

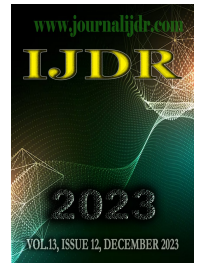


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RESEARCH ARTICLE

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## ANALYSIS OF FACTORS IMPACTING THE NEGATIVITY OF THE NET RESULT OF PRIMARY BANKS OF THE WEST AFRICAN ECONOMIC AND MONETARY UNION (WAEMU)

\*André Houndjo

National School of Applied Economics and Management, University of Abomey-Calavi, Cotonou, Benin-  
University of Abomey-Calavi (UAC) – Benin

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\*Corresponding author: André Houndjo,

### ABSTRACT

This study aims to analyse the explanatory factors of the negativity of the net result of primary banks in the West African Economic and Monetary Union (WAEMU). We collected data from the World Bank (WB) and the Central Bank of West African States (BCEAO). The data collected are annual data from 2003 to 2019 and concern all eight WAEMU countries. The analysis tools used were EXCEL and STATA 15 software. The estimation results showed that the increase in the cost of risk (CR) and the increase in general operating expenses (GOE) have a negative sign on the negative net result. Therefore, these two variables (CR and FGE) significantly positively affect the opposing net result. However, the increase in interest and similar income (IPA) has a positive sign, which leads us to say that this factor has a significant adverse effect on the opposing net result. To improve the negative net result, operational recommendations were made to primary banks in the WAEMU based on the results of our analysis.

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## INTRODUCTION

Severe banking crises in many countries marked the 1980s and 1990s. These crises did not spare the developing countries (DCs), particularly those of the West African Economic and Monetary Union (WAEMU), whose economies are very fragile. This was spectacularly evident in the difficulties experienced by many banks and non-bank financial institutions. Today the financial sector plays a crucial role in the economic development process. It is one of the primary resources for financing economic activity. Like all companies, the bank is a commercial enterprise seeking to maximise profitability. When they are profitable, financial intermediaries make it possible to mobilise savings from a wide variety of sources for more productive uses, benefiting investors and the beneficiaries of investments and the economy as a whole. Indeed, a banking system that efficiently channels available resources to productive uses is a powerful mechanism for economic growth (Levine, 1997). With the aim of fostering this profitability of financial systems, restructuring policies have been put in place in developing countries. The role of sub-Saharan pan-African banks, particularly those of the WAEMU, serve as financial intermediaries between those with financial means by collecting deposits from these agents and those who need financing by granting them loans.

Over the last decades, commercial banks in the West African Economic and Monetary Union have evolved in a globalised environment. Since the creation of the WAEMU, monetary policy has favoured the so-called driving sectors of the economy through preferential interest rates. However, this policy only sometimes had the expected effects and resulted in the banking crisis of the 1980s. The economic environment of the 1980s in African countries, particularly those of the WAEMU, was marked by an economic recession. This recession resulted from the fall in the price of raw materials on the world market and the crisis that affected the entire banking system. This crisis led to the failure of 30 banks out of 79 from 1980-1995 (Powo Fosso, 2000). (Caprio & Klingebiel, 1996) indicate that 80% of the loan portfolio of these banks was unprofitable. In the seven member countries of the West African Economic and Monetary Union, the experiences of banking crises were different. Côte d'Ivoire and Senegal had the highest bank failures, with eight and seven banks, respectively. The situation in Niger is similar to that in Togo; four banks are liquidated in each country. In Burkina, only one bank failed. In Mali, the situation is by far the best among all the other countries, with only the Banque de Développement du Mali (BDM) experiencing difficulties but not failing. Benin is an extreme case, as the entire banking sector went bankrupt. The Banque Béninoise de Développement (BBD) closed in 1989, and the Banque Commerciale du Bénin (BCB) and the Caisse

Nationale de Crédit Agricole (CNCA) in 1990. The consequences of bank failures in the WAEMU have been costly for households, businesses and governments. This situation of widespread mistrust led financial institutions to reduce their leverage and restrict credit to households and businesses. As early as 1989, a vast restructuring of the banking sector was initiated by the Central Bank of West African States, aiming at the one hand at restoring the solvency and liquidity of credit institutions and, on the other hand, at organising a gradual disengagement of the state from the capital and management of financial institutions. Following the sector's reorganisation, the banking landscape was gradually rebuilt through private initiative. Following the regulations, the public authorities hold on the banking sector has been eroded in favour of private national investors, especially foreign investors. A reading of the financial statements from 2003 to 2019 of the banks of the WAEMU countries on the BCEAO website shows that most of these banks have a negative net accounting result.

Given the above, examining the factors that may affect the negative net accounting result recorded by banks in the WAEMU region is necessary. To do so, we formulated the following central question:

### What are the effects of the factors explaining the negativity of the net accounting result?

From this main question flow our specific questions:

- Does an increase in credit risk costs have a significant adverse effect on the negativity of the net accounting result ?
- Does an increase in operating overheads have a significant adverse effect on the net accounting result ?
- Do an increase in interest and similar income have a significant positive effect on the negativity of the net accounting result ?

The answer to this question will enable banks in WAEMU countries to identify the natural causes of such a situation.

## Literature review and formulation of research hypotheses

### Definitions of concepts

**Bank:** A bank is a company or institution that is in the habitual business of receiving funds in the form of deposits or otherwise, which it uses for its account in discounting, credit or financial transactions; in other words, a bank is an enterprise that manages deposits and collects savings from customers; grants loans and offers financial services. By Article 20 of Law No. 90-018 of 27 July 1990 on banking regulations in the Republic of Benin (RB), all banks are public limited companies perceived as promoters of the economic fabric. They manage and remunerate clients' savings and distribute credit to individuals and companies thanks to the deposits held. They carry out the business of "asset management", either on their behalf or on behalf of their clients, and may also manage the wealth of their wealthy clients. Another business line is "corporate and investment banking" for large companies. Today, the old classifications of banks have been shattered for three main reasons: deregulation, market competition and the industrialisation of banking favoured by the progress of information technology and globalisation. The deregulations in most world countries from the 1980s onwards broke down the old partitions, particularly that which separated bank credit from the markets. This has created competition for banks, to which they have adapted. The deregulated banking activity gradually adopted an industrial logic based on a rational decomposition of the "value chains" that systematically describe the banking processes. This deconstruction first affected the most industrialised functions before progressively covering all banking products and services. For (Demazy, 2001), credit risk is the risk to which a credit institution is exposed if a borrower cannot meet its commitments. That is the risk of non-repayment of the claim or non-payment of the interest on the claim. This risk refers to the change in the value of the credit portfolio resulting from the actual or perceived inability of the borrower to meet all or part of the contract with the lender. (Desmicht 2004) defines

credit risk as the risk of loss if the borrower defaults. This is the risk of default or delinquency.

Credit risk or "counterparty risk in financial markets" is the probability of financial loss due to a borrower's failure to repay the debt issued by a financial institution when due. It is, therefore, the responsibility of the bank or financial institution to control credit risk by determining the profitability of the transactions undertaken. By underestimating this risk, the bank exposes itself to non-payment of the amounts lent and the interest due, which will be added to the losses. Credit (counterparty) risk is the most critical risk for banks. Banks, therefore, need to put in place procedures to quantify it. The measurement of this risk consists of studying the present and future solvency of the counterparty. It involves know-how adapted to the quality of the counterparty. For this purpose, banks use several methods to assess this risk. Financial analysis is the primary tool for evaluating a counterparty *a priori*. All risk-taking requires in-depth knowledge of the counterparty and its ability to meet its commitments. This traditional approach is based on the financial diagnosis of the company requesting credit.

**The cost of risk:** Indeed, each credit institution evaluates the amount it risks losing on average on its loan portfolio over a given time horizon. According to (Gourieroux & Tiomo, 2007), this amount corresponds to expected losses and is theoretically covered by provisions. For each credit line, this loss is a function of the probability of default (likelihood of default), the exposure at the date of default, i.e. the amount of capital outstanding in the case of a standard loan, and the loss given default, which depends on the recovery rate on a defaulted loan. It is the average annual loss over the years on a portfolio.

**Interest and similar charges:** This is interest paid to resource providers such as depositors or security subscribers. The other expenses come from capital losses on trading and investment securities transactions, foreign exchange transactions and transactions in financial instruments. In business economics, financial charges are the cost of borrowing resources from various banks and financial creditors. The amount of these financial charges varies according to the level of indebtedness of a company and the number of interest rates. In accounting terms, the interest due on these means of financing impacts the profit and loss account : it is a financial expense. This account records all financial charges due to various third parties involved in the company's financing (excluding remuneration of equity capital and banking services).

**General expenses:** For a company, *overheads* are the costs of manufacturing apart from the costs of direct labour and materials. For a banking institution, overheads include several kinds of costs, namely: personnel costs, external services, and various taxes. It should be noted that overheads are not part of banking operations. As such, they cannot be considered when calculating net banking income.

**Interest income and similar income:** This item includes interest and similar income, including endorsement and overdraft fees like interest, calculated on a time-proportional basis. This item includes income relating to the following balance sheet items:

- interbank claims, including claims on finance leases;
- receivables from customers, including finance leases;
- Bonds and other fixed-income securities, including the spreading of the premium or discount over the remaining life of the securities in the investment and placement portfolios;
- loans and subordinated securities;
- all income from items 1 to 5 on the assets side of the balance sheet, regardless of the form in which it is calculated. It also includes income corresponding to the staggered recognition of the premium on assets acquired below the amount payable at maturity and on liabilities incurred above that amount;
- fees like interest calculated based on the duration or amount of the claim or liability.

## LITERATURE REVIEW

(Shanko & al., 2019) study examined the factors affecting the profitability of the Ethiopian banking sector. The finding of the study showed that loan and advance, current deposit, other liabilities and gross domestic product have statistically significant and positive relationship with banks' profitability. On the other hand, variables like fixed deposit, market concentration have a negative and statistically significant relationship with banks' profitability. However, the relationship of deposit with other banks, sum of investment, saving deposit and inflation is found to be statistically insignificant. As a result, the study recommended that Ethiopian Banking Industry must focus on increasing public awareness to mobilize more savings this will enhance their performance in provision of loans and advance to customers. Finally, Ethiopian Banking Industry should not only be concerned about internal structures and policies, but they must consider both the internal environment and the macroeconomic environment together in fashioning out strategies to improve their profitability. (Brahmaiah & Ranajee, 2018) have shown that Strength of equity capital, operational efficiency, ratio of banking sector deposits to the gross domestic product (GDP), had significantly positive effect on profitability of banks and credit risk, cost of funds, non-performing assets (NPA) ratio and consumer price index (CPI) inflation have significantly negative influence on banks' profitability while bank size and ratio of priority loans to total loans do not have any influence on the profitability. The gross domestic product (GDP) growth and inflation have significantly negative relation with return on assets (ROA) and inflation has positive influence on return on equity (ROE). For (Yüksel *et al.*, 2018) show that loan amount, non-interest income and economic growth are significant indicators of profitability. Moreover, the 2008 global mortgage crisis has a negative influence on bank profitability in post-Soviet countries. According to the estimation results, there is a positive relationship between non-interest income and economic growth with profitability. This result shows that when non-interest income of the banks increases, such as credit card fees and commission, it affects the financial performance of the banks, positively, and contributes to bank profitability. Another result of this study is that economic growth positively influences bank profitability. This result allows us to conclude that higher GDP comes with higher bank profitability for post-Soviet countries. Lastly, there is a negative relationship between loan-to-GDP ratio and profitability of the banks in post-Soviet countries.

This means that when the ratio of total loans to GDP increases, it affects financial performance of the banks in a negative way. While considering this result, it is recommended that banks in post-Soviet countries should focus on ways to increase their non-interest income. Additionally, it is also significant for these banks to be careful and risk averse when lending to their customers. (Luqman Hakim & Sugianto, 2018) shows that the variable of company growth significantly influence to profit return on assets (ROA) with positive correlation. Variable CAR, non-performing loan, DPK growth significantly affects ROA profitability with negative correlation. It also shows that, non-performing loan variable significantly influences the negative correlation between corporate value, as well as the growth of DPK significantly affects the firm's value with positive correlation, but ROA profitability as intervening variable does not function as mediation to explain to the value of the company. Results from a study indicate that capital size and lending have a positive and significant effect on bank profitability, and that asset size, deposits, liquidity risk and bad debts have a negative and significant impact on bank profitability. These results suggest that banks can improve their profitability by increasing the size of capital and loans, while reasonably maintaining the size of assets, deposits, liquidity risk and bad debts (Nguyen & Nguyen, 2021; Kumar *et al.* 2018) show that the following indicators have a negative association with non-performing loans (NPLs) and are statistically significant at conventional levels: return on equity, capital adequacy requirement, market share based on assets, unemployment and time. On the other hand, the net interest margin has a positive and statistically significant association with NPL. According to the Central Bank regulations In Indonesia, the

non-performing loan is at a maximum of 5%. Exceed the percentage; there will be one of the indications that the bank is experiencing difficulties and could potentially endanger business continuity. The researchers use the micro-economic and several macro-economic variables to predict the influencing factors toward the non-performing loan. Microeconomic variables studied are the ratio of bank capital to assets (CAP), the loans to deposits (LTD) ratio, the return to assets (ROA) ratio and the ratio of return to equity (ROE). Macroeconomic variables are the ratio of public sector debt to gross domestic product (DEBT), the surplus or deficit of the government budget to gross domestic product (FISCAL) ratio, the percentage increase in gross domestic product (GDP), annual inflation rate (INFL), and percentage of job seeker level (UNEMP) Kartikasary *et al.* (2020). The results of a study by (Isa *et al.*, 2019) show that evidences that the volume of deposit, level of liquidity and bank size significantly influences the lending behaviour of commercial banks in Malaysia after the 2007/2008 global financial crisis.

Specifically, the volume of deposit and non-performing loans negatively influence the banks' lending behaviour whereas the level of liquidity and bank size pose positive impacts on lending behaviour. These findings are very beneficial to the commercial banks, the Central Bank of Malaysia (BNM), depositors or shareholders as well as business firms in planning, formulating appropriate policies and ultimately making well-informed decisions in the future. (Khalid *et al.*, 2021) showed that profitability of Sudanese banks is significantly influenced by credit risk management. The evidence shows that 57% of profitability in banks is affected by the change in capital adequacy ratio and non-performing loans. The study also shows there is a positive relationship between the banks financial performance and capital adequacy ratio, but the correlation is not significant. Furthermore the correlation between the banks financial performance and non-performing loans is significant, but negative. The results of a study showed that there is an acceptable level of accounting conservatism in the Jordanian commercial banks, and the findings concluded that there is a positive correlation between the Accruals scale and returns on equity, as well as the rate of return on assets. The study recommends conducting more studies using other measures of accounting conservatism on Jordanian banks, in general, to ensure that the results of other studies are similar, and to open opportunities for the investors to further progress, success, and improve competitiveness (Shubita, 2021). The implications for practice suggest that SMEs in the service industry can benefit from implementing financial accounting practices to improve their business performance. However, the use of management accounting practices should be evaluated carefully. Suggestions for further research include investigating the moderating factors that affect the relationship between accounting practices and business performance, such as the external environment and the availability of resources (Apriliani & Prakoso, 2023). (Rosiana & Akhmadi, 2023) showed that CSR had a significant negative effect on firm performance, leverage had a significant negative effect on firm performance, company size had no significant effect on firm performance, and leverage was able to strengthen the effect of CSR on firm performance. Based on the research results, it can be concluded that on the job training and off the job training have an effect on competency (Juita, 2023). For (Juita, 2023) whereas on the job training, off the job training and competence affect employee performance. For indirect influence, on the job training and off the job training through competence has a significant influence on the performance of employees. The factors of organizational culture and organizational climate have a real influence simultaneously (together) on employee job satisfaction. Among the factors of organizational culture and organizational climate, it turns out that organizational climate has a dominant influence on employee job satisfaction (Kurniawati, Waloyo, & Sholihin 2023). To make a company successful, we need to take the organizational climate into account. (Saputra, 2023) studies the direct influence of organizational culture on the performance; the direct influence of interpersonal communication on the performance; the direct influence of organizational culture on interpersonal communication; the influence of organizational culture and interpersonal communication together on the performance; the direct influence of organizational culture and

interpersonal communication, in partial percentages, on performance; the direct influence of organizational culture on work motivation; the direct influence of organizational culture and interpersonal communication, then realise that each of these influences is true. These are all factors that can have an impact on the nature of net accounting results in primary banks. (Duha, 2023) showed that partially the work ethic and communication, each partially had a positive and significant effect on work performance. Simultaneous testing shows that Work Ethic and Work Communication together have a Positive and Significant influence on Work Performance.

The findings of a study showed that the cost accounting information, which is realized in the calculation of cost of goods manufactured significantly affects the increase of company value. Increased corporate value significantly influences the company's ability to fulfill its responsibilities to stakeholders, such as paying dividends to shareholders, borrowing interest expenses to creditors, hiring employees, and paying taxes to the government. This study also concludes that there are differences in firm size, dividend payout, tax burden, interest expense on cement the company goes public in Indonesia, while the salary load is not significantly different (Hardana *et al.*, 2023). (Salim *et al.*, 2023) for their part, have shown that work discipline, work environment, and work motivation had a significant effect on employee performance. For (Wijaya *et al.*, 2023 ; Widyawati *et al.*, 2023) the company is said to be profitable if the percentage results on profit margins, return on assets and return on equity always increased and only experienced one decrease. But if you look at the profit and loss report, the profits generated by the company increased every year (Yusuf *et al.*, 2022). (Faris *et al.*, 2022) showed that partial compensation and training affect the performance of employees. Simultaneously compensation and job stress affect the employee's performance. showed that: (1) Motivation positive and significant effect on organizational culture (2) Work Discipline has a positive and significant effect on organizational culture, (3) Motivation has no significant effect on performance, (4) Work discipline has a positive and significant effect on performance, (5) Organizational Culture has a positive and significant effect on performance significant effect on performance, (6) Motivation through organizational culture has a positive and significant effect on performance, and (7) Work Discipline through organizational culture has a positive and significant effect on performance. Based on the overall results of the study, it can be concluded that Motivation and Work Discipline have implications for work through Organizational Culture.

Ranson, (2012) defines counterparty risk, also known as credit risk or signature risk as the potential loss realised by the bank in the event of future default by its counterparty. It is common to use the term counterparty risk to refer exclusively to credit risk. Counterparty risk has specific impacts on banks, such as

- Direct financial impacts (non-return of loaned capital, loss of value, misappropriation of funds);
- Indirect financial impacts (high provision on profits, anticipation of probable loss, additional charges);
- Commercial impacts (loss of customers, devaluation of the bank's image).

It has one thing in common with an impact on the banking institutions' profitability. Credit is necessarily linked to a notion of profitability and risk. These two elements remain inseparable in the context of banking activity. Searching for more excellent value added on bank loans is only sometimes a wise choice because it involves heavy precautions. Depending on the policy of each credit institution, a choice is made between a preference for quality or volume in granting credit. This strategic decision has consequences because it defines the bank's guidelines and lending policy. It becomes necessary to optimally manage the risk/return trade-off so that the bank can realise maximum value with minimum losses. For many years, credit risk has been one of the significant causes of volatility in the results of companies and financial institutions. Like any business, a credit institution is exposed to many risks that can lead to failure and

bankruptcy. A bank's performance depends on sound credit risk management with effective techniques implemented. The Bank of Tunisia and the Emirates (BTE) recorded a net loss of 17.1 million dinars (USD 6 million) in 2020, according to its financial statements as of 31 December 2020. This underperformance is mainly due to the dramatic increase in the cost of risk.

The determinants of banks' profitability are generally internal and external factors. Internal factors focus on bank-specific features such as size, capital, efficiency and credit risk (Akhavain *et al.*, 1997; Demirgüç-Kunt & Maksimovic, 1998). (Assumani Mulonda, 2014) in his study devoted to "the control of credit risk and its impact on the financial performance of a bank, the case of TMB" seeks to establish a relationship between risk management and financial performance. Starting from the question of how credit risk management could lead the company to the desired financial performance, the author believes that establishing a credit risk management mechanism within the bank would positively and significantly impact financial profitability. (Kwan & Eisenbeis, 1997) show a simultaneous but negative influence between the level of credit risk and bank performance. This result indicates that an increase in the bank's risk level leads to decreased performance and vice versa. This result is in line with the recommendations of the Basel Committee and underlines the interest in reducing credit risk to improve the bank's performance. Credit risk is considered significant because it only takes a small number of customers (especially SMEs), the most important ones, to have difficulties repaying their debts to put the bank in severe financial difficulties. Indeed, when the credit or counterparty risk materialises, the bank amortises it by constituting provisions. Otherwise, it can cover the losses by drawing on its funds, reserves, or capital. As soon as the bank starts to draw on its equity capital significantly to cover its losses, it will become insolvent itself and even disappear (bankruptcy). These facts show that increased risk-related costs harm the net accounting result.

In presenting their profit and loss accounts, the cost of risk line usually attracts attention. Indeed, the cost of risk is all the costs inherent in the risk of exchange, default and credit. In times of crisis, the amount of this item for retail banks is significant and can plunge the income statement into the red. This leads us to formulate the following hypothesis:

Overheads are one of business management's most important yet poorly understood aspects. Overheads are all the expenses incurred to obtain the company's income, resulting in a reduction in its net assets, i.e. its wealth. The deduction of overheads from taxable income is subject to three conditions

- The expenses must be related to the routine management of the company and be incurred in the interest of the company, which excludes personal expenses;
- Expenses must be regularly accounted for and supported by documentary evidence;
- The costs must result in a decrease in the company's net assets.

Because of their wide variety, overheads are often more challenging to identify than purchases related to the company's core business, but controlling these operating costs positively affects overhead costs by reducing them. Moreover, overheads absorb almost 2/3 of net banking income. As a result, any increase in overheads faster than the increase in net banking income reduces the operating result from one year to the next. For (Rouach 1998, 2020), the weight of overheads, particularly personnel costs, in the profit and loss account has more than ever an essential impact on the profitability of banks and financial institutions. As for (Péan, 2016), an increase in the wage bill will directly impact EBITDA, EBIT, EBT and, of course, net income for the year. The primary source of a bank's profitability is the interest rate it charges its customers. The higher the interest rate, the higher the return, but there is still a problem of retaining customers and dealing with competition. To keep customers loyal, they must be given a lower interest rate on loans than competitors and a higher rate

on their investments. In order to make a profit and stay in control of the game, banks offer more advantages on current account investments and thus manage to maximise their profit while keeping their customers. Interest rate risk is the possibility of a credit institution's profitability being affected by changes in interest rates.

The materialisation of interest rate risk in the income statement occurs through interest margins on banking transactions. In addition, the present value of assets, liabilities and off-balance sheet items is modified due to the impact of interest rate changes on the values of future flows of these various items. Practical and prudent interest rate risk management is, therefore, an essential factor in the quality of internal management and, at the same time, in the soundness of banks and the banking system's stability (Alessandri & Nelson, 2015) establish a positive and significant link between the yield curve slope and bank profitability on a sample of UK banks through a study. In line with the study by (Alessandri & Nelson, 2015), (Borio, Gambacorta, & Hofmann 2017) tested the non-linearity of the relationship between the slope of the yield curve and bank profitability. The authors consider a sample of 109 international banks in 14 industrialised economies from 1995-2012. As for (Alessandri & Nelson, 2015), the yield curve's slope is measured as the difference between the 10-year rate and the 3-month rate, while bank profitability is measured as the return on net assets. The results (Borio *et al.*, 2017) are consistent with those obtained by (Alessandri & Nelson, 2015). Indeed, the results suggest that a decrease in the short-term interest rate and the yield curve slope decreases the banking sector's profitability. Moreover, the results obtained by (Borio *et al.*, 2017) confirm the existence of a non-linear relationship between the slope of the yield curve and bank profitability, which means that the negative effect on profitability is more pronounced as the yield curve flattens. More importantly, the results suggest that the negative effect on profitability tends to be exacerbated when the yield curve tends to invert (Claessens & Donnelly, 2018) confirm these ideas by showing that a variation in the yield curve only affects profitability when short rates are below a somewhat arbitrary threshold of 1.25%. Moreover, the authors highlight that the relationship between low rates, intermediation margin and profitability varies considerably according to the characteristics of the banks. More precisely, the profitability of large banks does not react significantly to a fall in the interest rate or a flattening of the yield curve. On the other hand, the interest margin of these same banks is indeed affected by such actions. (Molyneux *et al.*, 2019) complement and partially amend these results by observing that a low-interest rate environment has no significant impact on the net interest margin of giant banks. In contrast, it tends to compress the margin of small banks very significantly. Furthermore, unlike small and medium-sized banks, which see their profitability decline in a low-rate environment, giant banks see their profitability increase during these low-rate periods. As shown by (Molyneux *et al.*, 2019), this result is explained in particular by the ability of large institutions to compensate for the decline in their income from lending activities by increasing fees and commissions.

This leads us to formulate the following hypothesis:

**Hypothesis 1:** An increase in risk costs has a significant adverse effect on the negativity of the net accounting result

**Hypothesis 2:** An increase in operating overheads has a significant adverse effect on the net accounting result

**Hypothesis 3:** An increase in interest and similar income has a significant positive effect on the negativity of the net accounting

## Research methods

**Data source:** The data we used come from the financial statements, notably the profit and loss accounts on the website of the Central Bank of West African States (BCEAO), namely [www.bceao.int](http://www.bceao.int). The data collected are annual data from 2003 to 2019 and concern all eight WAEMU countries. The analysis tools used are EXCEL and STATA 15.

**Choice and description of variables:** Given the problem presented in our research, our estimates focus on approximating the negative net accounting results equation. The dependent variable of our model is

the variable NR denoting negative net accounting results. We are interested in the opposing net accounting results of all the countries of the West African Economic and Monetary Union (WAEMU). The explanatory variables and the variable to be explained are all quantitative. They are Negative net accounting results (RN), the Cost of Risk (CR), Interest and Similar Expenses (ICA), General Operating Expenses (FG) and Interest and Similar Income (IPA), all in millions of FCFA.

**Negative Net Accounting Results (NAR) in a million FCFA:** It is the difference between all income (sums collected or to be collected) and all expenses (sums disbursed or to be disbursed) over one year. The values chosen in the income statement for all WAEMU countries are negative. In other words, our study focuses on negative values.

**Cost of risk (CR) in a million FCFA:** It is a probable amount collected or to be collected in the event of an average annual loss over the years on a credit portfolio.

**Interest and Similar Expenses (ICA) in a million FCFA:** It is a disbursement or to be disbursed in favour of resource providers such as depositors or security subscribers and other non-reimbursable expenses arising from capital losses on trading and investment securities, foreign exchange transactions and financial instrument transactions.

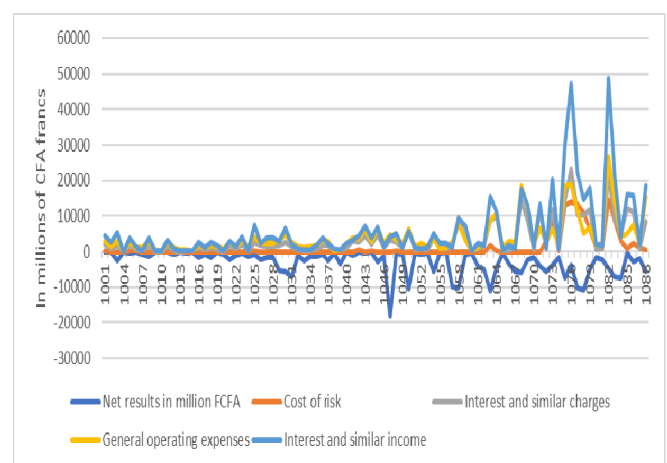
**General operating expenses (GOS) in a million CFA francs:** It is a disbursement or to be disbursed to staff and other overheads.

**Interest and Similar Income (IPA) in a million FCFA:** These are amounts collected or to be collected on interbank loans, customers and investment securities.

## RESULTS AND DISCUSSION

### Analysis of empirical results

**Descriptive analysis:** The descriptive analysis presents the graph showing the average evolution of certain variables in the WAEMU countries.



Source: Compiled by the author, BCEAO statistics

**Figure 1. Average evolution of the study variables**

The graph analysis reveals that general expenses, interest and similar charges, and interest and similar income showed similar trends over the entire study period except for the last few years, where interest and similar income were higher. Moreover, we can notice that the net result, negative over the whole period, was deficient until the middle of the study period. However, it oscillates around 1 300 over the rest of the period. The cost of risk remained zero until the 1970s, after which it evolved almost the same way as interest, similar charges, and general expenses.

Table 1. Descriptive statistics

	Net results (RN)	Cost of risk (CR)	Interest and similar charges (IGA)	General operating expenses (GO)	Interest and similar income (IPA)
Mean	-2846.831	1181.292	3409.045	4019.326	5844.056
Median	-1577	0	1520	2514	2411
Maximum	-10	14682	23006	26768	48875
Minimum	-18216	0	0	87	6
Std. Dev	3368.53	3332.186	4813.592	4767.299	8912.009
Observation	89	89	89	89	89

Source : Compiled by the author, BCEAO statistics

Table 2. Correlation matrix

	RN	CR	ICA	FG	IPA
RN	1.0000 89				
CR	-0.3843* 0.0002 89	1.0000 89			
ICA	-0.4452* 0.0000 89	0.7495* 0.0000 89	1.0000 89		
FG	-0.4431* 0.0000 89	0.6933* 0.0000 89	0.9072* 0.0000 89	1.0000 89	
IPA	-0.3663* 0.0004 89	0.8380* 0.0000 89	0.9543* 0.0000 89	0.9220* 0.0000 89	1.0000 89

Source: Compiled by the author, BCEAO statistics

Table 3. Augmented Dickey-Fuller (ADF) Stationarity Test

Variables	In level	In Difference 1 <sup>etc</sup>	Conclusion	Integration Order
	ADF Prob	ADF Prob		
RN	0,0000***		Stationary	I(0)
CR	0,0137***		Stationary	I(0)
FG	0,0000***		Stationary	I(0)
ICA	0,2569	0,0000***	Stationary	I(1)
IPA	0,0996	0,0000***	Stationary	I(1)

Source: Compiled by the author, BCEAO statistics

Table 4. Ordinary least squares (OLS) estimation results

Source	SS	df	MS	Number of obs	=	89
Model	277001035	3	92333678.3	F(3, 85)	=	10.88
Residual	721534472	85	8488640.84	Prob > F	=	0.0000
				R-squared	=	0.2774
				Adj R-squared	=	0.2519
Total	998535506	88	11346994.4	Root MSE	=	2913.5
RN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CR	-.526058	.1843318	-2.85	0.005	-.8925589	-.159557
FG	-.6910857	.1815713	-3.81	0.000	-1.052098	-.3300733
IPA	.367222	.1282854	2.86	0.005	.1121564	.6222877
_cons	-1593.771	418.6192	-3.81	0.000	-2426.098	-761.444

Source: Author based on estimation results in EVIEWS9

From the analysis of Table 1, it can be seen that the banks have an average of -2846.831 in Net Income (NI) with a maximum number of -10. The average Cost of Risk (COR) is 1181.292 with a maximum of 14682. During this period, an average of 3409,045 of Interest and Similar Expenses (IGA) was recorded with a maximum of 23006. The General Operating Expenses (GOE) amounted on average to 4019,326 with a maximum of 26768. It can also be noted that the average Interest and Similar Income (ISA) is 5844,056 with a maximum level of 48875.

**Econometric analysis:** In this section, we present the econometric analyses of our study. The correlation matrix analysis reveals that the IPA variable is highly related to the other explanatory variables (CR, ICA and FG).

We will remove this variable from the list of explanatory variables for estimation.

**Dickey-Fuller stationarity test Augmented:** From the results of Table 3, three (03) of the variables are stationary in level at the 5% threshold. This ADF test also indicates that two (02) variables are

stationary in the first difference at the 5% and 1% threshold. Therefore, all five (03) variables are integrated into order 0, and two into order 1. The differentiated forms will be preceded by d, i.e. dICA and dIPA, respectively, for the ICA and IPA variables.

### Estimation methods

#### Ordinary Least Squares (OLS) methods

Model equation:

$$RN = -0.5260*CR - 0.6910*FG + 0.3672*IPA - 1593.771$$

## DISCUSSION

Table 4 shows that the probabilities associated with the variables are all lower than 5%, so all the variables are significant at the 5% threshold. Moreover, the cost of risk and general operating expenses have a negative sign after estimating the negative net result, so these two variables (CR and FGE) positively affect the negative net result. The variable interest and similar income have a positive sign, which leads us to say that it harms the negative net result. When the cost of risk and overheads each increase by one unit, the net result increases by 0.5260 and 0.6910 units, respectively. However, when interest and similar expenses increase by one unit, the net result decreases by 0.3672 units. These results show that the factors that negatively and significantly influence the accounting net income of primary banks of the West African Economic and Monetary Union (WAEMU) include operating overheads and the cost of risk. These results partially support those presented by (Brahmaiah & Ranajee, 2018 ; Khalid & al., 2021) who showed that capital strength, operational efficiency, ratio of banking sector deposits to gross domestic product (GDP), had a significant positive effect on bank profitability and that credit risk, cost of funds, non-performing asset (NPA) ratio and consumer price index (CPI) inflation had a significant negative influence on bank profitability, while bank size and ratio of senior loans to total loans had no influence on profitability.

On the other hand, the third factor examined in this study is interest and similar income, which has a significant positive effect on the negativity of net accounting income. This last factor is also supported by (Yüksel & al., 2018), who show that loan size, non-interest income and economic growth are significant indicators of profitability. The present study has limitations, since not all the explanatory variables are taken into account, such as work climate, employee skills, organisational climate, motivation, organisational culture, and work discipline through organisational culture. These are all explanatory factors for the negative net accounting results, which merit further study in the Beninese context in future research. From all the above results, our initial hypotheses are validated.

**Table 5. Presentation of hypotheses**

Hypotheses	Statement	Decision
Hypothesis 1	An increase in risk costs has a significant adverse effect on the opposing net accounting result.	Confirmed
Hypothesis 2	An increase in overheads has a significant adverse effect on the net accounting result.	Confirmed
Hypothesis 3	An increase in interest and similar income has a significant positive effect on the negative net accounting result.	Confirmed

Source: The author based on the study's findings

**Operational recommendations:** From the study that has just been carried out, the banks that record negative results encounter some difficulties in maintaining their positive net result and taking steps to increase it yearly.

Thus, to remedy these difficulties, we have made the following suggestions to them:

1. The Board of Directors and senior management should ensure that appropriate credit risk practices are in place, including an effective internal control system, to ensure that adequate provisions are consistently made per the bank's policies and procedures, the applicable accounting framework and applicable prudential guidelines ;
2. These banks should adopt, document and adhere to sound methodologies regarding policies, procedures and controls that address the assessment and calculation of credit risk for all its loan exposures. The determination of provisions should be based on these sound methodologies and allow for appropriate and timely recognition of expected credit losses per the applicable accounting framework ;
3. They should apply a credit risk rating methodology that appropriately aggregates their loan-like exposures according to common credit risk characteristics ;
4. They should have policies and procedures in place to appropriately validate the models they use to measure and calculate expected loan losses ;
5. They should have a rigorous credit risk assessment and calculation process that provides them with a solid foundation of standard systems, tools and data for assessing credit risk and recording expected loan losses ;
6. Bank managers should take a unique look at the net accounting result by taking the following precautions :
  - Control overheads, including staff and other overheads.
  - Controlling the cost of risk by seeking to minimise the risk of credit granted to customers
  - Increase interest and similar products by subscribing to securities of financial structures at a competitive and attractive rate. Diversify these securities in several structures, offering desirable subscription rates in the WAEMU area.

## CONCLUSION

From the results obtained, the negativity of the net results is due to several factors, notably general operating expenses and risk costs. These factors are the only significant ones among the variables in the analysis. They negatively affect the net results. On the other hand, the variable "Interest and similar income" (IPA) have a significant positive effect on the opposing net result. It is essential for banking institutions to pay particular attention to these three factors. Any banking company that wants to perpetuate its actions should respect the standards of banking management and the requirements of the governance bodies of the BCEAO and the UEMOA and, above all, accept to be regularly evaluated. The implementation, application and compliance with these standards and requirements depend on the Board of Directors and the Executive Board, on the objectives they would like to achieve in the short, medium and long term in the performance of their activities, and on the strategies and mechanisms to be put in place within the bank so that all staff comply with these standards.

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