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Analyzing the Risk Management Framework of Ethiopian Banking System: A Case Study for Commercial Bank of Ethiopia

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Abstract: Present study focuses on the analysis of credit risk management framework in the context of Ethiopian Banking System. To discover the credit risk patterns of Commercial Bank of Ethiopia (CBOE), the authors advocated the usage of an inquiry on the risk management teams and employees of the bank. In the light of related findings, we discovered and patterned the risk management practices of CBOE. This article will endeavor to explore the underlying sources for origination of corporate lending and the structuring capabilities of corporate and business banking units under the country risk definition of Ethiopia.

Keywords: Rating, Credit Risk, Risk Management, African Banking Studies, Commercial Bank of Ethiopia

1. Introduction to the Banking in Ethiopia

1.1. Macroeconomic Fundamentals

Every year the Barclays Bank's Africa Group Financial Markets Index evaluates 17 countries of the southern continent on the pillars of market depth, foreign exchange reserves, regulatory practices, market discipline, attraction capabilities of local investors, macro-economic prospects, financial contract enforceability, insolvency and security enforcement regimes. According to top 60 executives from the econo-financial world from 17 countries in Africa, Ethiopia ranks on the worst quantile in terms of market depth, access to foreign exchange, market transparency, tax and regulatory environment, capacity of local investors and from macroeconomic opportunity point of view (Barclays, 2020). It is described as "fast growing country, without any financial depth and local investor capacity".

Ethiopia has many fundamental reasons for sound banking in Africa. The country on the "Horn of Africa" shadowed under the sun of the Sub-Saharan deserts, is rated as B1 with negative outlook by Moody's (Moody's, 20 Sep. 2019). Surprisingly, the country with its nominal GDP size worth of USD 93.5 billion and USD 956 per capita income is in the same rating category with Turkey. With its 8 times higher nominal GDP and 10 times higher per capita income Turkey is ranked as "substandard speculative grade" country by Standard Poor's as well (see. Appendix 1). Even though both countries are enjoying the same sovereign rating category, Ethiopia is still classified as LDC (least developed country) by United Nations and World bank standards (UNDP, 2019). The country is a member of COMESA (Common Market for Eastern and Southern Africa), which covers 15 other Sub-Saharan countries comprising of low-middle income countries. The IMF differentiates the Sub-Saharan African counties as oil exporters, other resource-intensive countries, non-resource intensive countries and middle-income countries, where Ethiopia is labeled as non-resource intensive country (IMF, 2009). With its 7.4% real GDP growth rate as of 2019, the country is among the top three countries in Sub-Sahara averaging a growth rate of 3.2%. Donations are largely provisioned by EU, UK, USA and China, where India, Brazil, Saudi Arabia and Turkey are among the investor countries in Ethiopia (Abbink, 2017: 149-171). Though the foreign direct investments (FDI) to the country is very modest at around USD 206 million level, Turkey and India is reported to be leading two investors at a bracket of 59% level. By the year 2012, Turkey was awarded with a railway construction project worth of USD 1.7 billion on standalone basis.

The country is passing through a fundamental economic transformation. "Home Grown" reform efforts to hinder the macroeconomic imbalances and to initiate financial sector reforms to eliminate the structural and institutional bottlenecks in its financial system (Birritu, December 2019: p. 26). U.N missions on the other hand, are directed towards accelerating economic development on institutional basis within the five-year growth and transformation plans. These transformation plans are also supported by international aids in form of loans and grants to the country at an amount of 40% of the national budget.

The country is in urgent need of expanding its knowledge, resources and expertise to modernize its banking and finance infrastructure given the limits of its government sponsored banking institutions such as Commercial Bank of Ethiopia. To meet the challenges of these resource needs, Ethiopia concluded an Article IV agreement with the International Monetary Fund on November 2018 (IMF, December 3, 2018). Ethiopia's macro- economic fundamentals are represented by 12.7% inflation rate as of September 2018 hitting the 14.6% level as of end 2019 according to IMF statistics, which shows heavy resistance against the single digit targets of National Bank of

Ethiopia (NBE). Behind the inflationary rigidity lies the expansionary credit policies of the public sector banks and the broad money and credit growth driven monetary policy of the NBE. The higher inflation rates are also supported by the strong credit growth of the banking system and the shift of ongoing project to concessional financing when possible. The agenda of the macro economic and financial management teams of the country is full of Growth and Transformation Plan II, which aims for catalyzing private investment with the help of financial sector reforms (FSRs). The FSRs9would foster the establishment of a government bond markets to manage the liquidity inside the banking system. As prescribed by IMF in a very much standard implementation fashion, the road to structural reform agenda finds its way through gradual opening of the financial sector to foreign competitors, who would be investing in the promising banking sector like it was done in Turkey right after the financial crisis of 2001.

Moody's has many arguments for a B level rating for Ethiopia ranging from the inefficiencies of State-Owned Enterprises to structural reform needs over privatization agendas in banking and finance capabilities of the country. The decision to change the rating calls for an immediate banking sector reforms and which is also subject to significant implementation of risk management best practices commensurate with global standards. This important step will be ultimately take time and the reversal of deterioration in credit risk management practices should start within the largest bank in Ethiopia, that is Commercial Bank of Ethiopia (CBE).

1.2 Objective of the Research

Economic growth either imposed by IMF or driven by Ethiopian banking elite and macro-financial system integrators such as the National Bank of Ethiopia (NBE), need sound banking infrastructure and efficiently functioning financial institutions. CBE as being the largest financial institution in Ethiopia deserves special attention of bank restructuring issues inside the financial transformation programs. The following research hopes to present a snapshot picture of the existing risk management framework of CBE at a point of time. The paper bases its resolving arguments out of this research question: **"How is the risk management framework is composed and does it provide a competitive source to CBE at a given point in time?".** The answer to this "risk moment of truth" should help the banking authorities and academicians in Ethiopia to generate certain principles for sound banking and risk management practices for enhancing the structural change programs to attain higher competitive positions inside Ethiopian banking system.

1.2.3 The Methodological Approach and Major Findings

The paper benefited considerably from a questionnaire developed within a master's work at the University of Commerce in Istanbul Turkey (Appendix 2). The survey as basis of the field research deciphered the internal risk management practices of CBE with superb efficiency. By using the query approach, Risk Management Framework Data was collected using interview from two bank managers and using questionnaires from 57 bank employees. The study moreover reveals that credit risk, liquidity risk and operational risk are the major risks to the bank. It was also found out that CBE, Bale main branch identifies risk in different ways, among these, the bank utilizes risk flow chart, physical risk assessment, check list and questionnaires. The desk research benefited considerably from the information provided by supranational such as IMF and UN sources.

1.2.4. Literature Review

The **UNDP's (December 2019)** program evaluation report about Ethiopia provides extensive information about the transformation of the country from its LDC level towards market oriented, economically sustainable country. For understanding the basic political, economic and societal developments **Abbink's** work of "A Decade of Ethiopia" is a source of extraordinary vitality. The IMF staff country surveillance reports and 2018 Article IV Country Report No.18/354 provide extensive and illuminating consultation information about economic indicators, fiscal and monetary reform processes and the size of the technical assistance of the IMF programs in Ethiopia. The Basel Principles of Sound Lending Practices (BSBC) helps to a great extend to the transformation process in revolutionizing the credit lending practices in every part of the world. Though there exist a limited source of banking for Ethiopia, the research paper of **Nwanne (2015)** provides material source for Banking System in Ethiopia. For detailed analysis of credit risk management practices, the research article of Saheb & Reddy (2018) provides a good fundamental on credit risk management practices on comparative basis. For detailed knowledge about fundamental credit risk management, the book of **Michael Ong, (1999)**: Internal Credit Risk Models and **Saunders, A. /Allen, L. (2002)**: Credit Risk Measurement with **Crouhy, M./Galai, D./ Mark, R (2000)** provide Comparative Analysis of Current Credit Risk Models.

2. The Banking in Ethiopia, the Case of Commercial Bank of Ethiopia

The history of banking in Ethiopia dates back to in 1905, the bank of Abyssinia commenced its actions in Addis Ababa. Afterwards, the Bank of Abyssinia was liquidated and the Bank of Ethiopia was established instead in 1942. In 1943, other bank called the State Bank of Ethiopia was established, which became the central bank in the country. In 1963, the state bank of Ethiopia was split in to the National Bank of Ethiopia (NBE) and Commercial Bank of Ethiopia (CBE).

During the second world war, the conquering Italians established Banca di Italia, Banco di Roma and Banco di Napoli with Banca Nazionale del Lavoro in the occupied country. However, they all ceased their operations soon after the liberation of the country from the conquerors except Banco di Roma and Banco di Napoli. They were merged under the new bank called "Bank Asmara". In 1941 another foreign bank, Barclays Bank, came to Ethiopia with the British troops and organized Banking services in Addis Ababa until its withdrawal in 1943. On April 1943, the state Bank of Ethiopia commenced full operation and acted as Central Bank of Ethiopia and had the note privilege as the agent of the Ministry of finance. The Ethiopian Monetary and banking is ratified in 1963. It stripped the entity into two distinctive entities such as Commercial- and Central Banking formations. Both establishments are inaugurated as the "National Bank of Ethiopia" and the "Commercial Bank of Ethiopia". The Commercial Bank of Ethiopia overcome the Commercial Banking from the former State Bank of Ethiopia in 1964 with all employees being solely from Ethiopia.

The CBE, as being a state-owned institution is involved in important transactions in the name and of the government of Ethiopia. The bank acts as the credit and transaction base of the Chinese funding facilities in the name of Government of Ethiopia. Chinese banks provided the state-sponsored CBE a funding facility of USD 300 million in a single facility The bank also evolves in transacting remittances from Ethiopians overseas. The bank's remittance payments reached a record level of USD 2.7 billion in 2015 which are mostly stemming from U.S.A. The payment transactions business constitutes the largest source of income not only the bank but the country as well (Abbink, 2017: 154). As this funding case is an example for opening of the capital account of Ethiopia, the liberalization of the capital flows in- and out of the country can have important implications for financial markets and institutions in the country (Johnston & Sundararajan, 1999: 20). The opening of the capital account may involve risks different from those encountered in purely domestic transactions. Such risks may be driven by the cross-border lending activities (sovereign, credit and transaction risks), increased exposure to currency fluctuations (forex and settlement risks) and by excessive overreliance on short term funding which might end up in liquidity crisis of the CBOE.

CBOE's duties are not restricted to Vostro account practices with foreign banks. In practice, the bank allocates funds to risky industries such as construction, mortgages and manufacturing where the NPL ratios range from 7% up-to 12% on average (Saheb & Reddy, 2018). One of the both researcher's significant findings was if the CBOE was compliant with respect to core Basel principles? To answer this questions, they had developed 25 questions out of 17 core Basel principles. Both researchers could not verify the implementation of the principles and the existence of a credit rating system in the bank. On regulatory and reporting issues, contrary to the most African banking systems, 7 countries are at the Basel III stage, whereas 9 countries are implementing Basel II. There is only one country in Africa which is still at Basel I stage (Barclays, 2017: 21).

2.1.1 Patterning the Banking Practices under the Macro-Prudential Regime of Ethiopian Monetary Authority

Against this background of banking in Ethiopia, some practices in banking deserve special attention. The country is not allowing foreigners for getting a banking license. Furthermore, according to the **Directive No. FXD/31/2006 (**Amendment to Directive No FXD/25/2004) the citizens except the Non-Resident Ethiopians are not allowed to open a foreign currency account in any bank in the country. The enterprise or an individual who are eligible to open a forex account may deposit min. USD 5000 and max. 50,000 USD and maybe funded only by reimbursement from abroad. It may only be used to perform local payments in domestic currency and the account may not be used for investment or for risk management purposes. Even the charge of interest may not be higher than **LIBOR**. The conversion of foreign currencies into local currency is only allowed at the ruling exchange rate of NBE. Free float of the currency is not allowed. From risk management point of view, a financial institution may not carry an open position at above 15% of its total capital. The net interest margin is also under the preasure of sovereign control. The net interest margin (spread) is monitored by the central bank of the country.

For intermediation to start as a bank, an institution has to have a comprehensive risk management policies and operating manuals put in place. It should be fortified with appropriate staff, well trained and properly placed (Nwanne, T.F.I., 2015: 1-10). Through the time when markets become more complex and volatile due to the new comers from private sector, NBE started to issue wide range of prudential supervisions on general risk management framework and credit risk management especially (NBE, may 2018). With respect to competition inside the banking industry, the banking system is heavily dominated by state-owned banks where they have large public accounts as clients. Banks are concerted to take action in favor of them in support of the government's development strategies. Similar to Turkey's experience during the early 2000 public banking practices, the State-owned banks do record "duty losses" based on the lending losses to those governmentally imposed accounts. The sovereign credit lending decisions are based on "name lending" practices where Basel imposed sound lending principles are very much ignored.

2.2. Findings of the Recherché and Analysis

The researcher interviewed employees of Commercial Bank of Ethiopia, Bale main branch and this bank was deliberately chosen among other branch of bank in Robe town. The Table 2.2 reveals the list of participants of the recherché.

Table 2.2 List of Interviewees and Questionnaires

No	Interviewee	Number of Participants (n=62)
1	Top Management (managers)	2
2	Middle Management (Department Heads)	4
3	Operational Management (Risk Experts)	6
4	Operational Management Staff	50

After the useful information about risk management practices are collected, it was analyzed and deciphered within the shape of qualitative and quantitative investigation techniques. To analyze the collected data, we used tables, percentages and frequency distributions for the primary information. We also analyzed the query information by comparing them with the secondary sources expressively.

2.2.1. General Findings about Risk Management Framework at CBE

One of the major findings of the questioner is that the Risk Strategy of the bank is approved by Board of Directors (BOD). The BOD ensures the adequate risk management processes and plays an important role in controlling the credit risks, payment and transaction related operational risks. According to the responses coming from the employees, the management is successful enough to create awareness about the risk content of the bank. Even though a significant amount of employees is exercising risk related functions, the exposure types are divided between the fundamental price risks (credit, liquidity, interest rate risks) and the operational risks (transaction, payment and fraud risks) on a 67:33 ratios. That means for 1 unit of operational risk, the bank is exposed to almost 2 times higher price risks. The major categories of operational risks are execution, delivery and process management, fraud, business disruption and system disappointments. Such risks are mainly caused due to skill gap among the employees and due to the missing internal control systems. With respect to management of risks, the bank has developed a risk scoring system as defined below.

Table 2.2.1: Risk Scoring Matrix

Impact\Risk	Risk I	Risk II	Risk III	Risk IV	Risk V
Likelihood	Low (1)	Low/medium (2)	Medium (3)	Medium/ High (4)	High (5)
High (5)	Medium(5)	Medium (10)	High (15)	High (20)	High(25)
Medium/High (4)	Medium (4)	Medium (8)	Medium(12)	High (16)	High (20)
Medium (3)	Low (3)	Medium (6)	Medium (9)	Medium (12)	High (15)
Low/Medium (2)	Low (2)	Medium (4)	Medium (6)	Medium (8)	Medium (10)
Low (1)	Low (1)	Low (2)	Medium (3)	Medium (4)	Medium (5)

Source: CBE

The scoring is based on the formula of **Potential impact x Likelihood of Adverse Outcome = Risk Score**. The risk matrix is evaluated on the basis of materiality, significance and manageability. The scores from 1-3 is designated as "manageable risks". The bank's risk appetite is comfortable with this level of risk. The scoring level from 4-14 indicates a material risk content and warns the officers about the management issues of the risk. Any risk above 14 up to 25 signals significant amount of risks and the need for additional measures in risk mitigation.

2.2.2. The Call for a New Risk Management Organization

The research has identified several deficiencies within the risk management framework of the bank. The bank's risk management is composed of very classical patterns of "risk scoring systems". In this regard the bank misses the "Pooling of credit risk" based on the related exposure type and actual Moody's or S&P style rating designations. There is a complex interaction between market, liquidity and credit risks in stress situations and the correlations on department or business basis is still waiting to be discovered by the risk professionals for CBOE. Public credit market data (number of defaults, spreads, ratings) may be very relevant for analyzing the national loan portfolios but it is still missing at the bank and industry levels. Therefore, parameter estimation and credit risk modelling issues are on the far front of the Ethiopian financial system. The country should have a strategy to start with the Basel II and Basel

III standards. Based on Basel II standards, the new credit risk ma nagement calls for an organization type as follows:

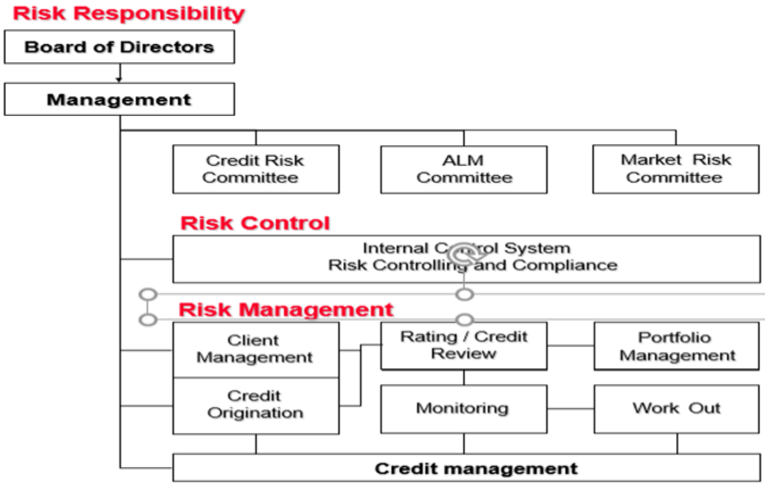


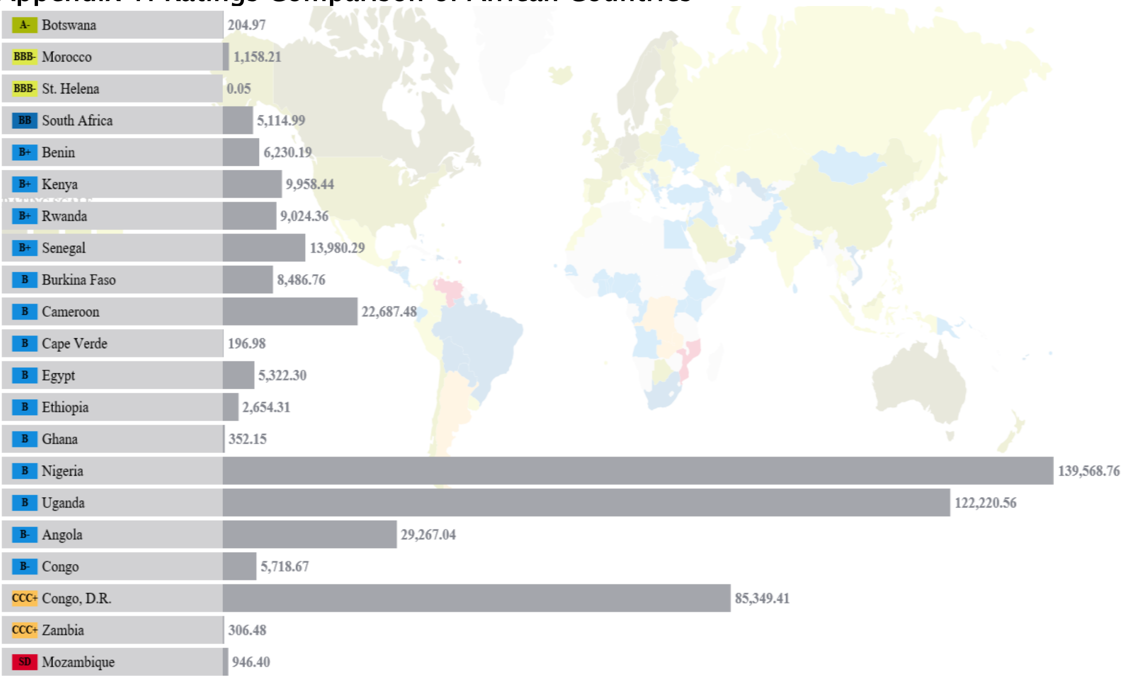
Figure 1. Risk Management Organization according to Basel II

Source: Beutler, M. (2001, 64)

3. Conclusions

The study examined the risk management practice of Commercial Bank of Ethiopia, Bale main branch. The researchers anticipated to give conclusion about the risk management framework of the bank. Based on findings the researcher concludes the main types of risk exposures are credit risk, operational risk, liquidity risk, transaction risk, and interest rate risk. The Commercial Bank of Ethiopia, Bale main branch identified risk presentation in different ways, among these the bank utilized to identify the risks in form of a flow charts. Physical risk assessment with checklists and questionnaires are also utilized. There are still quantitative rating models missing for understanding and managing the credit risks. More emphasis is given to the management of operational risks rather than managing the more fundamental price risks. Risk mitigation is still a matter of internal control units where the front offices of the banks are missing the chance of mitigating the risks with more quantitative methods. With respect to the implementation of core Basel principles, the doctrine of the National Bank of Ethiopia is preferring to be more on the sovereign side than the other members of the African continent. Basel I is passed away more than 20 years ago. The Ethiopian monetary authorities should take decisive and corrective actions for implementing the new rules of the game.

Appendix 1: Ratings Comparison of African Countries



Source: Standard&Poor's

Appendix 2: Research questionnaire

Dear respondents this questionnaire is to collect information of risk management practice in Commercial Bank of Ethiopia, Bale main branch. You answer will be kept sensitive and you are kindly requested to fill all questions properly. To be filled by employees of Commercial Bank of Ethiopia, Bale main branch thanks in advance.

Please mark you answer (x or √)

1. Sex: male ☐ female ☐
2. Age : 20-30 ☐ 31-40 ☐ 41-50 ☐ above 50 ☐
3. Education status of employees

   Certificate ☐ diploma ☐ degree ☐ other ☐
4. Mortal status

   Married ☐ divorced ☐ unmarried ☐
5. Year of service

   1-5 year ☐ 6-10 year ☐ above 10 ☐

Part II- read the following statement and give your response.

6. Did board of directors approved and revise the risk strategy?

   Yes ☐ No ☐

7. By appove and revise risk strategy what kind of risk are reduced?

a. transactional credit risk ☐ b. payment related risk ☐

c. loan application risk ☐ d. credit risk ☐

e.interest payment risk ☐ f. other -------------------------

8. Do you have a talent of risk management practice in the bank as an employee's?

Yes ☐ No ☐

9. If question No 9 says yes what kind of risk management practice are you done?

a. transaction risk ☐ b. credit risk ☐ c. payment risk ☐

d. understand problem ☐ e. other -----------------------------

10. Is there any kind of risk exposure are related to your job?

Yes ☐ No ☐

11. If questions No 10 say yes what kinds of exposure are related to your job?

a. transactional risk ☐ b. payment related risk ☐

c. credit risk ☐ d. liquidity risk ☐ e. other -----------

12. What is the preventive method and control procedures for the problem expose you?

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13. Did the management create awareness about risk exposure in the bank for the employees?

Yes ☐ No ☐

14. If questions No 13 says yes what kind of awareness are created or given by the manager of the bank?

a. credit risk ☐ b. interest risk ☐

c. liquidity risk ☐ d. transaction risk ☐

15. Do the management have a policy to follow the employees in risk controlling mechanism? Yes ☐ No ☐

16. As employees to determine the best possible techniques in order to reduce the risk, what types of risk control techniques are used?

a. Insurance ☐
b. Collateral system for loans ☐
c. Avoidance ☐
d. Retention (risk financing) ☐
e. Security nation ☐
f. Good realize about risk exposure of the employees ☐
g. Cresting awareness by the management of employees
h. Other specify ---

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