



## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 2 December 2024. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### **Malimali Bank PLC**

Malimali Bank Plc is a wholly owned private bank established in 2006. It was listed in the securities Exchange in 2019. The bank has the largest agriculture lending portfolio in the country of over Sh.7.35 billion and a market share of over 43 percent in agriculture lending within the country making it a leader in the agricultural line lending. The board of directors of Malimali Plc developed a vision of the bank with rallying call being “to be a leading bank that is customer-centric driven with a competitive return to shareholders” and its mission “to provide competitive and innovative financial solutions through digital transformations to achieve distinctive customer experiences”.

Malimali Bank Plc strives to create value to the society through access to credit, deepening the financial inclusion as well as coming up with a credit culture that is value driven in ensuring that the banks’ priority is long term consistent performance. This strong credit culture helps Malimali Bank PLC manage credit risk effectively and give it a competitive advantage in the market place. This is done through various corporate social responsibility programs to enable it achieve its societal objectives.

The board of management of Malimali Bank PLC has approved a program to venture in financing fisheries cooperatives in Mululu region. Fishing is the main economic activity in the region but it is mainly small-scale in nature. The bank has begun to expand its fisheries and aquaculture sector portfolio. The government is known to be supportive of the Blue Economy and the bank has noted this potential. Consequently, the region being close to the lake has attracted this form of financing with supporting research indicating that the potential is enormous and has not been tapped.

The bank has financed projects that are worth Sh.1.69 billion, covering small scale to large scale fishing businesses and is expected to increase its lending to the fisheries industry to at least Sh.3 billion by December 2024.

The credit risk department of the bank has assessed and approved the applied facility for the purpose of purchasing 50 Glassfibre Reinforced Plastic (GRP) fishing boats and engines by 50 fisherfolk organisations for small-scale fishing activities worth Sh.2 billion. The bank will retain ownership of the boats until the loans are fully settled and has approved another facility of Seaweed farming activities amounting to Sh.243 million all in the blue economy.

The banks’ loans policies, procedures and rules classify loans into short and long term loans. Short term loans tenure ranges from twelve to thirty-six months and long-term loans up to ten years. The loan categories attract varying interest rates based on their tenure and amounts. The policy states that Medium, Small and Micro Enterprise loans are in the following ranges:

- Micro loans start from Sh.10,000 based on client is needs up to a maximum of Sh.5 million.
- Small and medium enterprise loan amounts range between Sh.5 million - Sh.30 million.
- Loans above Sh.30 million are available as corporate loans.

#### **The loan applicants must meet the following requirements:**

- Each small-scale fish farmer must be a member of a registered fisheries group, aquaculture producers association or cooperative and have at least 3 years of experience in the activity.
- Must submit an individual loan application letters.
- For group members: minutes of resolutions made by them to borrow through their association.

- Equity contribution for any capital investment loan (preferably 30 - 40 percent equity contribution).
- Submit sales contracts signed with middlemen/wholesalers (if any).
- Produce evidence of sales made in the past 3 consecutive years.
- Submit a business plan with cash flow projections for twelve months.
- Submit Audited financial statements for the past four years from the Co-operative Audit and Supervision Corporation (COASCO).
- Securities to be pledged as collateral for the requested loan amount.
- Association leaders are expected to sign personal guarantee and indemnity on behalf of their borrowing members and avail Maximum Liability Certificate (MLC) from the Registrar of Co-operatives allowing banks to advance loans to association members.

The bank has noted that whereas interest rates present significant challenges, they also provide an opportunity to manage credit portfolio so as to refine and strengthen their management approaches. The Central Bank is currently reviewing the interest rates from 18 to 20 percent, dependent on the risk categories, collateral provided and variable costs of funds to enable commercial banks access cheaper funds for onward lending to certain economic sectors. This comes as good news to the banks.

While acknowledging that loan monitoring is crucial for the bank to maintain a healthy loan portfolio, the bank has developed a loan monitoring process. This is done by continuously monitoring the borrowers' creditworthiness and identifying early warning signs of potential problems and taking appropriate action to mitigate risks. The methods used, include manual and automated processes. Manual loan monitoring involves the review of financial statements, credit reports and other relevant data by trained personnel. An automated process serves as a customer information database and generates actionable insights to predict and reduce delinquencies, using technology and data analytics.

Upon loan disbursement the bank reports on cooperatives' progress using tools such as expected repayment report that shall guide on weekly installment for each member, cooperatives' meetings report that shall capture deliberations of the group, the cooperatives membership and status report to monitor the full portfolio which shall be updated daily after meetings and reviewed by the credit risk manager once a week. This shall form part of the reports for bank performance.

Malimali has noted that the banking industry is undergoing a major digital transformation and as a result, core banking systems need to keep up with new technological advancements. This requires a strategic approach to technology selection, implementation and management, as well as a culture of innovation and continuous improvement. Advanced analytical tools and financial technology enable more precise and timely analysis of portfolio risks, borrower creditworthiness market trends and detailed and rapid analysis of portfolio risks. Likewise, artificial intelligence (AI) and machine learning (ML) are increasingly being used to automate the risk assessment process, thereby increasing the precision of credit scoring models. These technologies facilitate dynamic risk management by analysing large data sets to predict potential default risks under various interest rate scenarios and enable banks' portfolio managers to make quick, informed decisions.

**Required:**

- To ensure the quality of its agriculture lending portfolio, Malimali Bank Plc should practice continuous loan portfolio monitoring. In reference to this statement:
  - Summarise to the management of the bank **FOUR** benefits of continuous loan portfolio monitoring. (4 marks)
  - Analyse **THREE** challenges the management of the bank is likely to face in loan portfolio monitoring. (6 marks)
- Malimali Bank Plc has the largest agriculture lending portfolio in the country. Discuss **FOUR** risks that could be present in its agriculture sector lending portfolio. (8 marks)
- Suggest **FIVE** warning signals of credit portfolio deterioration that Malimali bank Plc could identify during their portfolio monitoring. (5 marks)
- Examine **THREE** challenges Malimali Bank Plc could face when implementing AI-powered credit risk management. (6 marks)

- (e) Describe **THREE** challenges that the Malimali Bank Plc could face when lending to Micro Small and Medium Enterprises (MSMEs). (6 marks)
  - (f) Highlight **FIVE** credit risk management best practices that Malimali Bank Plc management have adopted in their fisheries cooperatives financing project. (5 marks)
- (Total: 40 marks)**

**QUESTION TWO**

- (a) (i) Describe the term Capital Adequacy Ratio (CAR). (2 marks)
  - (ii) Explain **TWO** components of the Capital Adequacy Ratio. (4 marks)
  - (b) Analyse **THREE** types of systematic risks. (6 marks)
  - (c) Enumerate **FOUR** features of collateralised debt obligations (CDOs). (3 marks)
- (Total: 15 marks)**

**QUESTION THREE**

- (a) Outline **THREE** advantages of credit derivatives to the buyer. (3 marks)
  - (b) Discuss **THREE** consequences of the 2008 financial crisis. (6 marks)
  - (c) Assess **THREE** practical applications of the credit metrics model. (6 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) Describe **FIVE** types of project funding alternatives. (5 marks)
  - (b) Summarise **FIVE** reasons why commercial banks should study the working capital cycle of borrowers. (5 marks)
  - (c) State **FIVE** factors that determine the amount of credit insurance premium. (5 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Identify **FIVE** factors lenders should consider in credit risk pricing. (5 marks)
  - (b) Summarise **THREE** additions of Basel III in credit risk measurement. (3 marks)
  - (c) Assess **SEVEN** challenges financial institutions encounter in portfolio credit risk management. (7 marks)
- (Total: 15 marks)**

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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 19 August 2024. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### MAXIMA BANK LTD.

In the recent times, Maxima Bank Ltd. has witnessed a phenomenal growth in terms of loans in its portfolio. The bank's products include short term finance, medium term finance, long term finance, construction and mortgage loans advanced against produce which is in line with the country's rapid growth and industrialisation.

It is expected that when the bank is providing these kinds of facilities, it is exposed to some risks. Lending has become a vital function in banking operations because of its direct effect on economic growth and business development. Loans granted to a customer but not recouped by the bank from the customers after all efforts being employed have increased on a large scale.

Maxima Bank Ltd. management knows that the pricing of credit products plays a crucial role in bank's profitability as well as the level of non-performing loans. The loan pricing methods can be diverse as there are diseases. For this reason, establishing optimal prices for loan products is of great importance. This is the reason why Maxima Bank Ltd. at times hires business consultants to assist in developing pricing and collateral management strategies.

Though Maxima Bank Ltd.'s directors expects their risk management department to exercise considerable skill, use their experiences and techniques in analysing credit proposals and assessing the risks, it has been established from experience that unforeseen situations sometimes affect the borrower's ability to pay and this has forced them to insure themselves in case the unexpected happens by demanding some form of security. The banking circles know that the risk management department of Maxima Bank Ltd. is said to be a very robust one. The bank has integrated credit risk models that provide a comprehensive approach to credit risk pricing which incorporates both micro-level credit characteristics and macro-economic factors that are thought to be relevant in today's dynamic financial environment, where the interaction between macro-economic developments and credit risk cannot be ignored.

On the other hand, there is a lot of agitation in the banking circle on the significance of good securities to a bank. Some of the Maxima Bank Ltd. customers have raised complaints that the bank deprived them financial assistance in time of need for investment purposes due to their inability to provide reasonable collaterals not minding their long-standing good credit record with them. If they get the facilities, they do so at very high prices affecting their ability to pay.

Securities perfection is particularly relevant where some bank customers show financial imprudence resulting in overtrading, poor management, loan mortality in business affairs, conflicts of interests and lack of proper accountability in financial management.

The management of Maxima Bank Ltd. has taken cognisance of the fact that there are many loans granted to customers but cannot be recouped by the bank and has come to a conclusion that collateral management need to be enhanced as well as a change in their product pricing structure. They have therefore appointed a management team committee chaired by Favor Chama, the credit risk manager, to come up with a proposal with the following terms of reference:

- The effects of poor credit documentation on bank credits.
- The types of acceptable securities and documentation procedures for the purpose of lending.
- The various methods adopted for debt recovery.
- What the bank should do when it notices any sign of a credit facility becoming doubtful.
- Gaining a solid understanding of their business model.
- Understanding the products the company sells.

- Understanding the company's stand in the market.
- Understanding the company's key objective such as profits, market share, growth and brand positioning.

On commissioning the management team committee, the board chairman James Kalimani, underscored the need for the proposal in order to improve Maxima Bank Ltd.'s pricing and collateral policy to enhance stakeholders trust in the bank. There is need to gain knowledge on how the banking industry market structure affects the loan pricing. This will inform the management on policy pronouncements on the enhancement of bank's competitiveness in order to tap on the welfare effects of a competitive market in terms of fair pricing of bank loans and efficient allocation of financial resources through a seamless financial intermediation process.

By understanding the customers' willingness to pay, the bank will be bound to adjust the pricing and collateral management strategies to customer preferences and market conditions.

**Required:**

- (a) Maxima Bank Ltd. applies integrated credit risk models that provide a comprehensive approach to credit risk pricing:
- (i) Summarise **FOUR** determinants of loan pricing they may have adopted. (4 marks)
  - (ii) Outline **FOUR** ways in which the services of a credit reference bureaus would impact loan pricing in Maxima Bank Ltd. (4 marks)
- (b) Identify **FOUR** types of integrated credit risk pricing models that Maxima Bank Ltd. could have used. (4 marks)
- (c) Credit risk pricing used by Maxima Bank Ltd. incorporates both micro-level credit characteristics and macro-economic factors that are relevant to today's dynamic financial environment.
- Highlight **FOUR** macroeconomic factors they could have used in developing their credit risk models. (8 marks)
- (d) Maxima Bank Ltd. is known in the banking circles to have a robust risk management department.
- Discuss **FOUR** credit payment history elements that it could have utilised in the credit risk assessment. (8 marks)
- (e) Explain **THREE** benefits Maxima Bank Ltd. could get by perfecting the borrowers' collateral. (6 marks)
- (f) Discuss **THREE** roles played by collateral documentations in the development of Maxima Bank Ltd.'s robust risk management department. (6 marks)
- (Total: 40 marks)**

**QUESTION TWO**

- (a) State **FIVE** principles of working capital management. (5 marks)
- (b) Distinguish between "credit portfolio" and "equity portfolio". (4 marks)
- (c) Explain **THREE** weaknesses of credit insurance as a risk mitigant. (6 marks)
- (Total: 15 marks)**

**QUESTION THREE**

- (a) Outline **FOUR** benefits of studying migration risk in credit portfolio management. (4 marks)
- (b) Analyse **FIVE** causes of global financial crisis. (5 marks)
- (c) Summarise **THREE** factors a credit analyst should consider when assessing collateral value. (6 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) State **THREE** goals of Basel II accord. (3 marks)
- (b) Describe **THREE** methods of measuring portfolio credit risk. (6 marks)
- (c) Examine **THREE** factors that affect credit risk modeling. (6 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Identify **THREE** differences between “systematic risk” and “unsystematic risks”. (3 marks)
- (b) Discuss **THREE** types of firm-level defaults. (6 marks)
- (c) International Financial Reporting Standard 9 (IFRS 9) will drive profit and loss, which will affect earnings. In addition, the standard will materially influence financial institutions’ financial statements, with impairment calculations most affected.

With reference to the above statement, explain **THREE** changes that have been brought about by IFRS 9 implementation to the organisation. (6 marks)

**(Total: 15 marks)**

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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 22 April 2024. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### SAWA CORPORATION - PORTFOLIO MONITORING PAYS OFF

In credit management, approving a customer for credit terms is the first step in an open credit relationship. Situations change, both for company and for its customers. Economic circumstances may cause a company to tighten its credit policies and customer credit limits. Even more likely are changes to a customer's business. This is no exception to Sawa Corporation.

New businesses and small businesses tend to have high failure rates, and there is good reason for a credit analyst to believe that a wave of defaults may occur. Factors contributing to commercial bankruptcies have been on the increase over the years. These risks are concentrated in the company's accounts receivables (AR) portfolio and can change significantly from year-to-year, this requires Sawa Corporation to have a program that involves both periodic accounts reviews and portfolio monitoring.

Five years ago, a credit manager at Sawa Corporation saved it from millions of bad debt loss by monitoring on the internet its biggest customer. The company was a conglomerate with head office in Kenya and a subsidiary in DR Congo. The credit manager through intelligence, uncovered that there were financial difficulties facing the Kenyan parent company and its largest chain store customers could spill over to the DR Congo subsidiary pulling it into bankruptcy even though its operations were profitable.

The credit manager at Sawa Corporation purchased a credit insurance on their customer and was able to continue approving credit sales, within limits, to the chain store customers. About 15 months later, the parent company defaulted on its debt and the chain store subsidiary was indeed pulled into the ensuing bankruptcy proceedings. The credit insurer was then compelled to pay Sawa Corporation for the receivables lost because of the bankruptcy, meaning the supplier was making profitable sales to the chain store for the entire 15 months after the default.

Sawa Corporation noted that conducting periodic account reviews, was certainly beneficial but would not necessarily have revealed the parent company's problem after all, the domestic chain store subsidiary had strong financials and a good payment record. In this case, ongoing Portfolio Monitoring was critical to turning up the customer intelligence that avoided a huge bad debt loss.

The credit insurer, after learning how the credit manager had identified this potential bankruptcy risk, brought the credit manager in as a consultant to train their credit analysts how to better monitor the insurer's credit portfolio, especially in regard to using internet resources and applications.

Sawa Corporation promoted its credit manager for his exemplary work in efficient utilisation of the internet to manage credit portfolio risks. He observed that in today's world, utilising the internet for intelligence gathering is much easier, especially with the Artificial Intelligence (AI) tools and alternative data sources that are emerging. AI in portfolio management leverages data-driven insights and advanced analytics to facilitate informed investment decisions through predictive analytics, risk assessment and market sentiment analysis. AI algorithms can optimise asset allocation, enhance diversification and provide real-time portfolio monitoring.

The use of AI in portfolio management is transforming the financial industry with a substantial impact, marking a shift from traditional, human-centric methods to a more data-driven approach. As a pivotal tool in an era where accurate and rapid decision-making is crucial, AI transcends the buzzword status to become an essential element in portfolio management.

No doubt Sawa Corporation benefited from worthwhile time spent on implementing a credit portfolio monitoring process. Noting that for most companies, accounts receivable (AR) is one of the largest assets on any company's books and Sawa Corporation is no exception, by assuming that all will be well opens the company up to unexpected losses. As the saying goes, an ounce of prevention is worth a pound of cure.

**Required:**

- (a) (i) Distinguish between the term "accounts review" and "portfolio monitoring" as used in the above case study. (4 marks)
- (ii) Propose **FOUR** guidelines that the credit manager of Sawa Corporation could have applied to review its existing credit customers. (8 marks)
- (b) Summarise **SIX** kinds of information that Sawa Corporation might have provided to the credit insurer during the purchase of customer credit insurance cover. (6 marks)
- (c) Explain **THREE** roles Sawa Corporation's credit analyst played in saving the company millions of bad debts. (6 marks)
- (d) Examine **THREE** contributions of Artificial Intelligence (AI) in transforming credit portfolio management at Sawa Corporation. (6 marks)
- (e) Outline **FIVE** benefits of loan portfolio review enjoyed by Sawa Corporation. (5 marks)
- (e) Suggest **FIVE** factors that might have influenced the credit limits set by Sawa Corporation when supplying to their customers. (5 marks)

**(Total: 40 marks)**

**QUESTION TWO**

- (a) Outline **THREE** methods used in the perfection of security. (3 marks)
- (b) State **FIVE** benefits of developing a credit risk distribution for a financial institution. (5 marks)
- (c) Enumerate **SEVEN** objectives of commercial banks' credit portfolio management. (7 marks)

**(Total: 15 marks)**

**QUESTION THREE**

- (a) Identify **FOUR** sources of credit concentration risks. (4 marks)
- (b) Highlight **FIVE** advantages of the Basel II accord. (5 marks)
- (c) Explain **THREE** features of Project Finance. (6 marks)

**(Total: 15 marks)**

**QUESTION FOUR**

- (a) Distinguish "between credit options" and "credit spread options". (4 marks)
- (b) List **FIVE** assumptions of Mertons Model as used in determination of the default point. (5 marks)
- (c) Discuss **THREE** post-crisis regulatory reforms adopted by G20 economies to address the data gaps during the 2008 financial crisis. (6 marks)

**(Total: 15 marks)**

**QUESTION FIVE**

- (a) With reference to credit exposure analysis, explain the meaning of the following terms:
  - (i) Loss given default (LGD). (2 marks)
  - (ii) Exposure at default (EAD). (2 marks)
- (b) Discuss **THREE** working capital management strategies. (6 marks)



- (c) (i) Summarise the method of assessing the economic worth of a project, as an aid to credit risk management. (2 marks)
- (ii) Suppose a project, which costs Sh.40 million to build, will generate Sh.8 million cash flows for seven years and thereafter at the terminal year, the cash generation, including the liquidation of all assets, would be Sh.12 million. The cash flow estimates are given below:

Year	2024	2025	2026	2027	2028	2029	2030	2031	2031
Cash flow (Sh. million)	(40)	8	8	8	8	8	8	8	12

**Required:**

Using non-discounting method calculate the projects Accounting Rate of Return. (The discount rate is 10%). (3 marks)

**(Total: 15 marks)**

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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 4 December 2023. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### ZAKA PLC - COMPANY INSOLVENCIES AND CREDIT RISK

There are many big firms mentioned as facing financial difficulties. It is claimed that many companies should not even be trading. It is a known fact that if a company is unable to pay its debts and therefore insolvent, then the company may either be voluntarily or involuntarily liquidated without first being placed under administration.

It is reported that the number of Kenyan firms facing liquidation have more than doubled in the last seven years, highlighting weaknesses in the legal regime on insolvency. Restaurants have not been spared, the latest research analysis by BWK LLP- Accountancy firm shows that at least five restaurants are closing daily in the region.

The deterioration in the payment behavior of customers can be part of the pandemic's collateral damage given that we have not yet overcome the effects of COVID 19 pandemic, and it has brought along a crippling ripple effect on business's cash flow. Notwithstanding the current international wars and fluctuating foreign exchange rates that have had a severe effect on the supply side of the economy. The challenge therefore is how to minimise such risks, so as to optimise portfolio and limit credit losses as much as possible.

Zaka Plc being a financial institution in competitive economic environment which is constantly subject to multiple risks and therefore requires the application of rigorous principles for their management, have decided to hire BWK LLP to carry out research on the current economic trends and its impact on firms' solvencies.

##### **Report of the Findings by BWK LLP**

BWK LLP found out that more and more companies had financial difficulties. The difficulties were caused by both faulty managerial decisions and fiscal pressure or competition increases leading businesses to the verge of insolvencies. In addition, changes in the business environment as a result of entering new markets or restructuring the economy can lead to corporate insolvency. Also, loss of capital, inability to secure new capital and high debt or disputes with a particular creditor can be causes of insolvency. Risk forecasting can economically recover a business whose continuity is threatened.

The risk of insolvency occurs when a company cannot pay its debts based on both internal factors and external factors. However, it is not possible to talk about the existence of an insolvency risk of a business in the absence of a financial-accounting diagnosis to determine the state of insolvency, recognised as that state of the patrimony of an entity characterised by insufficient funds for the payment of determined, liquid and matured debts. Indicators specific to liquidity and financial solvency are essential elements in identifying financial problems at the level of the economic entity, providing clues about the ability of the company to pay due tax obligations, the extent to which equity can cover long-term debt, but also the financial resources currently available.

The risk of insolvency cannot be eliminated but it can be identified before it occurs. The causes that lead companies to insolvency are numerous, with negative effects in terms of ability to pay. Thus, there was a major interest in predicting insolvency several years before it manifested itself. The accounting methods to identify the risk of insolvency offer the possibility of a limited interpretation in time and space. Banking methods are the most widely used because they allow the identification of the vulnerabilities of a business based on the use of score-type function.

These methods makes it possible to predict the instability of a business and classify it according to the risk area in which it is located. The most famous insolvency risk-scoring method was developed by Altman (1968). Altman determined a set of observations for solvent and insolvent companies, but also a series of financial rates.

The model was appreciated because it predicted insolvencies with an accuracy of 72% two years before their occurrence, being further developed. The objectives of the research were application of various techniques and methods for a period of four years, to measure the failure or financial health; verification of the robustness of the model through sensitivity analysis and multiple discriminant analysis. The companies were classified into financially stable and financially unstable.

### Conclusions by BWK LLP

Financial management plays an important role in terms of its applicability within a company. This provides relevant information regarding the risk exposure, the longer and more relevant the predictability period, the better the risks related to the insolvency of a company or in the worst case the appearance of the state of insolvency can be enriched.

The development of an insolvency risk forecasting model has become a widely debated topic in the field of credit risk management. This was also due to the financial instruments used which require a complex calculation analysis to determine the exposure to several risks, from operational risk to reputational risk.

Incorporating the most relevant information obtained from the analysis of economic-financial indicators and developing a model for assessing the risk of insolvency of companies can be considered the easiest way to predict future financial statements. The reason why insolvency forecasting is very important is given by the interdependence between the two financial statements of a company. When a company is in a state of insolvency, the possibility of it going bankrupt due to the inability to comply with the financial recovery plan is extremely high.

The specificity of national legislation, as well as other aspects related to the market in which a company operates, can influence the probability of predicting the risk of insolvency.

### Required:

- (a) Identify **FIVE** types of risks mentioned in the case study. (5 marks)
  - (b) (i) Explain the “Altman’s Z Score Model”. (2 marks)  
(ii) Enumerate **FIVE** limitations of the Altman’s Z Score Model. (5 marks)
  - (c) Propose **FIVE** techniques that Zaka PLC could consider in order to address reputation risk. (10 marks)
  - (d) (i) Explain **FOUR** indicators of insolvency that were not mentioned by the research carried out by BWK LLP. (8 marks)  
(ii) Outline **FOUR** negative effects of insolvency that Zaka PLC could suffer in the event the company was declared insolvent. (4 marks)
  - (e) Summarise **THREE** benefits that could accrue to Zaka PLC as a result of adopting credit risk modelling. (6 marks)
- (Total: 40 marks)**

### QUESTION TWO

- (a) Explain the term “systemic risk”. (2 marks)
  - (b) Enumerate **FIVE** principles of credit portfolio management. (5 marks)
  - (c) Explain **FOUR** types of financial risks that are built into every project, worth of consideration by project financiers. (8 marks)
- (Total: 15 marks)**

### QUESTION THREE

- (a) State **FOUR** advantages of risk-based pricing, of credit products. (4 marks)
  - (b) Explain **FIVE** weaknesses of Basel Capital Principles revealed during the credit crisis of 2007 to 2009. (5 marks)
  - (c) Describe **THREE** categories of assets used as collateral by lenders. (6 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) With reference to credit portfolio risk mitigation, highlight **THREE** uses of credit derivatives. (3 marks)
  - (b) Describe **THREE** goals of credit risk measurement. (6 marks)
  - (c) Summarise **SIX** applications of credit in economic capital modelling. (6 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Assess **TWO** objectives of the Kenya Banks' Reference Rate (KBRR), as the prime lending rate. (4 marks)
  - (b) Identify **FIVE** factors that affect credit risks at a portfolio level. (5 marks)
  - (c) Outline **SIX** symptoms of overtrading. (6 marks)
- (Total: 15 marks)**
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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 21 August 2023. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### MARIDADI FASHIONS

Maridadi Fashions (MF) is located in Mtoni, Coast town. MF was started 14 years ago by Juma Mapesa and Brown Kazungu who had over 25 years of experience with a major government manufacturer. Juma Mapesa is a reserved person and is extremely creative with a real flair for merchandising and trend spotting. Brown Kazungu on the other hand is outgoing, forceful and a good marketer. MF label is synonymous with quality and fashion.

Juma Mapesa is very worried about the liquidity position of the company. His fears emanate from the fact that most of their customers who are in retail business are experiencing financial distress and have spread out their payments which has caused cashflow shortages at MF. Juma Mapesa will be retiring next year due to health related complications. Considering that they have been partners with Brown Kazungu he is not sure whether Brown Kazungu will be able to manage the affairs of the company after he exits.

##### **Borrowing Concerns**

Brown Kazungu's Maridadi Fashions has no written credit policy in place. Brown Kazungu makes virtually all major operating and financial decisions. Three years ago he made a decision to retire all long-term debts, a move triggered by Kazungu's fear that MF's business risk was increasing. He cited the difficulties of seemingly rock-solid retailers like Bidii's and Malimali to support his claim. Kazungu is also concerned that firms of the size of MF have had difficulty maintaining stable bank relationships. Due to increasingly strict regulations, some banks have called in loans at the slightest technicality, and most are scrutinizing new business loans very carefully. Consequently, Kazungu views bank debt financing as 'unreliable'.

Mapesa is not sure what to make of this argument but he is concerned that this debt avoidance has significantly reduced MF's financial flexibility because it means that all projects will have to be equity financed. In fact, over the past five years, there has been no dividends because all earnings have been reinvested. Two years ago, each of the partners had to contribute Sh.1.5 million of capital in order to meet the company's cash needs. Another infusion of capital may be necessary since the firm's present cash position is low by historical standards. Mapesa is of the opinion that in order to progress, there is an urgent need to monitor the cash conversion cycle of the company. More importantly, however, Mapesa feels that the company is not benefiting from leverage effect of debt financing and that this hurts the profitability of the firms to the two owners.

##### **Working Capital Concerns**

Mapesa suspects that MF's inventory is 'excessive' and that capital is unnecessarily tied up in inventory. Kazungu's position is that a large inventory is necessary to provide speedy delivery to customers. He argues that 'our customers expect quick service and large inventory helps us to provide it'.

Mapesa is sceptical of this argument and wonders if there is no other efficient way of providing quicker service. He knows that a consultant recommended that MF 'very seriously' consider building a state of art distribution center. The proposed facility would allow MF to reduce inventory and also handle big orders from retailers such as Minimart and Prize-Mart. Kazungu rejected the suggestion. Saying that they needed to undertake a number of project evaluation technique like payback period, benefit cost ratio so as to find out whether opening distribution centres will be a viable project.

Kazungu was also concerned that if the company settled on opening distribution centres the company would suffer the following risks; construction risks, start-up phase risks and operational phase risks.

Mapesa also questions Kazungu's credit standards and collections procedures. Mapesa thinks that Kazungu has been quite generous in granting payment extensions to customers, and at one point nearly 40 percent of the company's receivables were more than 90 days overdue. Further, Kazungu would continue to accept and ship orders to these retailers even when it was clear that their ability to pay was marginal. Kazungu's position is that by continuing to extend credit to these customers it was a sure way of not losing sales and that the rough times these retailers face are only temporary.

Mapesa also wonders about the wisdom of passing up trade discounts. MF is frequently offered terms of 1/10, net 30. This company receives a one percent discount if a bill is paid in ten days and in any event full payment is expected within 30 days. Kazungu rarely takes these discounts because he "wants to hold onto cash as long as possible". He also notes that "the discount is not especially generous and 99 percent of the bill must still be paid."

**Required:**

- (a) State **THREE** project evaluation techniques that the company could have considered as a guide to opening distribution centres apart from the one mentioned in the case study. (3 marks)
- (b) Explain the following types of project implementation risks that Maridadi Fashions would suffer as a result of opening distribution centres:
- (i) Construction phase risk. (2 marks)
  - (ii) Start-up phase risk. (2 marks)
  - (iii) Operational phase risk. (2 marks)
- (c) Maridadi Fashions customers who were in retail business were experiencing financial distress.
- With reference to the above statement, describe **THREE** signs that might indicate financial distress in a company. (6 marks)
- (d) Examine **THREE** variables in cash conversion cycle that Maridadi Fashions must pay attention to. (6 marks)
- (e) Highlight **THREE** reasons that caused cash flow shortages at Maridadi Fashions. (3 marks)
- (f) Explain **FOUR** disadvantages that Maridadi Fashions could have experienced as a result of holding excess inventory. (8 marks)
- (g) Discuss **FOUR** benefits that would have accrued to Maridadi Fashions if they had a credit management policy in place. (8 marks)
- (Total: 40 marks)**

**QUESTION TWO**

- (a) Differentiate between "fixed capital" and "working capital". (4 marks)
- (b) Highlight **FIVE** benefits of developing a credit loss distribution. (5 marks)
- (c) Analyse **THREE** components used in computation of Kenya Bankers Reference Rate (KBRR). (6 marks)
- (Total: 15 marks)**

**QUESTION THREE**

- (a) State **THREE** conditions required for a loan to be reclassified as performing. (3 marks)
- (b) Describe **THREE** limitations of providing loan security by a borrower. (6 marks)
- (c) Discuss **THREE** elements of portfolio management. (6 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) Enumerate **THREE** types of trade credit insurance covers. (3 marks)
- (b) Explain **THREE** methods of assessing the financial viability of a project. (6 marks)
- (c) Evaluate **THREE** features of diversifiable risks. (6 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Highlight **FOUR** banks' functional areas where credit portfolio modelling is applied. (4 marks)
- (b) Outline **FIVE** features of capital assessment process under Basel II. (5 marks)
- (c) Examine **THREE** signs of a liquidity trap. (6 marks)

**(Total: 15 marks)**

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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 24 April 2023. Afternoon Paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### **QUESTION ONE**

##### **BANK RUN AND STABILITY OF SILITON VALLEY BANK (SVB)**

Siliton Valley Bank (SVB) was a bank whose target clients were tech start-ups and their founders. It started between 2019 and 2021. The level of venture capital funding exploded during this time, meaning that start-ups were getting tonnes of cash, and subsequently depositing this with SVB. SVB's deposits went from roughly \$60 billion in 2019 to \$189 billion in 2022. SVB made money through what is known as 'net interest margin.' SVB would offer customers 0.2% on their savings account, and they would take that money and place it in a different form of investment that gave them a return of 1% - keeping the 0.8%. SVB had all of these deposits, and in order to generate a return (with interest rates still at almost 0% at this point) they placed reportedly \$80 billion of the \$189 billion into long term mortgage backed securities. These were reportedly paying a yield of around 1.5%, leaving SVB with a healthy net interest margin. Unlike 2008, the viability of these mortgage securities was not the problem. The issue was the fact that they were long term liabilities that were being used to secure short term deposits, purchased at a time when interest rates were at all time lows.

##### **The risk of 'safe' mortgage bonds**

While there was no problem with the mortgage bonds that were purchased, they are still sensitive to interest rates. The reason for that is that bond prices move inversely to interest rates. If rates go up, bond prices fall and vice versa.

##### **Why did Siliton Valley Bank collapse?**

This was simply an old-school liquidity crisis. SVB's underlying investments had not failed. The prices went down. Because of the uncertain economic conditions, SVB saw a lot of their clients looking to get their hands on their money. Facing \$80 billion of their assets being held in securities which had fallen in value, SVB started looking for ways to raise cash.

This made markets a little nervous, but it went into overdrive when they announced a sale of stock at a loss of \$1.8 billion. This came just days after crypto-focused bank Salivate failed, and the announcement was made with little attempt at calming investors. A number of deposit holders turned into a tidal wave, as prominent Venture Capitalists (VC's) called their portfolio companies and told them to get out as fast as they could. This type of bank run would be a problem for any bank. SVB did not have enough liquid cash at hand at that given time for every account holder to redeem at once. It was an especially big problem for SVB, with their liquidity profile as it was.

##### **The bottom line**

It was the first time in a long time that such a bank run was seen. It highlighted the importance of understanding counterparty risk. Even organisations that appear stable and secure can be undone, in a matter of hours, given how fast information travels in 2023. Diversification is the best way to limit your risk, whether you are talking about investments or savings accounts. Hedging can be a powerful tool to protect against volatility, but it is not easy to do. These unprecedented withdrawals caused a strain on daily operations of SVB, necessitating the bank under the guidance of the regulator to limit some services, the bank management said in a statement. The regulator while commenting on the troubled bank was quoted as saying "the point is that all banks are working to deal with any liquidity issues or any of those challenges that may happen from one day to the next. This showed how regulators play behind scenes in bank trouble situations that it is difficult to determine if they are acting or not.

Strong interventions often have negative and far-reaching consequences for the many stakeholders involved and so bank supervisors should use them carefully. However, hesitation in using these tools could lead to an even worse outcome. In the case of the Banking Supervisory Authority (BSA), both the early detection mechanisms and intervention powers were lacking, which made it impossible to react at a sufficiently early stage.



Willis Otieno is the new head of the Banking Supervisory Authority (BSA). He has been hired to strengthen the bank supervision and reform the supervisory system to meet international standards and best practice. You have recently joined the BSA's Policy Department, and Willis Otieno has asked you to do some research with the aim of fulfilling these objectives.

**Required:**

- (a) (i) Describe the term "bank run". (2 marks)
  - (ii) Propose **FOUR** bank run mitigation measures that SVB would have considered. (8 marks)
  - (b) Apart from falling prices of the bonds, list **SEVEN** warning indicators that the Bank Supervisory Authority should have focused their attention on to avoid future bank runs. (7 marks)
  - (c) Describe **FOUR** supervisory tools that the Supervisory Authority should have used to gather information to detect potential problems. (8 marks)
  - (d) Identify **FIVE** factors the Supervisory Authority could have used to rate the bank's liquidity. (5 marks)
  - (e) Highlight **FOUR** risk types that the Supervisory Authority could have monitored to avoid future bank runs. (4 marks)
  - (f) State **SIX** sources of funding that SVB could have considered to avoid liquidity crisis. (6 marks)
- (Total: 40 marks)**

**QUESTION TWO**

- (a) Enumerate **THREE** reasons why banks measure the cost of funds. (3 marks)
  - (b) Explain **THREE** methods of taking a loan security. (6 marks)
  - (c) Assess **THREE** strategies for managing concentration risk. (6 marks)
- (Total: 15 marks)**

**QUESTION THREE**

- (a) Outline **THREE** assumptions of Modern Portfolio Theory (MPT) with reference to credit risk modelling. (3 marks)
  - (b) Explain the following types of credit risk models:
    - (i) Structural models. (3 marks)
    - (ii) Reduced form models. (3 marks)
  - (c) Summarise **THREE** credit events upon whose occurrence a firm may suffer default risk. (6 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) State **THREE** shortcomings of Basel I Accord. (3 marks)
  - (b) List **FIVE** objectives that credit portfolio management models seek to achieve. (5 marks)
  - (c) Explain the following types of project finance bonds as used in managing project finance credit risks:
    - (i) Performance bond. (2 marks)
    - (ii) Payment bond. (2 marks)
    - (iii) Retention bond. (3 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) With reference to prudential guidelines, enumerate **THREE** conditions that should be satisfied for a loan to be reclassified as performing. (3 marks)
  - (b) Outline **FOUR** features of financial crises. (4 marks)
  - (c) Discuss **FOUR** causes of overtrading. (8 marks)
- (Total: 15 marks)**

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CCP ADVANCED LEVEL

ADVANCED CREDIT RISK MANAGEMENT

MONDAY: 5 December 2022. Afternoon Paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.

QUESTION ONE

WAKUMAT BROTHERS HOLDINGS (WBH)

On September 15, 2008, Wakumat Brothers Holdings (WBH), sought protection under the Insolvency and Bankruptcy Act, initiating the largest bankruptcy proceeding in the history of the country. The company declared Sh.60 billion in assets and Sh.55 billion in debts. At the time, WBH was the fourth-largest investment bank, with 2,500 employees in East Africa, a far cry from its humble beginnings in 1984, as an ordinary warehouse. Despite being thought “too big to fail,” the government did not employ extraordinary measures to save the company.

WBHs’ demise was the beginning of a major event in the financial crisis that began in the country’s mortgage industry in 2007, spread to the credit markets, and then burned through the region’s financial markets.

The crisis resulted in significant and wide losses to the economy. Estimates of the cost to the economy based on lost output range from a few billion shillings to over Sh.100 billion. And this is despite the unprecedented efforts of the Central Bank, the National Treasury, the Deposit Protection Fund and the central banks of the regional countries to intervene and stabilise their economies.

The 2008 financial crisis began with cheap credit and lax lending standards that fuelled a real estate bubble. When the bubble burst, the banks were left holding billions of shillings of worthless investments in mortgages. The Great Economic recession that followed cost many their jobs, their savings, and their homes. One cause of WBH’s demise was its significant exposure to the mortgage and real estate markets. When these markets began to slow down, they sparked a retraction in the “shadow banking system” for short-term loans as concerns about unknown exposures to securitized mortgages spread to other types of assets.

WBH’s collapse had far reaching implications. Investor sentiment became nervous resulting in sharp falls in stock markets, triggering a flight to safety. If one of the top five investment banks is not safe, who is safe? It resulted in the disappearance of pure investment banking.

WBH, like most investment banks, relied on short-term markets to raise millions of shillings each day. Ultimately, it was an inability to secure funding that was WBH’s undoing.

**Required:**

- (a) One cause of WBH’s demise was its significant exposure to the mortgage and real estate markets.

With reference to the above statement, state **FOUR** additional factors which could have contributed to the collapse of WBH. (4 marks)

- (b) The Great Economic recession that followed cost many people their jobs, their savings, and their homes.

**Required:**

With reference the above statement:

- (i) Describe the term “economic recession”. (2 marks)
- (ii) Explain **FOUR** factors that could have caused the economic recession. (8 marks)

- (c) Housing bubbles are temporary periods characterised by high demand, low supply and prices that are inflated beyond fundamentals as demonstrated in the case of WBH.

With reference to the above statement:

Summarise **SIX** factors that could cause an increase in the demand for housing. (6 marks)

- (d) Despite being thought “too big to fail,” the government did not employ extraordinary measures to save WBH.

**Required:**

With reference to the above statement: (2 marks)

- (i) Describe your understanding of “too big to fail”. (2 marks)
- (ii) Summarise **FOUR** policy measures that government’s put in place after the year 2008 financial crisis to avoid the collapse of the “too big to fail” companies in future. (8 marks)
- (e) Discuss **FIVE** consequences of the credit crisis as a result of the collapse of WBH. (10 marks)

**(Total: 40 marks)**

**QUESTION TWO**

- (a) (i) Describe the term “portfolio analysis”. (2 marks)
- (ii) Distinguish between “passive credit portfolio” and “active credit portfolio” management. (4 marks)
- (b) State **FOUR** components that banks should factor in while pricing loans. (4 marks)
- (c) Outline **FIVE** qualities of a good collateral asset. (5 marks)

**(Total: 15 marks)**

**QUESTION THREE**

- (a) Enumerate **FOUR** goals of the Basel II Accord. (4 marks)
- (b) State **FIVE** indicators of an organisation’s good risk culture. (5 marks)
- (c) Summarise **THREE** variables used in calculating net present value (NPV). (6 marks)

**(Total: 15 marks)**

**QUESTION FOUR**

- (a) (i) Describe the term “enterprise-wide stress testing”. (3 marks)
- (ii) Justify **TWO** reasons why banks apply enterprise-wide stress testing in credit risk management. (4 marks)
- (b) (i) Differentiate between “credit risk culture” and “credit risk appetite”. (4 marks)
- (ii) Describe **TWO** factors that a credit manager should consider when categorising an organisation’s credit risk appetite. (4 marks)

**(Total: 15 marks)**

**QUESTION FIVE**

- (a) Enumerate **THREE** weaknesses of credit insurance as a credit risk mitigant. (3 marks)
- (b) Describe **THREE** types of concentration risks. (6 marks)
- (c) Examine **THREE** types of risks during the construction phase of a project. (6 marks)

**(Total: 15 marks)**

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CCP ADVANCED LEVEL

ADVANCED CREDIT RISK MANAGEMENT

MONDAY: 1 August 2022. Afternoon paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.

QUESTION ONE

HARMONISE AUTO INDUSTRIES LIMITED

Harmonise Auto Industries Limited is one of the most prominent companies in the world. They are pioneers in manufacturing load springs in East Africa. Their product is branded as “Ngumu Springs”. Harmonise Limited was started in 1985 by the visionary, Okumu Kamau, who is the chairman and managing director. The Company’s Head office is in Mosa. Under the able guidance of Okumu Kamau, the company grew to become the fourth largest spring manufacturer in Africa.

The group has two plants, one in Joba, and the other in Kota. Both plants are effectively managed by a team of qualified professionals. The Joba plant started operations in 1992, it has the distinction of being East Africa’s first spring plant. The other plant at Joba is ISO 9002 certified.

Harmonise Limited has an audit committee which is responsible for the effective supervision of the financial and accounting controls, as well as compliance with the financial policies of the company. The committee interacts with the auditors to ascertain the quality and precision of the company’s transactions, to review the manner in which they are performing their responsibilities, and to discuss the reports of the auditors.

The sources of funding for Harmonise Ltd are both internal and external. Internal sources of funds include factoring as a way to fund cash flow. While external sources of funds include loans from banks or financial institutions, the external sources are of two types:

1. Term loan.
2. Working capital loan.

A working capital loan is obtained for running and is of two types:

- Fund based.
- Non-fund based.

The following information was extracted from the books of Harmonise Limited for the period ended:

	31 March 2022 Sh.“000”	31 March 2021 Sh.“000”	31 March 2020 Sh.“000”	31 March 2019 Sh.“000”	31 March 2018 Sh.“000”
<b>Equities and liabilities:</b>					
<b>Shareholder funds:</b>					
Total share capital	42.78	40.04	40.03	37.37	17.71
Reserves and surplus	91.58	34.92	27.13	33.15	-2.61
Total shareholder funds	134.35	74.95	67.16	70.52	15.11
<b>Non-current liabilities:</b>					
Long term borrowing	49.1	108.8	141.9	131.09	73.29
Total non-current liabilities	59.07	137.52	166.61	155.46	86.73
<b>Current liabilities:</b>					
Total current liabilities	298.39	182.49	143.85	156.6	75.65
Total capital and liabilities	491.82	394.96	377.62	382.58	177.48

	31 March 2022 Sh. "000"	31 March 2021 Sh. "000"	31 March 2020 Sh. "000"	31 March 2019 Sh. "000"	31 March 2018 Sh. "000"
<b>Assets:</b>					
<b>Non-current assets:</b>					
Fixed assets	192.68	162.54	152.52	132.61	63.64
Total non-current assets	262.19	235.90	223.73	193.17	96.88
<b>Current assets:</b>					
Total current assets	229.64	159.06	153.90	189.41	80.60
<b>Total assets</b>	491.82	394.96	377.62	382.58	177.48
<b>Sales</b>	625.30	594.82	560.51	532.31	541.19
<b>Profit/(loss)</b>	73.50	54.32	25.20	(16.39)	16.06

### Financial Crisis

The Country's economy, stock market and practically all business forecasts painted a very bright business environment. The first quarter performance was an all-time high and had raised high expectations of a record turnover and profit. The company had geared itself up to achieve a record target turnover and was expecting a good jump in its profits. However, these expectations were met with a rude awakening when COVID-19 struck resulting in massive losses suffered by major businesses all over the world. Harmonise Limited did not remain immune from the global financial crisis and there were strong signs of a slowdown. These events were so sudden that no one was prepared for such a rapid decline in economic cycles the world over.

### Required:

- (a) One of the reasons that Harmonise Limited was able to maintain a stable cash flow was through the use of factoring.

With reference to the above statement, explain six benefits that Harmonise Limited enjoyed as a result of using factoring as a source of finance. (6 marks)

- (b) Distinguish between the following types of working capital loans:  
"Fund based working capital" and "non-fund based working capital". (4 marks)

- (c) Explain the following types of fund based working capital:

- (i) Working capital term loan. (2 marks)  
(ii) Bill discounting. (2 marks)  
(iii) Overdraft. (2 marks)  
(iv) Cash credit. (2 marks)

- (d) Discuss four techniques that Harmonise Limited could have used to optimise debtors during the COVID-19 pandemic. (8 marks)

- (e) Analyse four roles of Harmonise Limited audit committee in credit risk management. (8 marks)

- (f) Calculate and interpret the following ratios for the year ended 31 March 2022:

- (i) Current ratio. (3 marks)  
(ii) Net profit margin. (3 marks)

**(Total: 40 marks)**

### QUESTION TWO

- (a) (i) Explain the term "securitisation". (2 marks)  
(ii) Outline five steps of securitisation process. (5 marks)

- (b) Discuss four limitations of using the Net Present Value (NPV) technique of credit risk pricing. (8 marks)  
**(Total: 15 marks)**

### QUESTION THREE

- (a) (i) Explain Market liquidity risk. (2 marks)  
(ii) Enumerate seven features of process risk. (7 marks)

- (b) Discuss three requirements for the computation of Probability of Default (PD) by banks according to the new Basel Capital Accord. (6 marks)

**(Total: 15 marks)**

**QUESTION FOUR**

- (a) Identify four objectives of a credit rating system. (4 marks)
  - (b) Describe five conditions that must be met by a risk management architecture. (5 marks)
  - (c) Examine three ways of enhancing collateral management practices. (6 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Differentiate between “Credit Option (CO)” and “Credit Spread Option (CSO)”. (4 marks)
  - (b) Assess four risk occurrences covered by a political credit risk insurance cover. (4 marks)
  - (c) Describe seven methods of identifying individual project risks. (7 marks)
- (Total: 15 marks)**
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## CCP ADVANCED LEVEL

### ADVANCED CREDIT RISK MANAGEMENT

**MONDAY: 4 April 2022. Afternoon paper.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question. Do NOT write anything on this paper.**

#### QUESTION ONE

##### MUTUA BROTHERS LTD. AND AKILI BANK

It was a troublesome morning for the Mutua's family and Akili Bank, the directors of Mutua Brothers Ltd. They were scratching their heads, attempting to come to conclusion, and blaming one of the well-established banks in the regional market, Akili Bank. The Mutua's had been jointly issued with a pre-sanction letter in the names of both the brothers, John Mutua and James Mutua, from Akili Bank. On the basis of the pre-sanction letter being issued to the Mutua's jointly, it included the home loan pertaining to the property they had finalised at Lavington Green.

The pre-sanction letter provided approval for the amount of Sh.50 million, a loan based upon consideration of the financial strength of both brothers, on submission of the required documents. The property deal was finalised at Sh.48 million that is within the approval limit being sanctioned to them. When they approached the bank to issue the sanction letter and subsequent disbursement of the loan amount, they were surprised to discover from bank officials that, in normal circumstances, Akili Bank does not disburse home loans to two brothers in joint names. The Mutua's were taken aback by this response, which caused them to engage in a verbal exchange with the bank's officials. Their main point of contention was that the bank officials had "issued a pre-sanction jointly in the name of both the brothers". To that end, an enquiry was carried out into whether it was communicated to them that the loan could not be disbursed jointly in both of their names. Of course, the brothers' contention was that they would have approached other banks if they had been made aware of the bank's stance.

The Mutua's visited Akili Bank on a later date where they met with Duncan Wanyama, the head of the branch, and provided him with the pre-sanction letter with which they had earlier been issued. Duncan Wanyama discussed the issue with his colleague and finally assured them that they would seek approval from their boss, Judy Mwangi, and would communicate her response to them in two days. Duncan Wanyama also conceded that it was the bank's mistake to issue the pre-sanction letter in joint names. The grievance was further exacerbated when Duncan Wanyama informed the Mutua's that they would have to submit Life Insurance Cover policies to the tune of Sh.5million as additional collateral security, since the loan was in the joint names of both brothers. Although they were not informed about this at the time of seeking pre-sanction approval, they nonetheless extended their full cooperation to the bank and provided them with the Life Insurance Cover policies of John Mutua and James Mutua to the extent of Sh.2.5million each.

Nevertheless, the issues did not end there. Rather, the Mutua's were then told that they would need to provide the bank with the surrender value of the policies. However, as the policies had not yet been issued for three years, the Mutua's did not yet have their surrender value. Again, the Mutua's were assured by Duncan Wanyama that he would try to address their problem with higher authorities, to waive the three-year period for subsequent approvals. In short, although the Mutua's had wholeheartedly extended their cooperation to the bank to expedite the process of disbursement of a home loan, they did not receive the sanction letter and had to forgo the property deal, resulting in them suffering a huge financial loss; their future investment and other activities depended a lot on their ability to close the deal and, the owner of the property was not willing to co-operate with them.

#### Required:

- (a) From the above case study, summarise three factors that determine home loan application sanctioning. (6 marks)
- (b) Explain the following terms as used in the case:
  - (i) Loan pre-sanctioning letter. (2 marks)
  - (ii) Surrender value. (2 marks)

- (c) With reference to Akili Bank’s case, explain two benefits of pre-sanctioned home loan. (4 marks)
  - (d) Summarise six documents required from Mutua Brothers Ltd. for home loan sanctioning. (6 marks)
  - (e) (i) Describe the term “Lender Liability Risk”. (2 marks)
  - (e) (ii) Discuss three techniques Akili Bank should have used to reduce Lender Liability Risk. (6 marks)
  - (f) Assess three project risks that Mutua Brothers Ltd. could suffer. (6 marks)
  - (g) Discuss three benefits of using life insurance cover policy as an additional collateral to Mutua Brothers Ltd. brothers. (6 marks)
- (Total: 40 marks)**

**QUESTION TWO**

- (a) Discuss three factors that a bank’s regulator should take into consideration when examining the working capital loan portfolio of a microfinance bank. (6 marks)
  - (b) Discuss three effects of a severe financial crisis in the financial sector. (6 marks)
  - (c) Explain Moody’s KMV Credit Portfolio model. (3 marks)
- (Total: 15 marks)**

**QUESTION THREE**

- (a) (i) Describe the term “Risk Adjusted Return on Capital (RAROC)”. (2 marks)
  - (a) (ii) Analyse three purposes of undertaking RAROC assessment. (6 marks)
  - (b) Explain two criteria used by banks to effectively monitor and manage collateral to mitigate against liquidity risk that may occur within the day while trading. (4 marks)
  - (c) List three parties who are responsible for ensuring that a microfinance bank maintains adequate provisionary for its loan portfolio. (3 marks)
- (Total: 15 marks)**

**QUESTION FOUR**

- (a) A credit derivative is one in which the risk that a loan will not be repaid is sold to a party other than the lender.  
With reference to the above statement:
    - (i) Enumerate four risks of credit derivatives. (8 marks)
    - (ii) Examine four characteristics of transactions that generate dynamic credit exposures. (3 marks)
  - (b) Summarise four impacts of inflation on working capital. (4 marks)
- (Total: 15 marks)**

**QUESTION FIVE**

- (a) Describe four approaches used to measure the probability of default on loan. (4 marks)
  - (b) Outline six factors that influence interest rate charged on instalment loans by banks. (6 marks)
  - (c) State five terms and conditions that are included by lenders in project finance loans’ contracts. (5 marks)
- (Total: 15 marks)**
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**CCP ADVANCED LEVEL**

**PILOT PAPER**

**ADVANCED CREDIT RISK MANAGEMENT**

**December 2021.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question.**

**QUESTION ONE**

- (a) The main purpose of collateral is to improve the creditor's chances of getting its money back from the debtor. While taking collateral and considering it in securing credit facilities, it should be understood that collateral is not the primary repayment source.

In reference to the above statement:

- (i) Discuss four principles to be borne in mind while granting credit on the basis of securities. (8 marks)
- (ii) Summarise five precautions taken by lenders when using immovable property as collateral. (5 marks)
- (b) With reference to prudential guidelines on lending as provided by the Central Bank from year 2013, interpret the following:
- (i) Classification of multiple facilities. (3 marks)
- (ii) Reclassification of non-performing loans and advances. (4 marks)

**(Total: 20 marks)**

**QUESTION TWO**

- (a) Discuss five benefits of credit portfolio management. (10 marks)
- (b) One of the major cause of risk exposures in credit portfolios is "credit concentration". With regard to this observation:
- (i) Interpret the term credit concentration. (2 marks)
- (ii) Assess four ways by which credit concentration does occur. (8 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) While pricing credit risk, several factors need to be considered with credit default risk being most crucial.

**Required:**

- (i) Discuss four credit pricing methods. (8 marks)
- (ii) Examine the four main components included in credit pricing models by lending institutions (8 marks)
- (b) The advent of credit derivatives has been heralded as a path-breaking innovation that enables institution to mitigate credit risks with more flexibility. In line with this and management of credit portfolios, summarise the advantages of credit derivative instruments to:
- (i) The protection buyer. (2 marks)

(ii) The protection seller.

(2 marks)

**(Total: 20 marks)**

**QUESTION FOUR**

(a) Project financiers look primarily at the project cash inflows rather than the assets for repayments and therefore an understanding of the projects' financial risks is critical. Discuss five project financial risks that lenders of project finance should mitigate. (10 marks)

(b) Evaluate five ways by which credit managers could mitigate credit risks emanating from a borrower's working capital management. (10 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

(a) With reference to firm risks, portfolio risks and capital adequacy:

(i) Summarise four benefits of credit loss distribution. (4 marks)

(ii) Using three bases, distinguish regulatory capital from economic capital. (6 marks)

(b) Propose five lessons that could be drawn from year 2008 global credit crisis. (10 marks)

**(Total: 20 marks)**

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**CCP ADVANCED LEVEL**

**ADVANCED CREDIT RISK MANAGEMENT**

**WEDNESDAY: 15 December 2021.**

**Time Allowed: 3 hours.**

**Answer ALL questions. Marks allocated to each question are shown at the end of the question.**

**QUESTION ONE**

- (a) Analyse four factors that determine the amount of working capital. (8 marks)
  - (b) Discuss three techniques used by financial institutions to manage portfolios and control concentration risks. (6 marks)
  - (c) Outline six important elements of an effective loan portfolio management process. (6 marks)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) With reference to Base II Accord, highlight four conditions necessary for default to occur. (4 marks)
  - (b) Outline four collaterals that could be used to secure repayment of project finance. (4 marks)
  - (c) Explain four benefits of credit risk models. (8 marks)
  - (d) Enumerate four consequences of overtrading. (4 marks)
- (Total: 20 marks)**

**QUESTION THREE**

- (a) Explain the following terms as used in portfolio risk:
    - (i) Systematic risk. (2 marks)
    - (ii) Diversifiable risk. (2 marks)
  - (b) Banks need to develop and implement comprehensive procedures and information systems to monitor the condition of individual credits across various portfolios offered by the banks.  
  
With reference to the above statement, enumerate three benefits that accrue from the measures implemented by banks to ensure effective credit monitoring systems. (6 marks)
  - (c) Examine the following methods of perfection of a security:
    - (i) Perfection by possession. (3 marks)
    - (ii) Perfection by control. (3 marks)
  - (d) List four examples of credit derivatives. (4 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) A risk based pricing model must be clear and conspicuous.

With reference to the above statement, enumerate four information contained in a risk-based pricing model that a consumer should be made aware of. (4 marks)

- (b) (i) Differentiate between “positive working capital” and “negative working capital”. (4 marks)  
(ii) Describe three benefits of managing working capital in a business. (6 marks)
- (c) Analyse six criticisms against Basel II in connection with financial crisis of 2008. (6 marks)  
**(Total: 20 marks)**

**QUESTION FIVE**

- (a) (i) Explain “Merton model” as used in credit risk modelling. (3 marks)  
(ii) Examine six assumptions of the Merton model. (6 marks)
- (b) According to International Reporting Standard No.9 (IFRS 9), Financial Instruments are defined as a contract that gives rise to a financial asset in one entity and a financial liability or equity instrument in another entity.

With reference to the above statement, list five types of financial assets as outlined under IFRS 9. (5 marks)

- (c) Discuss the following methods of measuring financial assets:
- (i) Amortised cost. (2 marks)  
(ii) Fair value with changes in other comprehensive income (equity). (2 marks)  
(iii) Fair value through profit and loss. (2 marks)  
**(Total: 20 marks)**
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