

Challenges of Business Continuity Plans (BCPS) In Addressing Disaster Risks in Commercial Banks in Tanzania

Honest Amedeus Matem¹ & Nicholas Fabian Mwangeni²

Abstract

Bank of Tanzania (BOT) undertakes a regular review on Business Continuity plans (BCPs) in commercial banks to check their robustness in addressing risks. However, the results of such reviews are confidential hence not publicly known. Inadequate information in the general public and regulators about riskiness of banks and financial institutions may increase disaster severity considering that there has been an increase of both natural and anthropogenic disasters in Tanzania and the world at large. The main objective of the study was to examine the effectiveness of Business Continuity Plans (BCPs) in addressing disaster risks in commercial banks in Tanzania. The study used close ended questionnaires, interview and document review for data collection. The study found that commercial banks in Tanzania are exposed to both natural and anthropogenic hazards including hazards, fire, floods facility intrusion, information security breach, cyber-attacks, forgeries, fraud and corruption. In order to address these hazards, commercial banks in Tanzania have BCPs in place backed by policies, strategies, risk assessments, crisis management and communication protocols. Furthermore the findings show that BCPs were effective in addressing disaster risks in commercial banks in Tanzania even though there were some direct and indirect challenges in terms of staff awareness and management buy-in costs. It is recommended that, more budget is need in building capacity of commercial banks to enhance BCP practices in terms of trainings and infrastructures.

Key Words: *Effectiveness, Business Continuity Plan (BCP), Disaster Risk, Commercial Bank*

Date of Submission: 02-09-2022

Date of Acceptance: 15-09-2022

I. Introduction

Business Continuity Plan (BCP) is a detailed document backed with plans, actions, systems, procedures and processes used by organizations in preparation for, response to and recovery from disruptions (BOT, 2009). According to BIS (2008), BCPs are designed by financial institutions to ensure that critical activities are maintained or recovered timely during and after disruptive events in order to reduce various direct and indirect losses. It enhances operational resilience of financial institutions by boosting adaptive and coping capacities.

Globally, the subject of business continuity planning has evolved over time. As pointed out by Mahal (2008), the development of business continuity plans is rooted as far as 1950's in which its key focus was on recovery the IT infrastructure. Since then it have changed and evolved, being driven by different types of disasters and hazard events, the major ones being the Y2K and 9/11 bombings in the USA which gave it more mileage.

Various studies conducted in the area of business continuity plans suggest that companies which were struck by disasters with effective BCP programs in place were more resilient relative to the ones with none. The 9/11 bombing of Pentagon and World Trade Centre stood as a litmus test on the rationale for organizations having BCP in place. The study by Snedaker (2007) found that majority of the financial firms were located in the Twin Towers with effective Business Continuity Plans (BCPs) or Disaster Recovery Plans (DRPs) managed to recover and continue operating within few days post the September 11, 2001 bombing.

According to Snedaker (2007), various categories of losses arise when disasters strike an organization ranging from financial losses, loss of investor confidence and reputational damage. When financial institutions are struck by disasters they become vulnerable to various sorts of crimes, including loss of sensitive information which ends up triggering legal cases whose resultant might put the impacted financial institution into paradox.

The study by Gartner, Inc (2002) indicated that at least 40% of companies that were struck by disasters but without business continuity plans exited their respective markets within five years. The study was supported by Feldman and Eves (2007) who established that at least half of businesses ceased to exist within one year after experiencing a disaster event. It was in the same spirit that Light & Wheeler-Smith (2008) considered organizations with poorly implemented business continuity plan as good as those with none.

Noth, Felix; Schüwer, Ulrich (2017) established that natural disasters were responsible for eroding value of commercial banks operating in the disaster prone areas due to dwindling of the key performance metrics in both the income statements and the balance sheets. The results implied that insurance covers and other social security schemes were not adequately covering commercial banks against the financial perils.

According to East African Community (EAC) (2017), natural and anthropogenic hazards actuate disasters which amounts to internal displacements within East African Community, major ones being floods, landslides, drought and conflicts, coupled with environmental degradation, unsustainable use of resources, poor land use planning and unsustainable growth of human population. Other anthropogenic disasters impacting the region include terror attacks, cyber-attacks, fires, environmental pollution, HIV and AIDS, and epidemics, East African Community (EAC) (2017).

In cognizance of disaster risks that commercial bank's operating in Tanzania are exposure to, BOT came up with the business continuity management guidelines for banks and financial institutions (2009) which mandates all banks and financial institutions to maintain a BCM policy to guide formulation and maintenance of all matters related to business continuity, of which BCP is a part. The guidelines were then complemented with Banking and Financial Institutions (Licensing) Regulations (2014) which made maintenance of business continuity management policy as a key licensing requirement.

II. Methodology

The study was carried out in the City of Dar es Salaam, Tanzania which hosts more than 30% of the commercial banks' branch network in Tanzania. The study used descriptive research design in which various statistical methods such as percentages, proportions and graphs were used in data presentation. The descriptive research design was applied because the study involved describing interlinkages between various sets of variables which altogether defines an effective business continuity plan of a commercial bank. The study aimed at collecting information from bankers on the effectiveness of business continuity plans of commercial banks in Tanzania.

The case study involved the oldest banks in the business of banking in Tanzania, CRDB and NMBas such they have tested the disruptions before the establishment of BCM guidelines for banks and financial institutions in Tanzania. In terms of coverage the two banks have a reach over all regions and districts in Tanzania, offering retail and business banking, corporate banking and treasury services using various channels digital and electronic channels, major ones being automatic teller machines, ATMs

Sampling

Simple random sampling and purposive sampling techniques were deployed. Simple random sampling technique was used in selecting staff from various departments of the two banks who participated in the study. Purposive sampling technique was used to select the BCP coordinators of each bank owing to their unique knowledge of the subject area.

The calculation of sample size were developed following Slovene's formula ($n = N / (1 + Ne^2)$); where n = Number of sample, N = 7109 total population, e = margin error (10% or 0.1). Thus, a total of 99 respondents were approached from the two selected commercial banks.

Data Collection and Analysis Methods

This research utilized both primary data and secondary in which a number of methods including document review, questionnaire survey and interviews were deployed

Document Review

The study deployed review of various published documents from various sources on the effectiveness of business continuity plans in addressing disaster risks in commercial banks. The documents reviewed were mainly published by Bank of Tanzania (BOT), Bank of International Settlements (BIS) and Hyogo Framework of Action, Sendai Framework and other web based materials on the subject matter.

Questionnaire Survey

A total of 99 close ended questionnaires were distributed to staff within the selected commercial banks to seek their opinions, experiences, skills, knowledge and feelings on the subject matter. The questionnaires were designed to enable genuine responses on common disasters, history of concurrences and current interventions by the commercial banks.

Interview

Data and information from the BCP Coordinators who are the front liners behind the development and execution BCPs were gathered through telephone interviews. A total of two BCP coordinators (one from each sampled bank) were interviewed. The interviews were guided by a checklist comprising of open ended questions in order to provide an ample space for the researcher to ask respondents the follow up questions. Before actual

administration of the checklist, the questions were tested and the researcher analyzed the outcomes before the actual execution commenced.

Data Processing and Analysis

The data collected were captured in the statistical package for social sciences (SPSS, version 12) and Microsoft Office Applications such as Ms. Excel. The combination of all these tools was used to process the data. Both qualitative data were analyzed by content analysis while quantitative data were analyzed by descriptive statistics.

III. Results And Discussion

Disasters Profile in Commercial Banks in Tanzania

The findings revealed that commercial banks in Tanzania have experienced both natural and anthropogenic disasters in the past. In terms of natural disasters, the study found that fire, earthquakes and floods were the main natural disasters which had impacted commercial banks in Tanzania. The findings is in line with the study by Snedaker (2007) which concluded that fire is the most common type of disaster event that businesses experience. In which 44% of companies whose premises experience a significant fire do not recover at all due to lack of business continuity plans or disaster recovery plans.

In addition to that, the research found that cyber-attacks, armed robberies, health pandemic, money laundering, sabotage, frauds, forgeries, corruption, power outages, network downtimes, facility intrusion, information security breaches and loss of sensitive high value customer information were the main disasters which commercial banks had experienced in the past. The results imply that technology driven anthropogenic disasters were the most recurring and serious disaster in commercial banks in Tanzania owing to the fact that banking in today’s world is driven by financial technology “Fintech”.

Implementation of BCP in Commercial Banks in Tanzania

The study found that commercial banks in Tanzania have business continuity management plans drawn from the Bank of Tanzania Business Continuity Management Guidelines for Banks and Financial Institutions (2009). The mandates for executing BCPs were drawn from the Boards of Directors and Senior Management Teams of the respective banks. The findings were in line with the BIS High Level Principles of Business Continuity Management (2005) which vests the BCP responsibility for BCP with Board of Directors and Senior Management.

The study findings also revealed that commercial banks in Tanzania have dedicated resources for coordinating BCP practices. The BCP teams are led by the BCP coordinators who are responsible for ensuring that BCP policies are in place, staff are trained on BCP, testing of BCPs are done as per pre-defined schedules and reports to Board of Directors and Senior Management are prepared and released as per their specified timelines. The BCP coordinators are the focal points for BCP practices in their respective banks.

The study revealed that majority of the respondents (71.1%) involved in the study had training interventions related to BCP in their respective banks (Table 3). Regarding the comfort ability of staff to their level of BCP awareness/training the results indicated that 47.4% strongly disagreed while 7.2% simply disagreed. On the other hand 45.4% agreed that they were comfortable with their level of BCP awareness/training (Table 3).

Furthermore, the results show that, 45.4% of the respondents agreed that they understood their roles in case BCP is activated while 36.1% disagreed (refer Table 3). On the other hand 18.6% of the respondents were neutral. The knowledge gap by staff in case BCP is activated presents a crucial pain point in which the commercial banks must invest resources to close to ensure that disaster impacts are reduced in case a disaster events. Otherwise the knowledge gap could fuel disaster impacts if the situation remains unattended.

On the extent to which BCPs of commercial banks incorporate disaster matters, the findings shows that, 56.7% respondents agreed, 28.9% were of neutral opinion while 14.4% respondents disagreed that their respective banks considers disaster risk matters in implementing BCPs (Table 3).

Table 3: Staff Awareness of BCP Practices in Commercial Banks in Tanzania

| S/N | Variables | Responses | Frequency | Percent |
|-----|----------------------------------------------------------------------|-------------------|-----------|---------|
| 1 | BCP Training Program | Yes | 69 | 71.1 |
| | | No | 28 | 28.9 |
| | | Total | 97 | 100 |
| 2 | Comfortability with the Level of my BCP awareness Training/education | Strongly Disagree | 46 | 47.4 |
| | | Disagree | 7 | 7.2 |

| | | | | |
|---|------------------------------------------------------------------------------|----------|----|------|
| | | Agree | 44 | 45.4 |
| | | Total | 97 | 100 |
| 3 | Understanding of the staff role during BCP activation | Disagree | 35 | 36.1 |
| | | Neutral | 18 | 18.6 |
| | | Agree | 44 | 45.4 |
| | | Total | 97 | 100 |
| 4 | Commercial banks consideration of disaster risk matters in implementing BCPS | Disagree | 14 | 14.4 |
| | | Neutral | 28 | 28.9 |
| | | Agree | 55 | 56.7 |
| | | Total | 97 | 100 |

The Effectiveness of BCP Program in addressing Disaster Risks in Commercial Banks in Tanzania

Four attributes were used to investigate the effectiveness of BCP program in addressing disaster risks in commercial banks in Tanzania. The attributed are the way commercial banks used BCPS to respond to past disasters, adequacy of the BCP program, diversity, inclusion and governance of the BCP program as well as degree to which the BCPS address disaster risks faced by commercial Banks in Tanzania.

On the way commercial banks in Tanzania had used BCPS to respond to past disasters the study findings indicated that commercial banks had been resilient to various disaster events by using BCPS. Commonest scenarios where BCPS had enabled commercial banks sail through disasters were those of cyber-attacks, power outages, network downtimes, floods, armed robbery and the recent COVID-19 pandemic. One of the BCP coordinators had this to say, “... there has been several disaster incidents affecting our head offices and branches thereby disrupting process flows to our staff, customers and other stakeholders, the most frequent one being of power outages ...”

On the adequacy of the BCP program, seven criteria were used in the assessment (Table 4). The study results revealed that commercial banks had adequate business continuity management policy as well as adequate center for recovery of data and operations/recovery site (Table 4). Based on the BCP tests (drills) and disaster experiences commercial banks were improving their BCPS continuously. However, the business impact assessments, risk assessments and business continuity strategies were inadequate (Table 4). Despite the fact that commercial banks had crisis management plans in place, the study results revealed that they were inadequate (Table 4)

Table 4: Adequacy of the BCP Program

| S/N | Variables | Responses | Frequency | Percent |
|-----|-----------------------------------------------------|-------------------|-----------|---------|
| 1 | Have adequate business continuity management policy | Disagree | 7 | 7.2 |
| | | Agree | 37 | 38.1 |
| | | Strongly Agree | 53 | 54.6 |
| | | Total | 97 | 100 |
| 2 | Have adequate business impact analysis (BIA) | Strongly Disagree | 28 | 28.9 |
| | | Disagree | 51 | 52.6 |
| | | Strongly Agree | 18 | 18.6 |
| | | Total | 97 | 100 |
| 3 | Have adequate risk assessments (RA) | Strongly Disagree | 7 | 7.2 |
| | | Disagree | 72 | 74.2 |
| | | Agree | 18 | 18.6 |
| | | Total | 97 | 100 |
| 4 | Have adequate business continuity strategies | Strongly Disagree | 28 | 28.9 |
| | | Disagree | 51 | 52.6 |
| | | Strongly Agree | 18 | 18.6 |

| | | Total | 97 | 100 |
|---|--------------------------------------------------------------------------|-------------------|-----------|------------|
| 5 | Have adequate center for recovery of data and operations (recovery site) | Strongly Disagree | 7 | 7.2 |
| | | Disagree | 18 | 18.6 |
| | | Agree | 35 | 36.1 |
| | | Strongly Agree | 37 | 38.1 |
| | | Total | 97 | 100 |
| 6 | Have Robust crisis management plan is in place | Strongly Disagree | 7 | 7.2 |
| | | Disagree | 72 | 74.2 |
| | | Neutral | 18 | 18.6 |
| | | Total | 97 | 100 |
| 7 | There is continuous improvement of the BCP program. | Strongly Disagree | 28 | 28.9 |
| | | Disagree | 7 | 7.2 |
| | | Agree | 25 | 25.8 |
| | | Strongly Agree | 37 | 38.1 |
| | | Total | 97 | 100 |

Source: Field Data (2021)

On the other hand, analysis of the diversity, inclusion and governance of the BCP program indicated that BCP programs of commercial banks in Tanzania includes recovery objectives proportional to the size of the bank at the same time specifying the roles and responsibilities of all stakeholders (Table 5). Moreover, the study results indicated that the BCP programs of commercial banks were not exhaustive in terms of the roles and responsibilities of all stakeholders. Also, the findings of the study showed that the BCPs were not built based on international standards and best practices (Table 5).

Table 5: Diversity, Inclusion and Governance of the BCP program

| S/N | Variables | Responses | Frequency | Percent |
|-----|-------------------------------------------------------------------|-------------------|-----------|------------|
| 1 | Includes recovery objectives proportional to the size of the bank | Disagree | 18 | 18.6 |
| | | Agree | 35 | 36.1 |
| | | Strongly Agree | 44 | 45.4 |
| | | Total | 97 | 100 |
| 2 | Involves regular testing, maintenance and audit of the BCP | Agree | 79 | 81.4 |
| | | Neutral | 18 | 18.6 |
| | | Total | 97 | 100 |
| 3 | Specifies roles and responsibilities of all stakeholders | Disagree | 44 | 45.4 |
| | | Neutral | 18 | 18.6 |
| | | Strongly Agree | 35 | 36.1 |
| | | Total | 97 | 100 |
| 4 | BCP is built based on international standards and best practices | Strongly Disagree | 65 | 67 |
| | | Disagree | 32 | 33 |
| | | Total | 97 | 100 |

Source: Field Data (2021).

Improvements needed to enhance BCP Practices in Commercial Banks in Tanzania

The study found that the effectiveness of BCP practices in commercial banks in Tanzania was being impaired by various cost and non-cost related challenges.

On the direct cost challenges the study results showed the following; 52.6% of the respondents agreed that there were some direct financial cost affecting the program while 28.6% strongly agreed and 18.6% simply disagreed (Table 6). On the other hand 45.6% of the respondents agreed that indirect costs were impediments to effectiveness of BCPs in commercial banks, 36.1% respondents strongly agreed while 18.6% disagreed that indirect and intangible cost were existing obstacles (Table 6).

With regards to the challenges in identifying cost – effective solution to BCP program of a commercial bank the results showed that, 45.4% of the respondents disagreed while 36.1% respondents strongly agreed and 18.6% simply agreed (Table 6). The result indicates that, initiatives to implement BCP in commercial banks in Tanzania was being counteracted by cost challenges.

The findings above are supported by the interview response from the BCP coordinators of the two banks whereby one of them had this to say; “...*Inadequate budget allocation due to overall industry performance have been affecting the full implementation of the BCP...*”

Table 6: Cost Challenges

| S/N | Variables | Responses | Frequency | Percent |
|-----|---------------------------------------|----------------|-----------|------------|
| 1 | Direct financial costs | Disagree | 18 | 18.6 |
| | | Agree | 51 | 52.6 |
| | | Strongly Agree | 28 | 28.9 |
| | | Total | 97 | 100 |
| 2 | Indirect, intangible costs | Disagree | 18 | 18.6 |
| | | Agree | 44 | 45.4 |
| | | Strongly Agree | 35 | 36.1 |
| | | Total | 97 | 100 |
| 3 | Identifying cost – effective solution | Disagree | 44 | 45.4 |
| | | Agree | 18 | 18.6 |
| | | Strongly Agree | 35 | 36.1 |
| | | Total | 97 | 100 |

Source: Field Data (2021)

Non cost related challenges were also found to be barrier to effectiveness of BCPs in commercial banks. The study results indicated that 81.4% of the respondents considers that low priority given to BCP programs in commercial banks in Tanzania have been affecting its implementation while 18.6% of the bank’s staff who responded to this question simply disagreed (Table 7).

Other challenges that were identified by the respondents were lack of management buy-in, in which the study showed that 52.6% respondents simply agreed and 28.9% who strongly agreed while 18.6% simply disagreed that lack of management buy-in have negatively affected the implementation of BCP program in their respective banks (Table 7).

The results imply that for some reasons management was not buying in the value which was being created by having BCP arrangements in place. This contradicts BIS (2005) high level principle 1 which places heavy responsibility on Management and Board of Directors during disaster preparedness, response and recovery.

The findings above are in line with the interview responses from the two BCP coordinators who at different times one of them reacted, “...*you know our problem, the existing problem that really negatively affect implementation of BCP Program is limited local expertise on BCP matters, as a result most of our employees have little or no training on BCP matters something which consequently makes BCP implementation impartial...*”.

These results concurs with the second interviewer responses who suggested that; “...*In my opinions, I think if the commercial banks can invest in research on BCP specific to Tanzania, and train their employees on BCP, we will obvious do away the consequences of obvious disruptions...*”. It was also said; “...*inadequate buy-in and inadequate priority on BCP matters also contribute to the failure of implementation of BCP programs in our bank...*”

Table 7: Insufficient Priority, Research, Management Buy-in and Terminology

| S/N | Variables | Responses | Frequencies | Percentage |
|-----|---------------------------|----------------|-------------|------------|
| 1 | Low priority | Disagree | 18 | 18.6 |
| | | Agree | 79 | 81.4 |
| | | Total | 97 | 100 |
| 2 | Lack of management buy-in | Disagree | 18 | 18.6 |
| | | Agree | 51 | 52.6 |
| | | Strongly Agree | 28 | 28.9 |
| | | Total | 97 | 100 |

Source: Field Data (2021).

Despite the cost and non-cost related challenges impacting BCP implementation, the study results indicated that the commercial banks in Tanzania had strengths to overcome the challenges. The interviews done with BCP coordinators indicated that good rapport with regulators is key to effective implementation of BCPs in commercial banks in Tanzania. One of the coordinators had this to say; *“there will never be a successful BCP implementation in combating disruptions in commercial banks in Tanzania unless there is good rapport with our regulators, especially BOT”*.

The results points out that, apart from the inherent challenges within the particular banks, there are some outside factors which also affect the implementation of the program. The opinion above is in line with the opinion from another interviewee who had this to say; *“...availability of many trainings and many training platforms is pivotal for the successful implementation of the program to my bank, yes I cannot say we are doing the best, but at least I can't compare with other banks. Unlike other banks, my bank has made improvement basing on the past experience but also there is high quality back up.”*

The results above indicates that, despite the fact that some of banks are struggling in deploying BCPs to address disaster risks inherent to their banks, others have made significant milestones and aim to improve even more. Some of the banks have good platforms to stand on while some are creating their own strengths from the in-situ.

In terms of the opportunities available to optimize effectiveness of BCPs, each of the two coordinators and one respondent to the questionnaires opened up on the opportunities available to enhance the effectiveness of BCPs in addressing disaster risks in commercial banks in Tanzania. The first interviewee had this to say; *“...if the banks regardless their financial capacity, decide to allocate more budget on strengthening operational resilience, then all the banks can achieve their goals, but not with these challenges of electricity and COVID-19”*

The above statement clearly stipulates that, the commercial banks are being affected by external factors similar to internal factors. Focusing on the internal factors one interviewee had this to say *“.....one particular bank has to set aside more budget on strengthening operational resilience and seek more clarity from the regulator on BCM. The budget however should be there to serve the need from outside especially when the internal capacities are not enough, see, we need to increase frequency of drills in order to raise the level of preparedness but outsourcing disaster recovery function would add more value.....”*

In addition to that, one of the respondent had another opinion on factors affecting effectiveness of BCP implementations. *“...external and internal factors that affects business continuity management system (BCMS) from attaining its intended objectives. Risks treatment plan needs to be effectively established to manage both internal and external factors that could potentially affect the business continuity plan. BCPs should be always updated to remain relevant throughout the life circle of BCMS. Also, the BCMS objectives needs to be established that are relevant to BCM policy. BCM Objective should be measured over time to ascertain its effectiveness and deviations addressed promptly...”*

The findings above signifies that, despite the importance of the BCP program, most banks fails amidst disasters due to failure to keep abreast with challenges which emanates outside the banks. The results also implies that commercial banks can explore opportunities within their respective banks to address the challenges holding them back from optimizing the value created by having effective BCPs in place when disasters strike.

IV. Conclusion And Recommendation

The study revealed that, commercial banks operating in Tanzania had experienced both natural and anthropogenic disasters in the past. In terms of natural disasters fire, earthquakes and floods were the main natural disasters to have disrupted commercial banks in Tanzania. In terms of anthropogenic disasters the disruptions in terms of cyber-attacks, armed robberies, health pandemic, and money laundering, ranked the top in the list. Commercial banks in Tanzania have business continuity plans (BCPs) drawn from Business

Continuity Management (BCM) policies. The BCPs are updated on regular basis based on the testing results and lessons learnt from disruptions. The study also informed that, despite the value which commercial banks are harnessing from BCPs, there exists some challenges which obstructs the initiatives of which commercial banks in Tanzania are taking to optimize and perfect their BCPs. The challenges are two fold; cost related challenges as well as non-cost related challenges coming from both within and outside the commercial banks. However, the commercial banks are committed to utilize the available opportunities to enhance the effectiveness of BCPs in addressing disaster risks which they are exposed to. The study recommends that more trainings and awareness on disaster risks to bank employees. Commercial banks should create BCP culture as part of the overall bank's strategy, investing in disaster resilience, setting up realistic recovery objectives, build thorough understanding of organization's functions, provide budget for enforcing BCP program and enhance BCP awareness in respective banks.

References

- [1]. Bank of Tanzania (2009). Business Continuity Management Guidelines for Banks and Financial Institutions. Bank of Tanzania. Dar es Salaam
- [2]. Bank of Tanzania. (2014). The Banking and Financial Institutions (Licensing) Regulations
- [3]. CRDB Bank Plc Website. Company Profile. <https://crdbbank.co.tz/about-us/> retrieved on 22nd July 2021 at 2227hrs
- [4]. CRDB Bank Plc, (2021). Audited Financial Statements. <https://crdbbank.co.tz/wp-content/uploads/2021/06/2020-Audited-Financials.pdf> retrieved on 27th July, 2021 at 2109hrs
- [5]. Feldman, J, Eves, K. (2007). Semi Annual Business Continuity Survey Assessing Bay Area
- [6]. Gartner report. (2002). Press release. Gartner Says That Less Than 25 percent of Global http://www3.gartner.com/5_about/press_releases/2002_10/pr20021008a.jsp retrieved on 8th April, 2021 at 0923hrs
- [7]. Light, P. Wheeler, S. (2008). Predicting Organizational Crisis Readiness: Perspectives and Practices towards a Pathway to Preparedness. Center for Catastrophe Preparedness and Response. New York, NY: New York University
- [8]. Mahal, A. (2008). Business Continuity Management Maturity Model for Banks in UAE. The British University. Dubai
- [9]. NMB Bank Plc Website. NMB Company Profile. <https://www.nmbbank.co.tz/about-us/nmb-at-a-glance/company-profile> retrieved on 30th May, 2021 at 1527hrs
- [10]. Noth *et al.* (2017). Natural Disasters and Bank Stability: Evidence from the U.S. financial system. Hamburg
- [11]. Snedaker, S. (2007). Business Continuity and Disaster Recovery Planning for IT Professionals. Syngress Publication Inc
- [12]. The Bank of International Settlement. (2005). High-Level Principles for Business Continuity Management. Basel Committee on Banking Supervision
- [13]. The Bank of International Settlement. (2009). Strengthening Resilience of a Financial Sector. Basel Committee on Banking Supervision
- [14]. The Bank of International Settlements. (BIS). <https://www.bis.org/bcbs/publ/d509.pdf> retrieved on 6th September 2021 at 2307hrs
- [15]. The East African Community. (2017). Floods and Conflicts the Major Cause of Disasters in East Africa <https://www.eac.int/press-releases/144-environment-natural-resources/863-floods-and-conflicts-the-major-cause-of-disasters-in-east-africa> retrieved on 16th June, 2021 at 0808hrs

Honest Amedeus Matem, et. al. "Challenges of Business Continuity Plans (BCPS) In Addressing Disaster Risks in Commercial Banks in Tanzania." *IOSR Journal of Business and Management (IOSR-JBM)*, 24(09), 2022, pp. 11-18.