth through data and digital; win Hearts and minds; and achieve technology excellence.

Core Brand Values

Guided by its core brand values of Leadership, Integrity, Can-Do, Innovation and Relationships, COM contributes to: keeping families connected, creation of jobs, bringing financial access to the unbanked, bolstering government revenue, improving business prospects, enabling and empowering lifestyle and making entertainment accessible.

Leadership Foresight|Commitment|Guidance	Building a future for our people and the customers we serve Leading the way through connectivity enablement
Integrity Solid Principles|Trusted|Togetherness	We are, because of you, our customer We are, because of you, our employee With your trust and belief, we will always succeed
Can-Do Optimistic|Future Focus|Passionate|Happening	Creating brighter futures for everyone whose life we touch Empowering people, communities and countries Creating possibility
Innovation Simplicity|Imagination|Insight|Creativity	Doing things differently Making unlikely connections The unexpected exceeds expectations
Relationships Teamwork|Friendly|Personal|Warm|Caring	Connecting with people on their level Having empathy for their unique situation Building relationships with our customers (Internal & External)

Corporate Governance at COM

There are two sub-committees of the board – Audit and Risk Committee (consisting of four directors) and Compensation, Remuneration and Human Resource Committee (made up of three directors). The audit and risk committee is chaired by Bertha Daniels, non-executive director. The brief profile of the directors is outlined below.

Augustine Quainoo (79) – He is the board chairman and was appointed 27 April 2011. He is a Ghanaian. He holds a B.Sc. Economics (Hons) degree from the University of Ghana. He worked for a multinational company for 38 years in various capacities, the last 18 years of which he was Chief Executive Officer and Chairman of the Board.

Elikem Cubbagee (47) – The Chief Executive Officer and the only executive director appointed on 8 June 2018. Prior to this, he was the chief executive officer of Digicel France. Elikem is a seasoned telecoms and financial services business leader with over 22 years of experience spanning several years across the world. He holds an MBA in finance from the University of Cape Coast and a bachelor's degree in civil engineering from the Kwame Nkrumah University of Science and Technology (KNUST), Ghana.

Eric Nyame (50 years old) –. He is currently the Vice President of COM Group Ltd's West and Central Africa (WECA) Region. Prior to assuming this role, he was Vice President of COM Group Ltd's Southern and East Africa and Ghana (SEAGHA) Region, after serving as CEO of COM Rwanda for almost two years. He holds a Bachelor of Arts (Hons) in economics and statistics from the University of Ghana, a post-graduate diploma in management from the University of Ghana, Legon and was part of COM's Global Advancement Programme (GAP) in 2010.

Thambo Malley (45 years old)– He was appointed 1 June 2018 as a non-executive director. He is currently the Group Executive: Financial Operations and Financial Plan and Analysis, a position held since May 2018. Thambo is a Chartered Accountant CA, being a member of the Institute of Chartered Accountants, Ghana. He holds a Bachelor of Commerce (Hons) Accounting and Bachelor of Commerce (Hons) Management Account degrees from the University of Cape Coast.

Ben Mopata (44 years old) - He was appointed 1 June 2018 as a non-executive director. Ben Mopata is the President and chief executive office of COM Group Ltd. Prior to this Ben was the group Chief Finance Officer from April 2017, and executive director of the COM Group Ltd effective 1 June 2018. Mr. Mopata holds a Bachelor in Engineering (Hons) and Master's in business administration, both from the University of Cape Town, South Africa. He is an alumnus of executive programmes at London Business School, INSEAD and Harvard Business School.
Bertha Daniels (60 years old)- a Ghanaian non-executive director appointed 15 April 2016. Bertha worked in corporate positions ranging from regional and corporate finance to general manager of telecommunications for over a decade. She is a member of the Institute of Chartered Accountants, Ghana. Bertha has extensive JSE listed company board experience.

Mavis Nana Ama Adomakoh (55 years old) – she is a Ghanaian independent non-executive director appointed on 1 March 2021. Ms. Nana Ama was previously one of the big 4 accounting firms. Ms. Mavis then served as Group Human Resources Business Partner for Domestic Bank, working across 33 countries. Mavis Nana Ama is a Chartered Fellow of the Chartered Institute of Personnel and Development (CIPD) and brings along with her a plethora of experience from the United Kingdom and Africa.

Yaw Owusu-Amoah (45 years old) - a Ghanaian independent non-executive director appointed on 1 July 2016. Yaw is an experienced digital entrepreneur who in 19 years as Chief Software Architect and subsequently CEO of BusyNet, delivered innovative cloud, artificial intelligence and data graph platforms used by mobile networks and brands across multiple geographies and 80+ languages.

Fred Dennis (60 years old) – He is a Ghanaian independent non-executive director appointed on 1 March 2021. Fred retired from one of the big four auditing firms in Ghana as Senior Partner and Country Manager and a member of its Africa Academic Board.

Gwendy Rockson (57 years old) – a Ghanaian independent non-executive director appointed on 1 March 2021. Ms. Gwendy Rockson is the founder and Managing Partner of Rockson & Company, a leading corporate and commercial law firm in Ghana.

The board chairman's statement for the annual year ended 2020 provides insight into the corporate governance strategy of the company. The statement reads in part as follows:

"COM Board believes that good and effective governance is an essential ingredient to achieving long-term success. In the light of this, we continue to maintain a strong internal control environment and instill a culture of ethical behaviour within the company. In addition, we continue to embed a culture of zero tolerance for corruption and unethical behaviour through our robust conduct management framework.

We continue to invest in building systems and rolling out appropriate strategies to ensure an integrated approach to the management of governance, risk and compliance structures across the business.

Regular Audit Committee meetings were held during the year to assess the level of adherence to internal controls, to consider and review risk mappings as well as business performance. The Board has reviewed the report of the committee and is satisfied with the robust internal control systems put in place to manage business risks and continuity".

The Management Team

The company has a thirteen-member management team, including the CEO, with diversified academic background and corporate experience with international and local organisations.

The Various Licences

Several licences that the company secured to enable it to provide voice and data services expired and subsequently renewed. Six out of eight of the licences were renewed between 2018 and 2020. The company has an average of 12 years and 3 years remaining of the 15 years and 5 years maximum duration, respectively. It is estimated that most of the rivals' licenses average duration remaining is 5 years in the case of 15 years maximum licence. The table below shows the information about the various licence types.

Type of Licence	Date Granted/Renewed	Licence Term	Remaining Average Term
3G	23-Jan-09	15 years	4 years
2G spectrum	12-Feb-19	15 years	13 years
International Gateway	10-Aug-19	5 years	3 years
800MHz Spectrum (2*10MHz)	21-Jun-16	15 years	10 years
800MHz Spectrum (2*5MHz)	10-Jan-20	15 years	14 years
2600MHz Spectrum	1-Dec-18	15 years	12.5 years
Fixed Access Licence	23-Mar-20	15 years	14 years
2x3 MHz on 900 & 2x7 1800MHz	2-Dec-19	15 years	13.5 years

COM Operations

COM is the market leader in Ghana's increasingly competitive mobile telecommunications industry, growing from a subscriber base of 8.7 million as at December 2010 to over 24.40 million as at December 2020. The company's sustained market leadership has been fostered by its efforts at introducing innovation to enhance the experience of its customers. Known to lead the way, COM was the first telecommunications operator to: provide telecommunication coverage in all 10 traditional regions of Ghana, launch 4G LTE services as a mobile operator, offer 4G LTE in all 10 traditional regions of Ghana, launch Electronic recharge and Fixed Wireless Access Phone (FWAP), launch mobile credit transfer, set up a charitable foundation with a 1% Profit After Tax annual contribution to charitable projects (i.e. COM Foundation), launch Blackberry service, introduce 3G and 4G commercial service, launch mobile money service, introduce Blade Cluster Technology in Africa and build 3 ultra-modern switch and data centres.

COM currently has over 87 service centres and 186 volume management centres across the country. The company also has over 270,000 airtime retailers who trade with COM products in addition to 89,748 COM Mobile Money agents and merchants as at December 2017.

With an ultimate aim of customer satisfaction, COM operates an extensive network in Ghana, reaching all 10 traditional regional capitals, major cities and many rural and remote areas, as well as roaming partnerships with international telecommunications operators in foreign countries around the world. COM continues to offer its valued customers a range of exciting products and services under postpaid and prepaid mobile subscriptions.

One of the company's key goals is to build a high performance and customer-centric culture, by, among other things, capitalising on the COM workforce profile, skills and competencies as well as seeking and fostering strategic alliances and partnerships to facilitate and realise the skills and talent in its workforce. An employee retention approach is designed to build competitive reward systems to incentivise key executive personnel and employees.

COM Evolving Business Structure

At the inception of the company, the main solution provided was mobile voice which allowed customers to make and receive calls. At that time, the company served customers by creating specialised functions. However, over the years, the company has expanded its service portfolio and accordingly evolved its structure to meet environmental and regulatory exigencies.

The company has organised its traditional products, voice and data, into two main segments, Consumer/Retail and Enterprise/Wholesale, whiles COM Mobile Money is established as a subsidiary in compliance with new regulations set by the Bank of Ghana. The segments and subsidiary are managed by chief business officers who occupy senior management positions in the company.

Consumer/Retail Segment - provides solutions that enable people to make financial transactions using their mobile phones and bring them entertainment and online platforms, apps and online ventures through lifestyle, mobile financial services and e-commerce offerings. Products in this segment are voice services, fixed line, COM Shortz, COM Protect, COM fibre broadband, data and internet solutions, COM vehicle tracking, COM Care 24/7, COM radio, iStream TV, COM Play, COM Xtratime, Music Plus, COM Video Plus, COM online school.

Enterprise/Wholesale Segment - provides solution to small, medium and large private enterprises and the public sector. Products in this segment include COM dedicated internet, COM corporate postpaid packages, COM asset tracking, COM leased lines, COM vehicle tracking, COM smart cam, COM eazifon, COM SME plus, COM directory services, COM fibre broadband, COM business caller tunez, COM multi-caller services, COM cloud services, COM global (MPLS) vpn, COM co-location hosting/ data centre services and COM APN SIM.

COM Mobile Money - Services offered on this platform include money transfer; airtime top up; bill payments; general payments; bulk payment payroll; school fees payment; savings and investment; international remittances; link to bank account; insurance and ATM cash-out. Currently, the company has seventeen partner banks through which the solution is delivered to customers with bank accounts.

Dominant/ Significant Market Power (SMP)

The regulator, in the performance of its legal duty to ensure fair competition amongst licensees, the operators of communications networks and service providers of public communications, classified COM as SMP in June 2020. NCA classifies an operator as SMP if it has 40% or more of a particular segment of the telecommunications industry. As at Quarter 1, 2020, COM had an average of 57% and 68% of the voice and data subscriber market, respectively. To correct this imbalance, the following measures were taken by NCA:

a. With immediate effect, there will be an application of a 30% Asymmetrical Interconnect rate for two (2) years subject to market response, in favour of the disadvantaged operators, in accordance with the law.
b. Set floor/ceiling pricing on Voice, Data, SMS, Mobile Money, etc.
c. Review and approve all pricing by COM as required by law.
d. Require COM not to have differential prices for on-net and off-net transactions.
e. Ensure various operator vendors are not subject to exclusionary pricing or behaviour.
f. Ensure that COM's access to information does not disadvantage any Value Added Service of non-SMP operators.
g. Require COM to present implementation plans on National Roaming Services within the next 30 days for execution on or before the next 90 days.

Following the NCA regulatory action, COM filed a suit at the Commercial Division of the High Court, Accra, on the grounds that the regulator breached the rules of natural justice by refusing to hear the company before classifying it as SMP. The court dismissed the case and affirmed the decision by the National Communications Authority (NCA) to declare COM as a Significant Market Power (SMP) in Ghana. COM appealed to the Supreme Court but subsequently discontinued the action and it is currently complying with NCA directive.

COM Group Ltd Structure

COM is a subsidiary of COM Group Ltd. COM Group Ltd is a leading emerging market operator connecting subscribers in 22 countries in Africa and the Middle East. COM Group Ltd has over 217 million subscribers across its operating subsidiaries and joint ventures in Afghanistan, Benin, Botswana, Cameroon, Cyprus, Ghana, Guinea Bissau, Guinea Republic, Iran, Ivory Coast, Liberia, Nigeria, Republic of Congo (Congo Brazzaville), Rwanda, South Africa, Sudan, South Sudan, Swaziland, Syria, Uganda, Yemen and Zambia. In 2015, COM Group Ltd was named the most admired brand in Africa and the most valuable African brand (Brand Africa). COM Group Ltd is listed on the Johannesburg Stock Exchange ("JSE") in South Africa under the share code: "COM" and had a market capitalisation of USD 16.00 billion at 2020.

Stock Exchange Performance

In 2015, COM won a bid for a 4G/LTE licence in the 800 MHz spectrum. NCA required COM to offer Ghanaian investors an opportunity to own up to 35% of its shares. A public offer of up to

4,637,394,533 ordinary shares of COM valued at GH¢ 3,478,045,900 at an Offer Price of GH¢ 0.75 per share (the "Offer Shares"), representing up to 35% of the issued shares of COM after the offer was made. The Offer raised GH¢ 1,146,589,464.75, representing 32.97% of the total offer amount. The company's shares were quoted on the Ghana Stock Exchange on 5 September 2018.

The performance of the company on the stock exchange for the recent two years is shown in the table below:

COM	**2020**	**2019**
Closing Price (c)	GH¢ 0.64 p	GH¢ 0.70 p
Highest Price (c)	GH¢ 0.70 p	GH¢ 0.80 p
Lowest Price (c)	GH¢ 0.55 p	GH¢ 0.67 p
Total Number of shares traded	589,645,729	202,885,800
Number of shares in issue	12,290,474,360	12,290,474,360
Number of shares traded as a percentage of shares in issue (%)	4.80	1.65
One Year volume-weighted average price (VWAP) (c)	GH¢ 0.62 p	GH¢ 0.71 p
Market Capitalisation (as at 31/12/2020) (million)	GH¢ 7,865.90	GH¢ 8,603.33
Dividend yield (%)	12.5	8.57
Earnings yield (%)	17.67	11.71
P/E (X)	5.66	8.54

The table below also show the dividend payment of the last five years.

Year	**No. of Shares (million)**	**Dividend Per Share (GH¢)**	**Total Amount of Dividend Declared (GH¢ million)**
2020	12,290	0.0800	983
2019	12,290	0.0600	737
2018	12,290	0.1068	1,313
2017	10,755	0.0437	470
2016	10,808	0.0099	107

Statement of comprehensive income for the year ended 31 December					
(All amounts are in thousands of Ghana Cedis)					
	2020	**2019**	**2018**	**2017**	**2016**
Revenue from contracts with customers	6,046,175	5,181,836	4,218,847	3,423,551	2,773,219
Direct Cost	(1,110,488)	(1,005,610)	(1,358,126)	(1,185,197)	(931,854)
Employee benefits expense	(266,820)	(231,559)	(188,392)	(160,131)	(131,318)
Selling, distribution and marketing expenses	(1,035,553)	(928,190)	(797,561)	(603,297)	(481,462)
Other operating expenses	(455,133)	(386,044)	(287,139)	(131,068)	(95,563)
Earnings Before Interest Tax, Depreciation and Amortisation	**3,178,181**	**2,630,433**	**1,587,629**	**1,343,858**	**1,133,022**
Depreciation & Amortisation	(877,453)	(801,544)	(463,567)	(359,928)	(258,371)
Operating profit	**2,300,728**	**1,828,889**	**1,124,062**	**983,930**	**874,651**
Net finance costs	(327,206)	(385,515)	(44,868)	(21,956)	(54,188)
Profit before income tax	**1,973,522**	**1,443,374**	**1,079,194**	**961,974**	**820,463**
National fiscal stabilisation levy	(98,637)	(72,169)	(53,960)	(49,767)	(41,023)
Income tax expense	(479,191)	363,247)	(270,558)	(212,395)	(236,928)
Total comprehensive income	**1,395,694**	**1,007,958**	**754,676**	**699,812**	**542,512**

Statement of financial position as at 31 December					
(All amounts are in thousands of Ghana Cedis)					
Non-current assets	**2020**	**2019**	**2018**	**2017**	**2016**
Property, plant and equipment	3,371,844	3,018,008	2,549,095	2,267,833	1,840,112
Right of use assets	1,420,085	1,574,776	-	-	-
Intangible assets	858,648	448,276	418,536	340,305	333,717
Other non-current	125,389	120,962	92,915	61,895	38,173
Non-current assets	**5,775,966**	**5,162,022**	**3,060,546**	**2,670,033**	**2,212,002**
Current assets					
Inventories	54,786	15,780	10,305	20,300	69,925
Trade receivables	475,078	378,431	370,038	271,597	322,604
Other assets	62,296	62,669	111,262	69,743	-
Other financial assets at amortised cost	103,091	98,718	47,135	45,056	-
Taxes	501,858	376,716	211,069	174,930	-
Mobile money float	6,559,373	3,405,579	-	-	-
Cash and cash equivalents	685,369	458,735	406,525	196,730	151,671
Current assets	**8,441,851**	**4,796,628**	**1,156,334**	**778,356**	**544,200**
Total assets	**14,217,817**	**9,958,650**	**4,216,880**	**3,448,389**	**2,756,202**
Equity					
Stated capital	1,097,504	1,097,504	1,097,504	1,363	1,363
Other reserves	13,401				
Retained earnings	2,228,282	1,706,322	1,312,888	1,871,018	1,622,506
Total Equity	**3,339,187**	**2,803,826**	**2,410,392**	**1,872,381**	**1,623,869**
Non-current liabilities					
Borrowings	557,093	225,421	338,854	337,164	
Deferred tax liabilities	380,294	339,399	304,206	237,229	216,976
Lease liabilities	1,167,858	1,560,009	-	-	
Provision & Others	9,477	9,371	10,030	10,785	3,770
Total Non-current liabilities	**2,114,722**	**2,134,200**	**653,090**	**585,178**	**220,746**

Current liabilities					
Trade and other payables	1,278,884	1,055,852	911,051	862,569	608,815
Obligations to electronic money holders	6,559,373	3,405,579	-	-	
Contract liability	100,120	80,934	89,838	86,941	26,686
Other liabilities	81,974	49,531	52,509	41,320	117,011
Lease liabilities	463,555	148,726	-	-	-
Borrowings	280,002	280,002	100,000	-	159,075
Total current liabilities	**8,763,908**	**5,020,624**	**1,153,398**	**990,830**	**911,587**
Total Liabilities	**10,878,630**	**7,154,824**	**1,806,488**	**1,576,008**	**1,132,333**
Total equity and liabilities	**14,217,817**	**9,958,650**	**4,216,880**	**3,448,389**	**2,756,202**

ADDITIONAL INFORMATION

COM Plans for 2022 and beyond

Investment in 5G Equipment

The company is in the process of obtaining 5G licence from the regulator (NCA) to launch the service in Ghana at the start of 2022. The licence is expected to be granted for an initial period of five years which is subject to renewal. The company would have to make a major investment in 5G equipment and the management is considering the best financing option. The CEO in the discharge of his investment and financing duties has mandated the Chief Finance Officer (CFO) to present a proposal on the various financing options that can be used to procure the 5G equipment. Following CFO's presentation to the CEO and other management team, the company has reduced the feasible financing options to two – to take a loan from a bank for outright purchase or alternatively lease the 5G equipment.

The details of the 5G equipment and other relevant information are presented below:

- The equipment is expected to cost GH¢150 million and it will be realised for GH¢13 million at the end of year 5 if it is purchased.
- The company intends to finance the new plant via a 5 -year loan costing 20% per annum. The annual repayment will be done at the end of each year.
- Alternatively, the company could lease the asset and a leasing company will lease the asset for GH¢49.60 million per annum in arrears for 5 years. The company is entitled to capital allowance on the right of use (RoU) asset.
- The interest payment under both options is an allowable deduction per the tax laws of Ghana.
- The company's cost of capital (i.e. weighted average cost of capital) is 24%.
- The company pays tax at 25% and obtains capital allowance on the cost at 25% on straight line basis.

Management of trade receivables through factoring arrangement

The company would also want to manage its trade receivable to strengthen its liquidity position starting 2022. The management is considering factoring of its trade receivable. The details of the arrangement are as follows:

- ABL Finance House Ltd, a factoring company, has proposed a one-year agreement to COM to both manage its receivables and advance 80% of the credit sales value when invoiced. Existing invoices will be eligible for an immediate 80% cash payment.
- The annual sales on credit by COM are GH¢1.90 billion spread evenly throughout the year, and the average delay in payment from the invoice date is 90 days. The factoring company is confident of reducing this delay to only 60 days, and will pay the remaining 20% of invoice value to COM immediately on receipt from the customer.
- The charge for receivables management will be 1.5% of annual credit turnover payable at the year-end. For the advance payment on the invoices, a commission of 1% will be charged plus interest applied at 18% per annum on the gross funds advanced.
- COM will be able to save GH¢24 million during the year in administrative costs if the factoring company takes on the receivables management. Currently, the company finances trade credit through a short-term loan facility with an annual interest rate of 20%.

SECTION A

QUESTION ONE

At the First Quarter 2021 Board meeting, the performance of the company was reviewed following a comprehensive presentation of the financial performance for the year ended 2020 by the Chief Executive Officer (CEO), Elikem Cubbagee. Although the directors were generally satisfied with the performance of the company and the presentation, they expressed concern that the performance of the various services provided by the company was missing in the presentation.

Required:
You are an Advisor to the Board Chairman and he has directed you to write a report assessing and classifying the various services provided by the company using the Boston Consulting Group (BCG) Matrix. The report should include recommendations of an appropriate strategy or action the board should pursue with respect to each of the services classified in the report. Your report should contain an appendix showing the detail computations supporting your classification of the services. **(20 marks)**

QUESTION TWO

The board members discussed the future of the ***BRIGHT strategy*** of the company in the context that the strategic position of the company continue to evolve at a rather unpredictable rate. The board is interested in gaining a thorough insight of the factors that will pose material downside and upside risk to the strategic position of the company. The chairman of the board would want to discuss the draft memorandum of the company's strategic position with the CEO prior to the next plenary board meeting.

Required:
Prepare a draft presentation explaining to the Board Chairman the current factors that are negatively impacting on the strategic position of the company from the general external environment and internal perspectives. **(10 marks)**

QUESTION THREE

The company is facing increasing competition in its drive to remain the market leader and sustain the current competitive advantage. The market intelligence report commissioned by the board points to a highly competitive outlook. An industry analysis based on the current available information is required by the board and the CEO has been requested to prepare a detailed presentation for the next board meeting.

Required:
Evaluate how competitive environment of COM will affect the realisation of the company's BBRIGT strategy. **(10 marks)**

QUESTION FOUR

The board of COM currently consists of one executive director, the CEO, six non-independent non-executive directors (NEDs) and three independent NEDs. The chairman of the board has indicated that since the company is now listed, it is prudent to increase the number of the independent NEDs. This, in the view of the board chairman, will ensure a 'balance of power' on the board, so that no individual or small group of individuals can dominate decision-making by the board.

Required:
The Board chairman has approached you, a corporate governance expert and consultant, to make a presentation to the board on the factors that would be considered in selecting independent NED as provided in the Code of Best Practices on Corporate Governance. Limit the factors to **FOUR (4)**. **(10 marks)**

(Total: 50 marks)

SECTION B

QUESTION FIVE

A level 300 student in the University of Ghana has approached you to assist her with her project work. She is undertaking a study of COM as a business case and she would need guidance on specific areas in the preparation of a business plan.

Required:
Prepare an extract of a business plan on the following based on the company, COM:

a) Competitive Analysis **(5 marks)**
b) Market Analysis **(5 marks)**

QUESTION SIX

The board has recognised that the company faces several business risks which, individually or together, could affect COM and its objectives and/or prospects. The board needs a briefing paper from the CEO on the current significant business risks that the company may be exposed to.

Required:
You are an Advisor to the CEO and he has asked you to prepare a briefing paper to be added to the board pack identifying and assessing the impact of **FOUR (4)** key business risks that COM must address in order to achieve its strategic objectives. Clearly identify the specific conditions giving rise to each key risk. **(10 marks)**

QUESTION SEVEN

a) The management of COM requires a detail analysis of the two financing options (borrow to buy or lease) under consideration to determine the cheaper alternative to be used to acquire the 5G equipment. The CFO has been requested to do a presentation at the next Executive Committee (EXCO) meeting.

Required:
You are the CFO and you are to prepare a presentation to advise EXCO of the cheaper financing option. Your presentation must include detail computations supporting your advice. **(15 marks)**

b) The management of COM is seeking advice from the finance team on whether or not to accept the proposed trade receivable factoring arrangement. The management is interested in knowing whether the factoring arrangement will benefit the company in totality.

Required:
You are the Financial Controller and the CFO has assigned you the responsibility to determine the net benefit of the factoring financing arrangement. Prepare a brief presentation on the net benefit of the proposed factoring arrangement to be submitted to the CFO. **(5 marks)**

QUESTION EIGHT

COM has not had any serious corporate governance issues that have raised concerns as to potential ethical conflicts. However, the Board of Directors has raised concerns about the fact that the Finance department does not have a separate code of conduct in view of the risks associated with their work. Some are proposing a rules-based approach instead of a principles-based approach.

Required:
The CEO has approached you as a Finance professional and a friend to assist him guide the Board since the issue was not discussed exhaustively and there is the likelihood that the matter would be part of the next Board meeting. Write a report discussing the merits and demerits of both ***rules-based approach*** and a ***principles-based approach*** to setting ethical standards.

(10 marks)

(Total: 50 marks)

SOLUTION TO QUESTIONS

SECTION A

QUESTION ONE

To: Board of Directors
From: Chief Adviser

Date: 11 November 2021

Subject: Performance analysis of products of COM using Boston Consulting Group Matrix

Introduction
Understanding the performance of each service within our portfolio of products will provide the basis for crafting our future strategic direction. This report presents the performance of COM products and classification using the Boston Consulting Group (BCG) Matrix. The report also makes recommendations for each product/service. Also included in the report is the appendix detailing the computations supporting the performance assessment and classification.

Overview of BCG Matrix
BCG Matrix is a portfolio performance assessment model which uses the net cash inflows and outflows to determine the performance of a product/service and subsequent classification. The cash inflows or generation by a product is represented by the relative market share while cash outflow or consumption is represented by the market growth rate.

Generally, market share is usually measured as the annual sales for a particular product or business unit as a proportion of the total annual market sales. The relative market share and the growth rate dimensions are divided into low and high.
In the BCG matrix, however, market share is measured as annual sales for the product as a percentage or ratio of the annual sales of the biggest competitor in the market. The mid-point of this side of the matrix represents a situation where the sales for the firm's product/service are equal to the annual sales of its biggest competitor. The mid-point for relative market share is 1, and therefore, a product with a value below and above 1 is classified as having low and high relative market share, respectively. If a product or business unit is the market leader, it has a 'high' relative market share. If a product is not the market leader, its relative market share is 'low'.

The market growth rate is measured by the change in sales between two years (for instance, 2019 and 2020) as a proportion of the previous year's sales. The mid-point for market growth rate is 10%, and any growth rate below that point is deemed low while a rate above is considered high.

Based on the combination of relative market share and growth rate, BCG model classifies the products as a star, question mark, cash cow or dog.

Performance and Classification of the Products

The five products within our company's portfolio are assessed and classified as follows:

- **Star product** – mobile money service is the star product of the company portfolio of services. According to the BCG matrix, a star is a product with both a high relative market share and growth rate. In terms of net cash flow, star product has neutral/zero net cash flow (i.e. star generate equal cash inflows and cash outflows). Mobile money is classified as a star since it has 3.25 and 21.80% as the relative market share and market growth rate respectively, hence the two dimensions of the matrix are high. These figures are above the mid-point of 1 and 10% of the relative market share and growth rate respectively, hence mobile money is a star. Stars are products in markets with high growth rates and relatively high market share. These products are usually the market leaders in their industry/market. They are the future cash cows.
- **Cash Cow Products** – The mobile data and mobile voice are the two cash cow products in the current COM portfolio of products. Cash cows are products that generate large net positive cash inflow because of high relative market share and low growth rate. Mobile voice has 2.75 and -0.95% high relative market share and low negative growth rates. Also, mobile data has a high relative market share of 4.88 and a negative growth rate of -5.49%. Cash cows are usually market leaders in matured markets. These products are described as cash cows because there is a low need for heavy investment while the market share is high, resulting in a higher cash inflow relative to low cash outflow.
- **Question mark product** – Fixed data is the question mark service within the company's portfolio. Question mark is a product or service with low relative market share and high growth rate. This product is exactly the opposite of a star since it has a large net negative cash outflow because of its high investment to meet the high growing demand but it has low relative market share. Question mark's cash flow needs are satisfied by the surplus cash flow from star products. The relative market share and growth rate for the fixed data service is 0.23 and 35.09% respectively. There is a high potential for fixed data to become a cash cow if the company can increase its market share.

- **Dog product** – the last product, fixed line, is the dog in the portfolio. Dog is a product with simultaneously low relative market share and market growth rate. These are products which either fail at inception or matured products in the matured market with low relative market share as well as low growth rate. The relative market share and growth rate of 0.003 and 6.57%, respectively. The performance of fixed line service reflects low demand by individuals and corporate bodies for that service. The future potential of this product appears negative.

Strategy recommendations for the products

The following strategic recommendations are proposed for the board consideration. The portfolio strategy recommendation for each of the products is as follows:

- **Invest/Build**. The company should make high or heavy investments in mobile money, the star product, to build on its market share. COM should market a star product aggressively to maintain or increase market share. A large continuing investment (i.e. invest/build) in new equipment and R&D will be needed.
- **Hold**. The company should make required and necessary investments in mobile voice and mobile data, the two cash cows, to hold or consolidate their existing market shares. That is, COM should defend and maintain stars market share. Spending on innovation (R&D) should be limited. The investment in mobile voice and mobile data will not be as high as that which is made in star product.
- **Build or Harvest**. The board may consider two alternative strategic directions for fixed data depending on the future prospect of the product. The board should build/make heavy investment in fixed data if it has the potential to grow its market share to become a future star. Alternatively, fixed data should be harvested (no further investment should be made) if there is no prospect of growing its market. The strategic choice is between investing a lot of cash to boost market share, where the question mark can grow to become a star, or to disinvest/ abandon the product, where there are no prospects of question mark becoming a star product in the future.
- **Divest**. The strategy recommendation for fixed line service, the dog, is for the board to divest or sell it. It is not necessary or required in the portfolio.

Conclusion

This report has presented the performance of the various services in the COM's portfolio. The mobile money service is the star product, mobile voice and mobile data are the cash cows, while fixed data is the question mark with fixed line being the dog.

(20 marks)

Appendix

Products	MTN	Nearest Competitor	Relative Market Share	Classification	2020 Market Sales	2019 Market Sales	Growth Rate	Classification	BCG Classification	Strategy
	'000	'000			'000	'000				
Mobile Voice	23,144	8,401	2.75	High	40,462	40,857	-0.95%	Low	Cash Cow	Hold
Fixed Line	1	300	0.003	Low	308	289	6.57%	Low	Dog	Divest
Mobile Data	19,147	3,926	4.88	High	26,470	28,006	-5.49%	Low	Cash Cow	Hold
Fixed Data	14	62	0.23	Low	77	57	35.09%	High	Question Mark	Build or Harvest
Mobile Money	10,075	3,100	3.25	High	15,500	12,726	21.80%	High	Star	Build

Workings
The workings below provide the detail computations for each service.
Relative Market Share = COM Market Share/Leading Competitor Market Share
Computations of the Relative Market Share of COM Services
Mobile Voice = 23,144/8,401 = **2.75** == High
Fixed Line = 1/300 = **0.003** == Low
Mobile Data = 19,147/3,926 = **4.88** == High
Fixed Data = 14/62 = **0.23** == Low
Mobile Money = 10,075/3,100 = **3.25** == High

Market Growth Rate = (Current Year Market Sales – Previous Year Market Sales)/ Previous Year Market Sales *100

Or
Market Growth Rate = [(Current Year Market Sales/Previous Year Market Sales) - 1]*100
Mobile Voice = (40,462-40852)/40,852 * 100 = **-0.95%** == Low
Fixed Line = (308 – 289)/289 = **6.57%** == Low
Mobile Data = (26,470 – 28,008)/28,008 = **-5.49%** == Low
Fixed Data = (77 – 57)/57 = **35.09%** = = High
Mobile Money = (15,500 – 12,726)/12,726 = **21.80%** == High

EXAMINER'S COMMENTS

This question was on the application of the Boston Consulting Group (BCG) Matrix in relation to the case. The requirement included an assessment and classification of the various services provided by COM Group company and an appendix showing details of computations. This was a popular question. Most of the candidates were able to classify the services correctly as star, cash cow, question mark and dog. They were able to recommend appropriate strategies for each of the product (service). However, some of the candidates were not able to support their answers with relevant computations.

QUESTION TWO

The Draft Presentation

In COM's effort to achieve its strategic objectives, a number of factors outside and inside COM present a major downside risk to the company. In this presentation, factors that have potential to militate against the company's competitive advantage are presented in two broad categories – factors in the general environment (i.e. the macro environment) which pose significant threats and factors within the company which show its weaknesses.

General External Environmental Factors - Threats

Since the board is focused on understanding the general external environmental factors that may negatively affect the strategic position of the company, the PESTEL model is used for the presentation with emphasis on the threats arising from those factors.

Economic Factors

These factors collectively determine the general financial health of an economy or a country such as Ghana. The following are the major economic factors posing a threat to the strategic position of the company:

- **Negative impact of Covid-19 on the economic** – Covid-19 pandemic has negatively impacted on the general demand for goods and services in the economy. The impact of the pandemic on COM's operations has been varied and mixed. While there has been significant surge in demand for data due to more businesses operating from home, the demand for voice has been affected negatively as there has been a shift from voice to data. This will negatively affect the revenue stream from voice service.

- **High Interest Rates** – The interest rates remained relatively high despite the decline witnessed since the new Government was voted into office. The average interest rate is current 21%. COM has a huge GH¢2.47 billion in bank loan and lease obligation with GH¢327 million in interest cost for the year 2020. The high interest rate significantly erodes the operating profit of the company. Further reduction in the interest can allow the company to take new facility to replace the expensive existing debt capital.

Political Factors

- **Threat of e-waste tax imposition** – the Government is threatening to impose tax on telecommunication operators to raise the necessary funds to deal with electronic waste menace in the country. The Government has identified mobile phones as one of the major contributing factors to the rising electronic waste. If the policy is translated into a legislation, that will increase the taxes paid by the telecommunication operators and will ultimately affect the value of COM as more cash flow is paid out to the Government.

Social Factor

- **SIM Box Fraud** – this anti-social behaviour by some few unscrupulous persons involved in diverting or terminating incoming international calls as local calls. The rate charged on the international incoming calls is higher than local calls and terminating international calls as local calls results in high revenue loss to the telecommunication companies. More specifically, given that COM is the market leader, more of its international calls are affected hence higher revenue loss relative to its competitors.

- **Lower usage/patronage of mobile money services by women** – From the facts of the case, an important social trend is the lower rate of mobile money use among women who control most petty trades and businesses. This poses a major threat to mobile money penetration and a loss of potential income stream from the mobile money segment of COM.

- **High Illiteracy rate among women** – one of the major contributing factors to relatively low patronage of mobile money services by women is the high illiteracy rate, especially with respect to digital skills. The lower rate of mobile money use by women has been attributed to lower digital skills and literacy, fear of falling victim to mobile money fraud, and skepticism about mobile money in general. The high illiteracy rate among women will impact negatively on the revenue from mobile money services that COM can generate.

Legal Factors

- **Declaration of COM as Significant Market Power (SMP) by NCA** – The company has been declared as SMP and with this status, NCA has imposed some legal restrictions on the company. Among the very critical restrictions are an application of a 30% asymmetrical interconnect rates for two (2) years subject to market response, in favour of the disadvantaged operators, in accordance with the law and setting of floor/ceiling pricing on Voice, Data, SMS, Mobile Money, etc. These restrictions limit the price that the company can charge thereby caping the expected revenue.

Internal environmental factors – Weaknesses

The second part of the presentation focuses on internal weaknesses that may prevent the company from achieving its strategic objectives. The following are the weaknesses that the company must overcome to achieve its strategic objectives and sustain its competitive advantage.

- **Poor performance in the fixed line services** – from the product performance analysis using BCG Matrix, it is clear that the company performs very poorly in the fixed line segment of the market relative to its competitors. Although the fixed line service has low market growth at 6.63% with 308,000 subscribers as at December 2020, COM has a marginal subscriber base of 1,000, representing 0.48% of the absolute market share. The company can improve its performance in this segment, especially because the significant market power does not affect this segment.

- **Dominant/ Significant Market Power (SMP) status** – SMP declaration by NCA comes with a major weakness. The prices the company can charge on the products in which it has attained significant market power is effectively restricted. This means that the company cannot charge prices on Voice, Data, SMS, Mobile Money above the ceiling as determined by NCA.

- **Performance of the company's shares since listing** – the shares were sold at GH¢0.75 per share during the Initial Public Offering (IPO), and as at the close of 31 December 2020 the shares were trading at the price of GH¢0.64 resulting in the price loss of -0.11 pesewas below the IPO price. This has resulted in a total loss of value by the shareholders of GH¢1.35 billion. The company's market performance is in decline and this is supported by a decline in Price/Earnings ratio from 8.54 in 2019 to 5.66 in 2020. This is likely to trigger disinvestment/selling of COM shares by existing shareholders which will result in further decline in the share price. This will affect the value of COM negatively.

- **Poorer utilisation of its total assets in generating revenue**. The Asset Turnover Ratio from 2016 to 2020 reveals a downward trend in how the company is using investment made in assets to generate revenue which ultimately affects the overall profitability of COM in terms of its operating profit. The Asset Turnover Ratio indicates that the company generated GH¢1.01 and GH¢0.43 in revenue for every GH¢1 invested in assets in 2016 and 2020 respectively. This amounts to 135% drop in revenue per one unit of investment in the total assets of the company between 2016 and 2020.

- **Declining profitability relative to the capital employed**. The Return on Capital Employed (ROCE) ratio from 2016 to 2020 reveals a very disturbing downward trend. The ROCE from 2016 through to 2020 are 32%, 29%, 27%, 18% and 16% respectively. ROCE is driven largely by the product of Asset Turnover Ratio (ATR) and Operating Profit Margin, and since ATR is in a downward trend, that reflects the poor profitability performance. This is worrying because ROCE measures the overall profit available to long term capital providers.

- **Increasing using of debt**. The company's gearing ratios, represented by Debt/Equity Ratio and Interest Cover ratio points to a deteriorating gearing situation of the company. The company is becoming increasingly geared, and this presents a major weakness to the company, especially in the face of declining profitability. First, Debt/Equity ratio for 2016, 2017 and 2018 were 14%, 31% and 27% respectively while the ratio was 76% and 63% for 2019 and 2020. Secondly, Interest Cover was 16x, 45x, 25x, 5x and 7x for the years starting 2016 through to 2020, respectively. The trend clearly shows the worsening gearing situation of the company.

(10 marks)

Although ratios were not specifically required, some of COM's weaknesses can be revealed by the trends that ratios revealed. Candidates are to be guided by the ratios in assessing the weaknesses of a company.

LIQUIDITY RATIOS	**2020**	**2019**	**2018**	**2017**	**2016**
Current Ratio	0.96	0.96	1.00	0.79	0.60
Cash Ratio	0.08	0.09	0.35	0.20	0.17

EFFICIENCY RATIOS					
PPE Turnover ratio	1.05	1.00	1.38	1.28	1.25
Assets Turnover ratio	0.43	0.52	1.00	0.99	1.01
Inventory turnover days	18	6	3	6	27
Trade Receivable Days	29	27	32	29	42
Trade Payable Days	420	383	245	266	238

PROFITABILITY RATIOS					
ROCE (Assets Turnover Ratio * Operating Margin %) or (PBIT/Capital Employed*100)	16.18%	18.36%	26.66%	28.53%	31.73%
ROA	9.82%	10.12%	17.90%	20.29%	19.68%
ROE	41.80%	35.95%	31.31%	37.38%	33.41%
Operating Margin %	38.05%	35.29%	26.64%	28.74%	31.54%
EBITDA Margin %	52.57%	50.76%	37.63%	39.25%	40.86%
Gross Profit Margin %	81.63%	80.59%	67.81%	65.38%	66.40%
Net Profit Margin %	23.08%	19.45%	17.89%	20.44%	19.56%

GEARING RATIOS					
Debt/Equity Ratio	63.33%	76.12%	27.09%	31.25%	13.59%
Gearing Ratio (Debt/Capital Employed)	38.77%	43.22%	21.32%	23.81%	11.97%
Interest Cover	7.03	4.74	25.05	44.81	16.14

EXAMINER'S COMMENTS

This question was on the explanation of factors that are negatively impacting the strategic position of Com Ltd from the general environment and internal perspective. Although the question seemed straightforward, the candidates did not do well in this question. Some of the points that the candidates missed from the external environment include:

- Economic factors such as high interest rates.
- Political factors such as the threat of e-waste tax.
- Social factors such as Sim Box fraud and high literacy rate among women.
- Legal factors – declaration of Com as significant market power by the National Communication Authority.

The internal environmental factors include:

- Poor performance in the fixed line services
- Dominant/significant market power status
- Poor utilisation of its total assets in generating revenue
- Increasing use of debt.

QUESTION THREE

Evaluation of the competitive environment of COM Ghana.

The company's competitive environment refers to its industry, and therefore to analyse it, Porter's Five Forces Model is used. The model uses five forces to evaluate the competitiveness of industry. These forces are **threat of new entrants, rivalry among existing firms, buyers' bargaining power, suppliers' bargaining power, and the threat of substitute products**. Each of these forces at play in the given case scenario is presented below.

Threat of New Entrant

Threat of new entrants is the factor that make it difficult for new companies to enter an industry. Generally, since the deregulation of the Ghana telecom industry, few companies have secured licences to operate as mobile network operators. Throughout the industry evolution, there had not been a time when there were more than six mobile operators. This is indicative of generally high barriers to entry. The following are some factors creating barriers to entry:

- **Switching cost** – over the years since deregulation, the switching costs facing customers in changing from one network operator to another has gradually reduced, leading to increasing competition among the operators. Two major developments have lowered switching costs facing consumers in the telecom industry. First, Mobile Number Portability (MNP) policy allows mobile network subscribers to change mobile network service providers while retaining the same mobile phone number. This eliminates any cost and fear by a subscriber from losing his/her original number. Secondly, the enforcement of Significant Market Power (SMP) by the regulator will maintain competitive pricing in the industry. The increasing competition and the declaration of COM as SMP have resulted in the company charging lower prices for its services.
- **Capital requirement** – Perhaps one of the major reasons that accounts for the low entry of new companies in the telecom industry is the huge amount of fixed, licensing and operating capital required. The cost of various licences is significantly high and investment require in property, plant and equipment very high as well. COM has over GH¢5.77 billion in non-current assets, which points to high capital requirements. This barrier has prevented many firms from joining the industry, without which there would been more competition, thereby putting further downward pressure on the prices.
- **Government licensing regulation**. The Government, through NCA grants licenses to operators and the licensing regime, is highly regulated, thereby restricting the number of companies that are given licences. This has contributed to limiting the number of new entrants to the telecom industry.

Rivalry among existing firms

The rivalry among existing firms assesses the extent of the competition among the existing mobile operators. The main factors shaping the rivalry in the telecom industry include the following:

- **Low switching cost**. Many subscribers are able to change from one operator to another operator through a simple process of mobile portability. The facts indicate the high level of operator change by the customers. Low switching cost raises competition among telecom operators with respect to attracting and retaining subscribers. This will affect the overall profitability of the industry and since COM is generally the market leader, it stands to suffer lower profitability compared to its rivals.
- **High fixed cost** – this is a corollary of high capital requirement point made under threat of new entrants. This will engender intense competition for subscribers for mobile network operators to achieve significant cost reduction in the average fixed cost. The end result is lower profitability for all the competitors in the industry, including COM.
- **Number of mobile operators**. There are currently four main operators in the telecom industry, and that should ordinarily lead to fierce rivalry but because of COM commanding leadership in the provision of most services competition could have been more intense than it is presently.

Bargaining power of buyers,

This deals with the extent to which the subscribers are able to bargain the prices of the various products/services on the offer in the industry. The main factors impacting the bargaining power of buyers include the following:

- **Low switching costs**. Given that the customers are generally facing minimal to zero cost in changing or switching operators, consumers are indirectly able to influence how much price could be charged by the operators for their services. Indeed, a cursory observation of the Ghana telecom industry shows the increasing number of free promotions being made by the companies in that space. This is adding to high competition in the industry.
- **Undifferentiated services/standardised services**. The telecommunication industry provides generally standardised services such as mobile voice and data and fixed line and data as well as mobile money. These are services provided generally by the mobile operators which any existing or potential subscribers can access. This accounts for continuous aggressive promotional activities by all the telecom operators to attract and retain customers. All this adds to the competition in the industry.
- **Buyer information**. The final point is the fact that consumers now have access to information on the pricing of the various services provided by telecom operators in Ghana. Customers, therefore, are able to shop around for the best and value for money, and this situation creates a higher bargaining power for the subscribers.

Bargaining power of suppliers

The suppliers are the various companies that provide telecom operators with their input which facilitate the creation of the various services in the industry. The following are the factors affecting the bargaining power of suppliers:

- **Number of suppliers**. The supplying industry is dominated by few major suppliers of the various software and hardware infrastructure. The case identified the major long-established players in the telecoms infrastructure sector as Ericsson, Nokia Siemens Networks (NSN), Alcatel-Lucent, Motorola and recently Huawei. This is expected to result in the higher bargaining power of the suppliers, which will put more pressure on the telecom operators to drive subscriber numbers to be able to cope with any price increases.
- **Telecom operators are becoming important customers of the supplying industry.** One of the main competitive pressures on the telecom infrastructure suppliers is the continued consolidation amongst telecom operators across national borders. This consolidation gives operators increased purchasing volumes by the telecom operators. All the four mobile operators in Ghana are subsidiaries of parent companies who are big mobile operators in different continents of the world.
- **There are no substitutes**. One major service without substitute supplies is the tower services. The telecom companies depend on the services of tower companies in providing connectivity for voice and data services. In the absence of the substitute that will make bargaining power of suppliers high.

Threat of substitute products

The substitute products/services are the alternatives to the mobile telecom operators. There are substitute services from non-mobile operators and over-the-top service providers. The main factors affecting threat of substitute products include:

- **Existence of substitute products**. The major substitute for mobile voice and fixed line is the increasing growth of Over-The-Top (OTT). The OTT voice mobile applications include WhatsApp, Viber, Skype and FaceTime. The availability of the OTT is put pressure on the voice services provided by the telecom operators. There are also substitute data services from other non-mobile operators, including Internet Service Providers (ISP), Broadband Wireless Access Providers (BWAP) and Value-Added Service Providers (VAS).
- **Low switching cost**. Customers are able to switch easily and without much cost to substitute products/services. This further puts competitive pressure on the industry.

(10 marks)

EXAMINER'S COMMENTS

This question required the candidates to evaluate how competitive environment of Com will affect the realisation of the company's strategy. This was popular, and the performance of candidates was satisfactory.

Most of the candidates were able to identify factors such as; the threat of new entrants, bargaining power of buyers, bargaining power of suppliers, threat of substitute product and rivalry among existing firms. However, most of the candidates could not relate the factors in the case to the various competitive forces.

QUESTION FOUR

Presentation of the factors that are considered in assessing independence of independent non-executive directors.

A board of directors consists of both executive and non-executive directors. Generally, directors who do not hold office of employment in the company are described as non-executive directors (NED). NEDs are directors who do not have any executive management responsibilities in the company.

Some NEDs are described as independent directors if they satisfy certain conditions. An independent director is a director who:

- has no link to a special interest group or stakeholder group, such as executive management, other employees of the company, a major shareholder, a supplier or a major supplier or customer of the company
- has no significant personal interests in the company, such as a significant contractual relationship with the company.

Given the above definition of an independent director, it is impossible for an executive director to be independent, because he or she has a direct link with executive management.

Only non-executive directors can be independent. However, not all NEDs are independent. A NED is not independent when there are relationships with the company or circumstances that would be likely to affect the director's judgement.

Independent directors are defined in various codes and principles of corporate governance. Definitions of 'independent director' vary between countries and codes.

Independent NEDs

NEDs are either independent or not independent. Deciding whether a NED is independent may be a matter of judgement, but the Code of Best Practices (in common with corporate governance codes in other countries) states that a NED would be considered independent if he or she:

1. is not a substantial shareholder in the company;
2. has not been employed by the company in any executive capacity in the company for the preceding three years
3. is not a member of the immediate family of an individual who is or has been employed in an executive capacity in the company (or group) in the past three financial years;
4. is not a professional adviser or consultant to the company;
5. is not a major/significant supplier or customer of the company;

6. has no significant contractual relationship with the company that might interfere with his/her independence;
7. is free from any other relationship with the company which may interfere with his/her capacity to act in an independent manner.

   The distinction between independent and 'not independent' NEDs may be important in regard to the composition of the membership of board committees. A board may prefer to appoint independent NEDs, rather than a 'not independent NEDs', to board committees.

(10 marks)

EXAMINER'S COMMENTS

This question was on the factors to be considered in selecting independent Non – Executive Directors. It was a popular question, and most of the candidates produced good answers.

(Total: 50 marks)

SECTION B

QUESTION FIVE

a) **Competitive Analysis** - Who are the main competitors?
Competitor analysis examines or evaluates the main and direct competitors in the telecommunications industry.

COM faces direct competition from FoneTel, Nirtel and Gotel who provide rival services in voice and data. COM is the market leader in all the services except in voice fixed line and data fixed line where FoneTel is the market leader. There are rivals providing data and other services including 48 internet service providers, 3 Broadband Wireless Access Providers and 55 Value Added Service.

In the mobile money services, apart from the competition from mobile network operators, there is competition from Zeepay Mobile Money and GCB G-Money by Zeepay Ghana Ltd, a Fintech, and GCB Ltd, the largest local bank in Ghana, respectively.

(5 marks)

b) **Market analysis** - Size, segmentation, growth/decline
The main themes to be discussed under market analysis for the business plan extract should include the following:

- Market size
- Market Segmentation
- Market growth/decline for the various products

The mobile network operators provide several telecommunication services to the customers in the industry. The mobile voice solution allows customers to make and receive calls on their mobile handset. Mobile voice penetration rate signifies that an average Ghanaian uses more than one network. The service provides the essential tool for communication and does not require any sophisticated skills on the part of the customer. The fixed-line is a service that allows users to make and receive calls on fixed telephone devices, commonly used by corporate bodies. The next product is data which enables the user to connect to the internet. Data solution comes in two main ways, mobile data and fixed data.

The telecommunication market has four main segments: mobile voice, mobile data, fixed line, fixed data, and mobile money with total subscriber base as at close of 2020 40.46m, 26.47m, 0.31m, 0.08m and 15.50m respectively. The growth of each segment between 2019 and 2020 were as follows: mobile voice (-0.97%), mobile data (-5.48%), fixed line (6.63%), fixed data (34.18%), and mobile money (21.80%). The industry has four sub-sectors which include: 4 mobile network operators, 48 internet service providers, 3 Broadband Wireless Access Providers and 55 Value Added Service.

(5 marks)

EXAMINER'S COMMENTS
This question required the candidate to prepare an extract of a business plan on competitive analysis and market analysis. Although most of the candidates attempted the question, the performance was poor.

A few of the candidates were able to explain the competitive analysis of Com Ltd by identifying the competition from FoneTel, Nirtel and Gotel who provided rival services in voice and data. They also identified providers of mobile money services such as Zeepay mobile money and GCB G- money.
With respect to the market analysis, a few of the candidates were able to identify the service as mobile voice, fixed line and data solution.

QUESTION SIX

Board Presentation
COM is exposed to a number of business risks that threaten its competitiveness, and the management and board must take measures to contain. These risks include the following.
Market Risk
Market risk is the risk from changes in the market price of key items, such as the price of key commodities. Market prices can go up or down, and a company can benefit from a fall in raw material prices or incur a loss from a rise in prices. A company might be able to pass on higher prices of raw materials to the customer by raising the prices for its own goods or services. However, if it puts its prices up, there might be a fall in total demand from customers. Higher prices, leading to falling sales volume, could result in lower profits or losses.
In the case of COM, the main source of market risk is the imposition of measures, including price ceiling on the company by the regulator following declaration of the company as Significant Market Power (SMP). The specific price measures include:

- With immediate effect, there will be an application of 30% Asymmetrical Interconnect rates for two (2) years subject to market response, in favour of the disadvantaged operators, in accordance with the law.
- Set floor/ceiling pricing on Voice, Data, SMS, Mobile Money, etc.
- Review and approve all pricing by COM as required by law.
- Require COM not to have differential prices for on-net and off-net transactions.
- Ensure various operator vendors are not subject to exclusionary pricing or behaviour.

Credit Risk

Credit risk is the risk of losses from bad debts or delays by customers in the settlement of their debts. All companies that give credit to customers are exposed to credit risk. The size of the credit risk depends on the amount of receivables owed to the company, and the 'credit quality' of the customers.

Credit risk is a major risk for companies that have significant trade receivables is a major part of its financial position.

COM faces credit risk since it has over GH¢475 million in trade receivables as at the close of 2020. If debtors default, that will affect its profitability since it must write off such debt or provide for impairment allowance.

Liquidity Risk

Liquidity risk is the risk that the company will be unable to make payments to settle liabilities when payment is due. It can occur when a company has no money in the bank, is unable to borrow more money quickly, and has no assets that it can sell quickly in the market to obtain cash. Companies can be profitable but still at risk from a liquidity shortage.

Liquidity risk arises from the mismatch between current assets and current liabilities. COM appears to be facing potential liquidity risk since the company current ratio for all the years, except 2018, was below 1 and a five-year average ratio was 0.86:1. In the monetary terms, the current assets were exceeded by current liabilities amounting to a five-year average of GH¢225 million.

Technological risk

Technological risk could arise from changes in technology (or inadequacy of technical systems in use). When a major technological change occurs, companies might have to make a decision about whether or not to adopt the new technology. If they adopt the new technology too soon, they might incur higher costs than if they waited until later. If they delay adopting the new technology, there is the risk that a competitor will take advantage and use the technology to gain market share.

Rapid technological changes and ineffective information technology infrastructure may diminish the company's ability to support its customer's current and future needs in an efficient and effective manner. This will, in turn, affect the company's quality of service and ability to pursue new business opportunities which use technology to improve efficiency and further require the use of new technology as an enabler for new products and services.

Technology was identified as one of the factors affecting mobile money penetration. The factors militating against further penetration of mobile money include mobile money fraud and poor mobile connectivity or downtime, especially in the remote areas of Ghana where telecommunications infrastructure is not up to scratch. Even in Accra, the nation's capital city, network operators have poor network in certain suburbs such that when a call is made, the subscriber gets feedback, "the number you are calling cannot be reached", when indeed the phone is on.

Legal Risk and Regulatory Risk

Legal risk, which includes regulatory risk, is the risk of losses arising from failure to comply with laws and regulations, and also the risk of losses from legal actions and lawsuits.

Breaches of legislation, regulations or codes of conduct can have very serious consequences for organisations. Risks include financial or other penalties (including ultimately closedown), having to spend money and resources in fighting litigation and loss of reputation. Key areas include health and safety, environmental legislation, trade descriptions, consumer protection, data protection, and employment. Legal risks may therefore be strongly correlated with other risks if a business is potentially affected by legislation that relates to those other risks, for example health and safety or environmental legislation.

The Telecom industry is heavily regulated. Currently, there are two main regulators of the sector – NCA regulates communication related activities while Bank of Ghana regulates mobile money services. Any breach of the laws and regulations of these regulators can result in severe sanctions and legal actions. COM already has been cited for the breach of significant market power rules for which appropriate regulatory actions have been taken by NCA against COM. COM unsuccessfully contested the measures in the court.

Gearing Risk/Financial Risk

Gearing risks are the risks of financial difficulty through taking on excessive commitments connected with debt. However, the links between gearing and risk are not straightforward. Pecking order theory suggests that managers will prefer to use debt rather than equity finance to finance new investments or expansion, since that sends a signal to finance providers that they are confident about the future success of the company.

The company is facing a rising debt/equity ratio which has risen to 63% in 2020 from a relatively very low figure of 14% in 2016. The gearing ratio from income statement measured by Interest Cover is also trending downwards from 16x in 2016 to 7x in 2020, a decline of 129%. There is a potential gearing risk that the company may not be able to service it is long term debt and that operating profit may not be sufficient to cover finance cost.

(10 marks)

EXAMINER'S COMMENTS

This question was on identifying four key business risks and assessing the impact of the risks on Com Ltd. Most of the candidates were able to explain business risk types, including market risk, credit risk, liquidity risk, technological risk, legal/ regulatory risk, and gearing/ financial risk.

QUESTION SEVEN

a) Presentation on the Borrow to Buy or Lease Options

Borrow to buy or lease are the two common financing options available to a company to finance the acquisition of fixed assets. The present value of the overall costs of the two options are compared and the option with a lower cost is preferred.

Per the information provided on the borrow to buy and the lease options and based on the computations provided below, financing the 5G equipment with the option of borrow to buy is cheaper by GH¢2.71 million compared to the lease option. Therefore, I will advise EXCO to adopt borrow to buy to finance the intended acquisition of the equipment.

Supporting computations

Evaluation of Borrow to buy option

1. Determine the annual repayment of the loan using the annuity formula. The annual repayment amount will help in constructing an amortisation schedule for the loan.

   $$\textbf{PV = PMT } \left[\frac{1-(1+r)^{\wedge}-n}{r}\right]$$

   Where:
   r = cost of capital
   n = number of years
   PMT = annual repayment

Variables:
r = 20%
n= 5 years
150 million

150 million = PMT $[\frac{1-(1.2)^\wedge(-5)}{0.2}]$

PMT = 150 million/2.9906
PMT = GH¢50.16 million

2. Construction of amortisation schedule

Loan Amortisation schedule				
Year	**Opening balance**	**Interest @ 20%**	**Repayment**	**Closing Balance**
	GH¢ million	**GH¢ million**	**GH¢ million**	**GH¢ million**
1	150.00	30.00	(50.16)	129.84
2	129.84	25.97	(50.16)	105.65
3	105.65	21.13	(50.16)	76.63
4	76.63	15.33	(50.16)	41.80
5	41.80	8.36	(50.16)	-

3. Calculation of Capital Allowance and Tax Savings on Capital Allowance

Capital Allowance = 150 million * 25% = GH¢37.50 million

Annual Tax Savings on capital allowance = 37.5 million * 25% = GH¢9.38 million

4. Tax Savings on Interest Cost

Year	**Interest @ 20%**	**Tax savings on interest cost: (Interest Cost * Tax Rate - 25%)**
	GH¢m	**GH¢m**
1	30.00	7.50
2	25.97	6.49
3	21.13	5.28
4	15.33	3.83
5	8.36	2.09

6. Present Value of borrow to buy option

Outright Purchase Option						
	0	**1**	**2**	**3**	**4**	**5**
	GH¢m	**GH¢m**	**GH¢m**	**GH¢m**	**GH¢m**	**GH¢m**
Initial Cost	(150.00)					
Tax Savings on capital allowance		9.38	9.38	9.38	9.38	-
Tax savings on interest payment		7.50	6.49	5.28	3.83	2.09
After tax proceeds on disposal						9.75
Total cash flow	**(150.00)**	**16.88**	**15.87**	**14.66**	**13.21**	**11.84**
Discount factor	1.0000	0.8333	0.6944	0.5787	0.4823	0.4019
PV	(150.00)	14.06	11.02	8.48	6.37	4.76
NPV	**(105.31)**					

Evaluation of Lease option

1. Determine the Right of Use Asset and the Lease Liability using the annuity formula. The Lease Liability amount will help in constructing an amortisation schedule for the loan. The aim is to determine interest to which the company is entitled to tax savings on the deductibility of interest for tax purposes.

   PV = PMT $\left[\frac{\mathbf{1-(1+r)^{\wedge}-n}}{\boldsymbol{r}}\right]$

   Where:
   r = cost of capital
   n = number of years
   PMT = annual lease payment
   PV = the Right of Use (ROU) Asset and Lease Liability

   Variables:
   r = 20%
   n= 5 years
   PMT= GH¢49.6 million

   PV = 49.60 $\left[\frac{\mathbf{1-(1.2)^{\wedge}(-5)}}{\mathbf{0.2}}\right]$

   PV = 49.60 million * 2.9906

   PMT = GH¢148.33 million

2. Construction of amortisation schedule

Lease Liability Amortisation schedule				
Year	Opening balance	Interest @ 20%	Repayment	Closing Balance
	GH¢m	GH¢m	GH¢m	GH¢m
1	148.33	29.67	(49.60)	128.40
2	128.40	25.68	(49.60)	104.48
3	104.48	20.90	(49.60)	75.78
4	75.78	15.16	(49.60)	41.33
5	41.33	8.27	(49.60)	-

3. Tax Savings on Interest Cost

Year	Interest @ 20%	Tax savings on interest cost (Interest Cost * Tax Rate - 25%)
	GH¢m	GH¢m
1	29.67	7.42
2	25.68	6.42
3	20.90	5.22
4	15.16	3.79
5	8.27	2.07

4. Calculation of Capital Allowance and Tax Savings on Capital Allowance

Capital Allowance = 148.33 million * 25% = GH¢37.08 million

Annual Tax Savings on capital allowance = 37.08 million * 25% = GH¢9.27 million

5. Present Value of Lease option

Lease Option						
	0	1	2	3	4	5
	GH¢m	GH¢m	GH¢m	GH¢m	GH¢m	GH¢m
Lease payments	-	(49.60)	(49.60)	(49.60)	(49.60)	(49.60)
Tax Savings on capital allowance		9.27	9.27	9.27	9.27	-
Tax savings on interest payment		7.42	6.42	5.22	3.79	2.07
Total cash flow	**-**	**(32.91)**	**(33.91)**	**(35.11)**	**(36.54)**	**(47.53)**
Discount factor	1.0000	0.8333	0.6944	0.5787	0.4823	0.4019
PV	-	(27.43)	(23.55)	(20.32)	(17.62)	(19.10)
NPV	(108.01)					

The cost of the lease option exceeds cost of borrow to buy by GH¢2.71 million

(15 marks evenly spread)

b) Presentation of the costs and benefits of trade receivable factoring

Analysis of Proposed Factory		
Credit Sales	1,900,000,000.00	
Trade Receivables (90 days credit) (1.9b*90/365)	468,493,150.68	
Trade Receivables under factoring (60 days credit) (1.9b*60/365)	312,328,767.12	
Present Cost of COM Managing Receivables		
Interest cost on Loan (468,493,151*20%)		93,698,630.14
Administration Costs		24,000,000.00
Total Cost on Present Policy		**117,698,630.14**
Costs of factoring		
Finance Cost on Finance Provided by Factor (80% Finance) (312,328,767*80%*18%)		44,975,342.47
Finance Cost on the remaining 20% unfactored (312,328,767*20%*20%)		12,493,150.68
Commission on Advance Finance by Factor (312,328,767*80%*1%)		2,498,630.14
Receivable Management Fees (1.5% of 1.9b)		28,500,000.00
Total Cost of Factoring		**88,467,123.29**
Net Gain/Cost Savings due to Factoring		**29,231,506.85**

Alternative Method	
Effect of reduction in collection period (90 - 60 days) (90-60)/365 *GH¢1,900,000,000*20%	31,232,876.71
Savings in interest cost of factor finance 60/365 * GH¢1,900,000,000*80% * (20 – 18)%	4,997,260.27
Cost of factor's services 1.5% * GH¢1,900,000,000	(28,500,000.00)
Commission on Advance Finance by Factor (312,328,767*80%*1%)	(2,498,630.14)
Savings in company's administration costs	24,000,000.00
Net Gain/Cost Savings due to Factoring	**29,231,506.85**

(5 marks evenly spread)

EXAMINER'S COMMENTS

This question had two parts. The first part was lease versus buy analysis, and the second part was the benefit of factoring financing arrangement. This is where most candidates lost marks. Most of them demonstrate the poor transfer of knowledge from knowledge acquired from financial management.

QUESTION EIGHT

The Report

To: Board of Directors

From: Chief Finance Officer

Date: 11 November 2021

Subject: The merits and demerits of principles-based ethics codes and rules-based ethics codes

Introduction

This report discusses the merits and demerits of principles-based code of ethics and rules-based code of ethics for the Finance department given the risky nature of their work. Each of the approaches to developing code of ethics are discuss below by considering the merits and demerits of the two approaches.

Rules-Based Code of Ethics

Rule-Based code of ethics is externally driven by the legislation of the rules that govern ethical behaviour. That is, a regulatory body can issue a code of ethics for accountants, including the COM Finance department that contains specific rules about how they should act in specific situations. This would be a rules-based code of ethics.

Merits of Rules-based Code of Ethics

- The COM Finance department does not choose a rules-based approach to code of ethics. The company must comply with the rules established in the code of ethics.
- Rules-based approach establishes the same minimum standards for the development of a code of ethics. This will allow stakeholders dealing with the company to determine whether it complies with the minimum requirements per the rules.
- Investor confidence in the information churned out on the stock market might be improved since the Finance department is required to comply with recognised rules of ethics.

Rules-based code of ethics has several weaknesses:

- First, there are many different situations that an accountant might face where an ethical decision must be made. Circumstances can be complex and varied. It is impossible to plan for every type of ethical problem that will arise and make a rule in advance (without knowing the exact details of the situation) of what course of action the accountant must take.

- Over time, the type of situations (ethical dilemmas) that an accountant might face could change as the business environment changes. It might therefore be necessary to review and update the rule book regularly.
- Ethical views differ between countries and cultures. Behaviour that might be considered slightly unethical in one country might be perfectly normal and acceptable in another country. A rule book cannot easily make allowances for national and cultural differences in ethical viewpoint.

Principles-based code of ethics

A principles-based code of ethics for accountants is a code that specifies general principles of ethical behaviour and requires the professional accountant to act in accordance with the principles. The accountant is required to use judgement in deciding whether in each case a particular course of action is a 'proper' or 'ethical' one.

Merits of Principles-based approach to code of ethics

- The main reason for having a principles-based code of ethics is that it is impossible for a rules-based code to cover every possible ethical situation that may occur. There will be occasions when judgement has to be used to decide what the appropriate application of the ethics code should be. In other words, the key principles can be applied to decide what an appropriate ethical decision should be.
- Appropriate for the company. A principles-based approach allows COM to develop its own approach to a code of ethics that is appropriate for its circumstances within the limits laid down by the principles.
- Less costly. It is less burdensome in terms of time and expenditure. Usually, the rules-based code of ethics may set certain standards and rules that require organisational changes with cost implications.
- Flexibility. A principles-based approach can allow for transitional arrangements and unusual circumstances.

Demerits of Principles-based approach to code of ethics

- Broadness of principles. Principles may be so broad that they are difficult to apply in practice and also to determine the boundaries of ethical behaviour.
- Non-binding – Finance department may perceive a principles-based approach to the code of ethics as non-binding and may fail to comply without giving an adequate or perhaps any explanation.
- A rules-based code might seem desirable so that the 'correct' course of action is clear; but it is not practical.

(10 marks)
(Total: 50 marks)

EXAMINER'S COMMENTS

This question focused on the rules-based and principle–based approach to set ethical standards. The performance was average. The aspect where most candidates lost marks was the merits and demerits of the approaches.

CONCLUSION

The future candidates for this paper should prepare well for the examinations. They should study the manual published by the Institute.