

Effects of Political Instability on Financial Development in the West African Economic and Monetary Union Region

Ahandi Vincent LOMPO

<https://orcid.org/0009-0006-5595-4620>

Centre for Economic and Social Studies, Documentation and Research (CEDRES)
Economic Sciences, Thomas Sankara University, Burkina Faso
contact@uts.bf vincent.lompo88@gmail.com

Article's history:

Received 5th of July, 2024; Received in revised form 5th of August, 2024; Accepted 14th of August, 2024; Available online: 15th of August, 2024. Published as article in the Volume XIX, Fall, Issue 3(85), 2024.

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Suggested citation:

Lompo, A. V.(2024). Effects of political instability on financial development in the West African Economic and Monetary Union region. *Journal of Applied Economic Sciences*, Volume XIX, Fall, 3(85), 277 – 290. [https://doi.org/10.57017/jaes.v19.3\(85\).04](https://doi.org/10.57017/jaes.v19.3(85).04)

Abstract

This paper analyses the effects of political instability on financial development in the West African Economic and Monetary Union region (WAEMU) countries. The results are obtained using the autoregressive staggered lag model (ARDL) over an analysis period from 2002 to 2021. The main reason for this analysis period is the availability of data. The results show that political instability reduces financial development by lowering financial efficiency. Moreover, inflation tends to increase the negative effects of political instability on financial development. On the other hand, the interest rate manages to mitigate the negative effects of political instability on financial development. The results therefore suggest that measures should be taken to mitigate the risks of political instability. Consequently, the results suggest the development of policies against rising inflation and for the revision of interest rates in order to influence the level of political instability and financial development.

Keywords: financial development, political instability, inflation, interest rate, ARDL.

JEL Classification: B26, D53, D74, F31, G21, H56.

Introduction

Financial development determines economic growth (Levine, 2005). It reduces poverty and facilitates production (Beck et al., 2007). In 2017, 93% of people in Organization for Economic Co-operation and Development (OECD) countries had a bank account. At the same time, only 29% of people in sub-Saharan Africa had a bank account (Alhassan et al., 2019). BCEAO statistics (2023) show that in 2021, the average bank penetration rate for all WAEMU countries was 42.44%. This extended bank penetration rate considers the percentage of individuals holding accounts in banks and other financial institutions.

Among WAEMU countries, Niger and Guinea-Bissau have the lowest penetration rates, at 13.04% and 16.49% respectively. The average bank penetration rate of 42.44% for all WAEMU countries remains minimal compared with the rate of 165.4% for middle-income countries (World Bank, 2023). In addition, the WAEMU countries registered 1,052 financial institutions in 2005, compared with 506 financial institutions in 2021. In 2021, the value of credit granted to the private sector as a proportion of GDP is estimated at an average of 23.55% for all WAEMU countries (WDI, 2022). Over the same period, the value of private credit is estimated at 28% for sub-Saharan Africa and 156% for East Asia (World Bank, 2023). Furthermore, during the period from 2002 to 2021, financial development in the WAEMU region is subject to the risk of political instability. Our forecasts indicate that in 15 years, financial development will increase by an average of 23% (2021) to 35% (2035) for WAEMU countries. However, this increase is minimal and can be explained by the extent of political instability. Indeed, according to the World Bank, conflicts are set to intensify between now and 2030.

In theoretical terms, political instability is perceived as a propensity for government collapse (Alesina et al., 1996). Political instability is also seen as an abrupt change in political orientation (Tran & Silke, 2024). Political instability is therefore achieved through a perception of government collapse (Alhassan et al., 2019). This is a situation of state fragility that gives rise to demonstrations and protests. If this situation persists, it is likely to lead to political violence. As a result, property rights and individual freedoms find themselves imprisoned by an uncertainty likely to hinder financial development. In this sense, Tran & Silke (2024) admit that the political environment influences the stability of the banking system in the implementation of political reforms. Thus, for these two authors, banking and financial development depends on the quality of political governance.

The theory of equality of Robinson (1952) and Roe & Siegel (2011) stipulates that political stability should lead to financial development through a transfer of individuals from the poor class to the middle class through an increase in purchasing power. Alhassan et al (2019) stipulate that the factor that weakens financial development specifically concerns instability within the government. This form of political instability tends to slow down public policies aimed at the financial sector. When instability within the government intensifies, it subsequently leads to uncertainty for economic agents holding financial products and financial crises ensue.

In addition, the costs of asymmetric information, transaction costs, risk management, and the mobilization and allocation of financial resources are all constraints on financial development. Minimum chequing account balances, annual account maintenance fees, documentation requirements, loan processing times and the limited number of distribution channels for financial products are also constraints that delay financial development (Beck et al., 2008). In addition, financial market failures lead to credit rationing for investors. Research has also found that income inequality, foreign trade, GDP per capita, inflation and the exchange rate influence financial development (Roe & Siegle, 2011; Irshad, 2017). The work of Alhassan et al. (2019) indicates that income, corruption, unemployment are determinants of financial development. Furthermore, industrial production and institutional quality positively influence financial development (Ellahi et al., 2021). In addition, the quality of political institutions improves financial development (Zeqiraj et al., 2022). Institutional quality reduces the negative effect of mining resources on financial development (Dosso, 2023). Thus, institutional quality improves financial development. However, these studies seem to ignore the role of the risk of political instability in the financial market (Ahmad et al., 2024).

Furthermore, empirical work indicates that financial inclusion is negatively affected by political instability (Roe & Siegle, 2011; Murshed et al., 2023). Symmetrical analysis of the work of Murshed et al. (2023) indicates that resolving internal conflicts improves financial inclusion. The work of Irshad (2017) shows that political instability reduces stock prices and returns. The work of Alhassan et al. (2019) based on microeconomic analysis reveals that a 1% increase in the level of political instability leads to an 8% reduction in the probability of having a formal account. A 1% increase in political instability reduces the probability of having a formal savings account by 10%. A 1% increase in political instability reduces the probability of obtaining formal credit by 11%. Political instability in the work of Roe and Siegle (2011) only considers government instability represented by coups. Furthermore, this work does not highlight the privileged role of private credit in financial development in the WAEMU space, where companies seek investment funds. Thus, the literature has not sufficiently explored the effects of political instability on financial development. Specifically, previous work has not sufficiently analyzed the role of political instability on credit to the private sector. What are the effects of political instability on financial development via the credit channel? The objective of the research is to analyze the effects of political instability on financial development through the credit channel.

This paper attempts to complement the literature by analyzing the effects of political instability on financial development as measured by credit to the private sector. There is a consensus in the literature that credit to the private sector is the main indicator of financial development. Credit to the private sector is appropriate because it represents the volume of finance channeled to the private sector and the most widely used in the financial sector in the WAEMU area (Campos et al., 2012; Gakpa, 2019). In terms of measurement, it is a relatively comprehensive measure of financial intermediaries. It has advantages over other financial development indicators such as the M1 and M2 aggregates and the ratio of commercial bank assets to central bank assets (Beck et al., 2007). In terms of its contribution to growth, private credit has the advantage of exerting a strong influence on economic growth and is therefore the main indicator of financial development (Beck et al., 2008; Campos et al., 2012).

Furthermore, the work attempts to complement the literature by exploring specific effects of internal conflicts on financial development. To our knowledge, previous work has not sufficiently analyzed the evolution of financial development through the specific effects of internal conflicts. However, internal conflicts are increasingly more numerous than external conflicts in the WAEMU area.

In addition, this paper attempts to complement the literature by analyzing the effects of political instability on the credit rationing of financial institutions, particularly second-tier banks. To our knowledge, the literature examines the effects of political instability on financial development less by considering the specific origins of credit granted to the private sector. Finally, this article considers two important channels. On the one hand, the inflation rate is likely to affect the effects of political instability on financial development. On the other hand, the rise in the interest rate may be able to influence the effects of political instability on financial development. However, the literature hardly discusses the role of these two channels in the relationship between political instability and financial development.

The remainder of this paper is organized as follows. The first section presents a review of the literature on the effect of political instability on financial development. The second section is devoted to the stylized facts, and the third section presents the methodological approach. The final section presents and discusses the results.

1. Theoretical Relationship between Political Instability and Financial Development

In the theory of institutions, Acemoglu et al (2005) set out two types of political power. The first is *de jure* political power, which is the legal power recognized by the rules governing political institutions. On the other hand, *de facto* political power is instituted by the resolution of collective action problems, riots, revolts and demonstrations. Thus, these two political powers determine the functioning of economic and financial institutions. In addition to moral hazard and adverse selection, a dysfunction of one of these political powers is likely to influence financial institutions. The influence of political power on economic institutions can be explained by the fact that political parties in power implement economic institutions for their individual benefit. Thus, the type of political power determines the allocation of resources and the development of the financial market. *De jure* political power is likely to influence the financial market through the implementation of public policies.

The pressure group theory of Rajan & Zingales (2003) is also worth considering. This theory states that there are winners and losers in the process of developing the financial system. The losers are reluctant to financial development and exert their influence on government public policy. The losers are pressure groups represented by large companies that do not necessarily need financing. If they do need finance, they can use their reputation to obtain it. These large companies are in a position to buy up small and new companies with good sales figures. In addition, financial development also encourages the entry into the financial market of new companies capable of competing with the large ones. More often than not, the banks themselves oppose financial development for fear of the financial innovation that encourages the entry of new competing banks. According to pressure group theory, losers have a negative influence on financial development, while winners have a positive influence. Kpodar (2006) adds to this theory by stipulating that political instability increases payment defaults and the reluctance of banks to finance investment projects. On the other hand, winners can also use strikes to demand conditions that favour their inclusion in the financial system. These strikes are then likely to have a positive effect on financial development by improving the quality of financial services.

2. Empirical Literature Review

The paper of Roe & Siegle (2011) based on the instrumental method over the period from 1965 to 2003 indicates that political instability hinders financial development by affecting the evolution of debt and the stock market over several decades. On the other hand, the work of Campos et al (2012), based on the power-ARCH framework for the period from 1896 to 2000, highlights the reducing effects of political instability and financial development on economic growth. The financial development indicators used in their work include M3, M1, private sector bank deposits and savings bank deposits. In addition, the work of Irshad (2017) following an ARDL model during the period from 1998 to 2012 shows that political instability significantly reduces stock prices in

Pakistan. Hence, stock returns are an indicator to measure financial development. Recent work by Alhassan et al (2019) over the period from 2011 to 2017 using the probit method on microeconomic data indicates that political instability prevents individuals' ability to own an account, save and access credit in formal financial institutions. Political instability therefore prevents the achievement of financial inclusion.

Other work shows that the absence of political instability characterized by institutional quality improves access to and use of financial services (Zeqiraj et al., 2022; Dosso, 2023; Tran & Silke, 2024). Furthermore, the empirical work of Murshed et al (2023) on South Asian countries over the analysis period from 2004 to 2018, using the common correlated effects mean group estimator (CCEMG), indicates that the resolution of internal conflicts is an important determinant that increases financial inclusion. The work of Tran and Silke (2024), using a forecasting model over the analysis period from 1975 to 2017, reveals that a political environment marked by government stability leads to an improvement in the banking system and avoids a systemic banking crisis.

However, the work does not take into account the extent of internal conflicts, terrorist attacks and anti-government demonstrations, which are nonetheless significant indicators of political instability in WAEMU countries. Furthermore, the paper of Campos et al (2012) and Irshad (2017) does not take into account private credit, which is an important indicator of financial development for WAEMU countries. Their indicators do not include private sector companies in need of financing (Beck et al., 2007). The consideration of financial development in the work of Alhassan et al (2019) is of a microeconomic nature and therefore does not allow extrapolation to the macroeconomic level. Moreover, their consideration of "financial inclusion" as a dummy variable may pose a problem for measuring financial development. Finally, the fact that they have taken the political stability variable as an indicator for both political stability and instability is a limitation of their work.

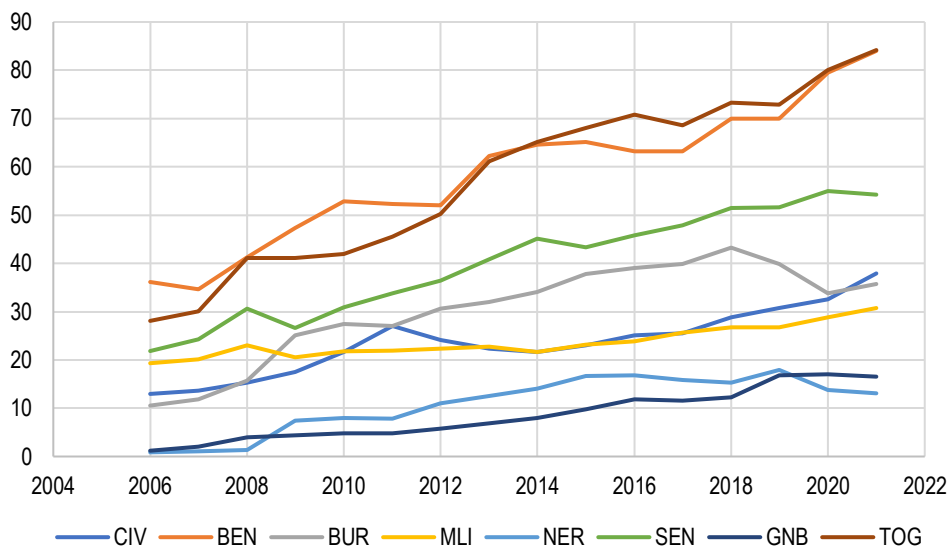
3. Political Instability and Financial Development: Stylized Facts

This section presents stylized facts on financial development and political instability.

Bank penetration rate and access to financial services

The extended bank penetration rate refers to the number of individuals holding accounts in banks, postal services, savings banks and treasuries. This number is related to the adult population, including people aged 15 and over. The table shows that the countries in the WAEMU region have an increasing rate of bank penetration. This means that the rate of access to banking institutions, microfinance institutions and treasuries has increased over the period from 2006 to 2021. Compared with other countries, Benin and Togo have a high number of people with access to financial services in financial institutions. This is an important indicator of financial inclusion and a partial measure of financial development in the WAEMU region.

Figure 1. Growth in bank penetration rate in WAEMU, 2006-2021

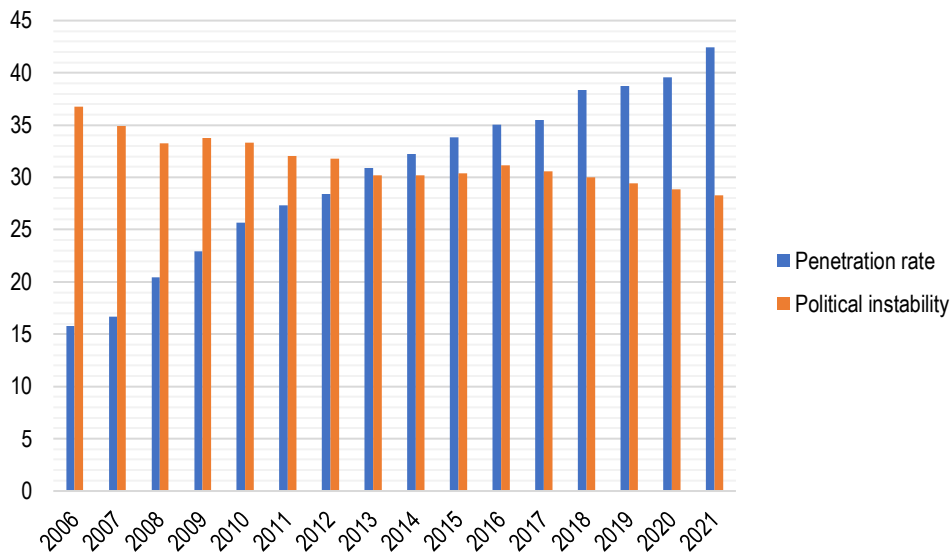


Source: Author

Internal conflicts and the rate of bank penetration

The Figure 2 shows the relationship between the level of internal conflict and the bank penetration rate for all WAEMU countries. Internal conflicts are an important indicator of political instability, measuring the level of political violence against the government. Such conflicts include civil wars, civil disorder, political violence and terrorism (Akinlo et al., 2022). As a result, the low rate of bank penetration corresponds to a high level of internal conflict. However, when the level of conflict decreases, the bank penetration rate increases to 42.44%. More people have access to financial services, while conflicts tend to decrease.

Figure 2. Internal conflicts and rate of bank penetration in WAEMU, 2006-2021

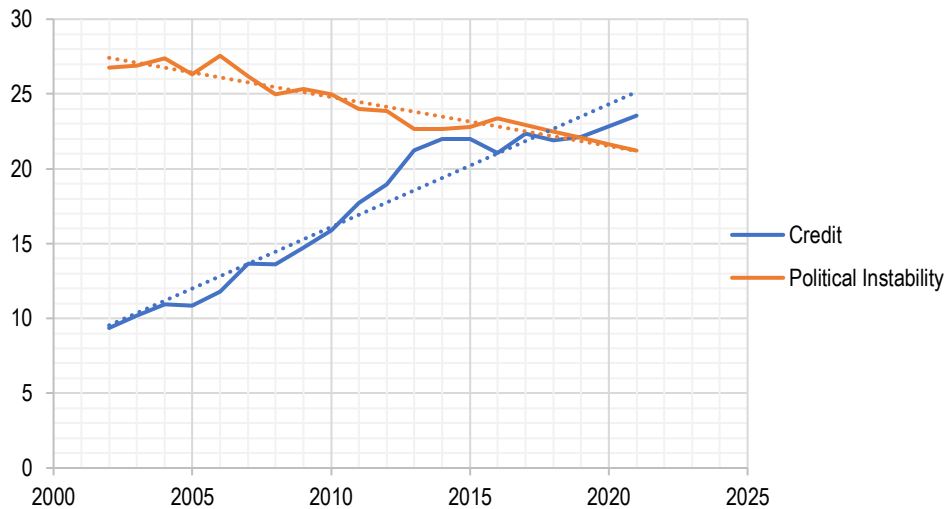


Source: Author

Internal conflicts and credit granted to the private sector by financial institutions

Figure 3 shows the relationship between internal conflicts and credit granted to the private sector for all WAEMU countries. Analysis of this graph reveals that private credit and conflicts are evolving in opposite directions. The fall in the level of political instability (internal conflicts) is accompanied by an increase in credit over the period from 2002 to 2021. This suggests a negative relationship between internal conflict and financial development.

Figure 3: Private credit and internal conflicts in WAEMU, 2006-2021



Source: Author

4. Methodological Approach

This section describes the methodological approach.

Justification of the theoretical model

The various theoretical arguments highlighting the relationship between political instability and financial development make it possible to propose a model that analyses the determinants of financial development. The empirical model is based on the Ellahi et al (2021) model, which analyses the role of political instability on financial development. The relevance of the choice of the model is justified by the fact that it is adapted to this work to explain financial development. The model seems recent and allows us to grasp the problem of political instability acting on financial development.

Specification of the model

In order to analyze the effects of political instability on financial development, the empirical model considered is based on the financial development equation of Ellahi et al (2021), which is adapted to the present research. In his initial model, financial development measured by several financial indicators is explained by institutional and other control variables.

$$DFS_{it} = \alpha_i + \gamma_t + \sum_{j=1}^k \beta_j INST_{ijt} + \sum_{k=1}^l \gamma_k X_{ikt} + \mu_{it} \quad (1)$$

where: DFS represents financial development; INST represents institutional factors; X the vector of control variables; α , β , γ the parameters of the equation and μ the error term.

For the model specification of Ellahi et al. (2021), the variable INST is replaced by the variable of interest InstaP which is political instability with its components.

$$DFS_{it} = \alpha_i + \gamma_t + \sum_{j=1}^k \beta_j InstaSP_{ijt} + \sum_{k=1}^l \gamma_k X_{ikt} + \mu_{it} \quad (2)$$

The model specification incorporates several variables that aim to explain financial development in the WAEMU area:

$$DFS = f(\text{InstaP}, \text{REER}, \text{Interest}, \text{InflaPC}, \text{Imports}, \text{Invpub}, \text{M3}) \quad (3)$$

More precisely, the econometric model is finally as follows:

$$DFS_{i,t} = \beta_0 + \beta_1 InstaP_{i,t} + \beta_2 REER_{i,t} + \beta_3 Interest_{i,t} + \beta_4 InflaPC_{i,t} + \beta_5 Invpub_{i,t} + \beta_6 Imports_{i,t} + \beta_7 M3_{i,t} + \mu_{i,t} \quad (4)$$

Description of variables

The dependent variable is financial development. It is represented by credit granted to the private sector by banks and other financial institutions. It is related to GDP and is the main variable most commonly used in the literature to measure financial development (Levine et al., 1997; Rajan & Zingales, 2003; Kpodar, 2006; Beck et al., 2008; Ductor & Grechyna 2015; Bongomin et al., 2020; Ellahi et al., 2021). Credit to the private sector is appropriate because it represents the volume of financing channeled to the private sector (Kpodar, 2006; Campos et al., 2012). Moreover, it is the most widely used indicator of financial development in the WAEMU financial sector (Gapka, 2019). Private credit is a relatively comprehensive measure of financial intermediaries and has advantages over other measures of financial development (Beck et al., 2007). Broad money (M2) used as an indicator of financial development does not allow savings from financial companies to be channeled into private sector projects (Beck et al., 2007).

Furthermore, using the ratio of commercial bank assets to central bank assets as an indicator of financial development also lacks precision. It does not reveal the direct role of commercial banks in credit allocation (Beck et al., 2007). In their choice of financial development indicators, Levine et al. (2000) show that private credit has the advantage of exerting a solid and positive influence on economic growth. It is a good predictor of economic growth and the main indicator of financial development (Levine et al., 2000; Beck et al., 2008; Campos et al., 2012).

The following independent variables are used in this research:

- Internal conflicts (InstaP): this variable assesses the political violence in a country and its potential effect on the administration. It is the proxy for political instability (Akinlo et al., 2022). It is taken from the ICRG database (2023).
- The real exchange rate (REER): The real effective exchange rate represents the ratio between the prevailing nominal exchange rate (value of a currency against the weighted average of foreign currencies) and the price deflator. It comes from the World Bank (2022).
- The real interest rate (Interest): measures the lending rate adjusted for inflation as measured by the GDP deflator. This variable is taken from WDI (2022).
- Inflation (InflaPC): measures the consumer price index, which represents the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services. This variable is taken from WDI (2022).
- Public investment (InvPub): measures the ratio of public GFCF as a percentage of GDP. This variable comes from WDI (2023).
- Money supply as a percentage of GDP (M3): Sum of non-bank currency in circulation. This variable comes from WDI (2023).

- Imports: The value of market goods and services received from the rest of the world as a percentage of GDP (WDI, 2022).

The data is analyzed for WAEMU countries covering the period from 2002 to 2021. There are two reasons for this period of analysis. Firstly, during the period from 2002 to 2021, the WAEMU area experienced a fair amount of conflict and violence, while financial development did not decline. Secondly, the lack of data on certain variables meant that it was not possible to go beyond this period. The study covers 7 WAEMU countries, given the absence of data for Benin on indicators of political instability and control variables.

5. Estimation Methods and Data Analysis

This section presents the data analysis and estimation method.

Statistical analysis of the data

The statistical table shows the mean, standard deviation, minimum and maximum of all the variables. The table shows that, on average, access to credit by the private sector does not exceed 17.336% in the WAEMU region, with a minimum of 0.229% and a maximum of 40.163%. These rates are low compared with middle-income countries, which have a maximum rate of access to credit of 118.7% in 2021. In terms of comparing the main components of political instability, the level of instability 2 is more than twice that of instability 1. This indicates that executive instability is twice as low as social instability in the WAEMU region.

Table 1. Statistical analysis of the different variables

Variable	Obs	Mean	Std	Min	Max
Credit to the private sector	140	17,336	8,171	0,229	40,163
Exchange rate	140	99,775	4,098	89,625	110,266
Interest rate	140	4,266	14,535	-26,218	120,546
Inflation	140	1,726	3,056	-13,405	11,305
Imports	140	32,875	8,802	18,303	66,285
Public investment	140	6,634	2,888	0,600	13,050
Money supply	140	27,958	11,203	6,556	53,119
Internal conflicts	140	8,101	1,101	5,333	11,000

Source: Author

Correlation analysis between independent variables

A high correlation between independent variables can lead to a multi-correlation problem. This makes econometric estimations difficult (Goaied and Sassi, 2012). As such, the correlation matrix presents coefficients below 0.6 and does not indicate a presumption of multi-correlation. To confirm the results presented by the correlation matrix, the inflation factor test (VIF) was carried out. The results of the test indicate a value of 1.20 for the regression as a whole if the 'Terms of trade' variable is subtracted and 1.44 if it is included. In addition, each independent variable registers an acceptable tolerance value (1/VIF) greater than 0.75. Overall, the model does not suffer from multi-correlation problems.

Table 2. Analysis of correlation coefficients between variables

Variables	Credit	Exchange	Interest	Inflation	Imports	Public	Money	Internal
Credit to the private	1,000							
Exchange rate	0,033	1,000						
Interest rate	0,216*	-0,007	1,000					
Inflation	-0,062	0,334*	-0,068	1,000				
Imports	0,502*	0,183*	-0,050	0,085	1,000			
Public investment	0,135	-0,071	0,051	-0,244*	-0,158	1,000		
Money supply	0,716*	-0,088	0,250*	-0,053	0,392*	0,066	1,000	
Internal conflicts	-0,316*	-0,063	-0,145	0,115	0,049	-0,043	-0,243*	1,000

Source: Author

Dependency test

The Breusch-Pagan test is used to analyze the presence of correlation between inter-individual errors. The null hypothesis of this test is the independence of residuals between individuals. The test consists of checking whether the sum of the squares of the correlation coefficients between the errors is close to zero. The results lead us to reject the null hypothesis of independence of residuals between individuals.

Unit root test

The results of the dependence test indicating the presence of cross-sectional dependence led to the adoption of the second-generation unit root test. This unit root test is used to analyze the level of integration of the variables. The results of the unit root test are presented in the table below. Consequently, the Pesaran test is used to test stationarity. The statistical results imply rejection of the null hypothesis I (0) and acceptance of the null hypothesis I (1) of the presence of a unit root.

Table 3: Unit root test

Variable	Stationarity
Credit to the private sector / financial institutions	I (1)
Credit to the private sector / banks	I (1)
Exchange rate	I (1)
Interest rates	I (1)
Internal conflicts	I (0)
Inflation	I (0)
Imports	I (1)
Public investment	I (1)
Money supply	I (1)

Source: Author

Cointegration tests

Given the dependency and unit root tests, the first generation cointegration tests of Pedroni (1999) and Kao (1999) are performed. In addition, the second-generation test of Westerlund and Edgerton (2008) is also performed to take into account the dependence between countries. The results of the tests are presented in the table below. These empirical results indicate that the test rejects the null hypothesis of no cointegration between the variables. The results show that there is a cointegrating or long-term relationship between the variables over the analysis period.

Table 4: Cointegration tests

Tests	Statistiques	P-value
Test de Pedroni		
Modified Phillips–Perron t	3,3245	0,0004
Phillips–Perron t	1,7798	0,0376
Augmented Dickey–Fuller t	1,6303	0,0515
Test de Westerlund	7,9243	0,0000
Test de Kao		
Modified Dickey–Fuller t	-0,4990	0,3089
Dickey–Fuller t	-1,0947	0,1368
Augmented Dickey–Fuller t	-2,2944	0,0109
Unadjusted modified Dickey–Fuller t	-2,2829	0,0112
Unadjusted Dickey–Fuller t	-2,0850	0,0185

Source: Author

Heteroscedasticity test

Several tests can be used to detect heteroscedasticity. These include the Breusch-Pagan and White (or modified Wald) tests. The heteroskedasticity test seeks to verify whether the squared residuals can be explained by the model's explanatory variables. The null hypothesis is the presence of homoscedasticity or that all the coefficients of the squared residuals are zero. The null hypothesis tests whether the variance of the errors is identical for all individuals. The results lead us to reject the null hypothesis. There is a heteroskedasticity problem.

Endogeneity test

There is a presumption of endogeneity between financial development and GDP growth. This leads us to analyze whether the model suffers from an endogeneity problem. The Hausman test is used to check whether one or more variables suffer from endogeneity. The null hypothesis of exogeneity is accepted. There is no endogeneity problem. These results of absence of endogeneity are confirmed by the Nakamura Nakamura test performed on each variable.

Estimation methods

Following the usual tests, standard methods such as OLS and GCM are not suitable for regressions. White's covariance matrix estimator seems appropriate for conclusive results (Joshi et al., 2021). However, this method does not deal with the heteroskedasticity problem and is likely to produce biased results.

Consequently, the staggered lag autoregressive model (ARDL) estimation method overcomes the shortcomings of the previous methods. This method includes the Pooled Mean Group (PMG), the Mean Group (MG) and the Dynamic Fixed Effects model (DEF). The usual tests lead to the selection of the Pooled Mean Group (PMG) method, which favours homogeneous countries.

To confirm and strengthen the results obtained, the Dynamic Ordinary Least Squares (DOLS) method proposed by Koa & Chiang (2000) is used to estimate the robustness of the results. This estimation method solves the econometric problems of heteroscedasticity and endogeneity. It also addresses the problem of nuisance parameters.

6. Results and Discussion

Results and discussion using the autoregressive staggered lag model method

The estimation results from the ARDL method are presented in Table 5. These results show that the recall force is significant, indicating the validity of the model. In column 1, the dependent variable is "loans from all financial institutions". In column 2, the dependent variable is represented by loans granted by second-tier banks.

The coefficient assigned to internal conflicts has a negative sign and is significant for both models at the 5% level. Political instability therefore has a negative and significant effect on financial development. This result is consistent with the findings of Roe and Siegel (2011), Alhassan et al. (2019) and Ahmad et al. (2024). This result means that political instability leads to a delay in financial development in the WAEMU area. Political instability tends to prevent the achievement of policy objectives aimed at financial sector development. Consequently, political instability is a constraint that creates uncertainty in the financial market. This uncertainty tends to increase information asymmetry and transaction costs in the financial market. Thus, political instability tends to create a rationing of credit granted to the private sector and to paralyze the financial sector. In addition, political instability is likely to lead to a halt in the activities of financial institutions through the closure of branches. In the event of political instability, banks' mistrust of customers' commitments leads them to refuse to grant loans.

As far as the control variables are concerned, the coefficient associated with the inflation rate is negative and significant. An increase in inflation tends to reduce financial development. Inflation is a constraint for second-tier banks and also for private economic agents. It leads banks to be wary of the risk of acting to finance businesses. Furthermore, the public investment variable has a negative and significant coefficient. An increase in public investment therefore leads to a decrease in financial development. This result is easily understood in the sense that public investment is likely to compete with private investment. When there is no privatization and the government does not promote private enterprise, this situation is likely to have a negative effect on financial development. As for the coefficient associated with the money supply, it has a positive and significant sign. This means that an increase in the money supply in the economy helps to improve financial development by giving second-tier banks easy access to the desired quantity of money.

Finally, the interest rate variable has a significant and positive coefficient at the 1% level. This result shows that the increase in the interest rate by the banks constitutes a situation of efficiency for these banks. The increase in lending rates allows financial institutions to have more financing capacity. This financial capacity makes it possible to expand their financial services, in particular the granting of credit to the private sector.

Table 5. Estimation of financial development using the autoregressive staggered lag model

Variables	Financial development	Financial development
	Credit from institutions	Credit from banks
Internal conflicts	-1,410** (0,569)	-1,201** (0,558)
Exchange rates	0,514*** (0,108)	0,482*** (0,104)
Interest rates	0,435*** (0,164)	0,362** (0,150)
Inflation	-0,490* (0,254)	-0,469** (0,221)
Imports	0,092 (0,135)	0,140 (0,134)
Public investment	-0,498** (0,228)	-0,580*** (0,215)
Money supply	0,336*** (0,055)	0,348*** (0,053)
Constant	-7,754*** (2,926)	-6,090* (3,313)
_ec	-0,257*** (0,098)	-0,218** (0,109)
Observations	133	133

Note: Standard errors in brackets *** p<0.01, ** p<0.05, * p<0.1

Source: Author

Robustness results and discussion

The results of the robustness test presented in Table 6 make it possible to verify the effects of political instability on financial development using the DOLS method. As a result, the coefficient assigned to internal conflicts has a negative and significant sign. These results show that a 1% increase in the risk of internal conflict leads to a drop in financial development of 1.58% percentage points. Financial development corresponds to loans granted by all financial institutions (column 1). In addition, a 1% increase in the risk of internal conflict leads to a 1.98 percentage point decrease in financial development (credit granted by second-tier banks) (column 2).

Consequently, these results explain that internal conflicts lead to a decline in the financial efficiency of banks. This decline in financial efficiency is explained by a reduction in the capacity of banks and other financial institutions to grant loans to private sector economic agents. These conflicts create a situation of uncertainty for the central bank, which is the provider of funds to financial institutions. This uncertainty or even distrust is also felt by financial institutions with regard to the ability of economic agents to repay their loans. Finally, credit rationing becomes widespread among financial institutions, preventing them from being fully functional and efficient.

The coefficients associated with imports are particularly positive and significant (columns 1 and 2). Therefore, the increase in imports tends to increase financial development. This means that imports of goods and services require entrepreneurs to obtain finance from financial institutions. Without access to private sector finance, imports of machinery, capital goods and other goods and services appear difficult to achieve. Consequently, the increase in imports should lead financial institutions to broaden the scope for granting credit.

Table 6. Estimation of financial development using the Dynamic Ordinary Least Squares method

Variables	Financial development	Financial development
	Credit from institutions	Credit from banks
Internal conflicts	-1,583**	-1,980***
	(0,738)	(0,721)
Exchange rates	-0,231	-0,339**
	(0,153)	(0,149)
Interest rates	0,139***	0,116***
	(0,038)	(0,038)
Inflation	-0,307*	-0,184
	(0,178)	(0,174)
Imports	0,581***	0,433***
	(0,113)	(0,110)
Public investment	0,351	0,689*
	(0,362)	(0,353)
Observations	112	112
R-squared	0,821	0,892
Number of Country	7	7

Note: Standard errors in brackets *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Author

The results presented in Table 7 further strengthen the robustness. The results show the interaction effects between internal conflicts and the interest rate. As a result, the coefficient associated with the interaction variable has a negative and significant sign. These results show that an increase in the interest rate reduces the risk of internal conflicts on financial development (columns 1 and 2). An increase in the lending rate leads to an improvement in the efficiency of banks and other financial institutions. This increase in the interest rate therefore acts as a buffer against the shocks to financial development resulting from internal conflicts. Initially, the coefficients associated with internal conflicts are negatively high (columns 1 and 2). The coefficients associated with the interest rate variable are significant and positive. Subsequently, the constitution of the interaction variable indicates significant, negative coefficients that are low in terms of value. The interest rate then attenuates the influence of internal conflicts on financial development. Consequently, banks tend to keep rates high in order to mitigate any eventualities that could have negative effects on their operations. Among these contingencies, they take into account the risks associated with political conflicts.

Table 7. Estimation of financial development using the Dynamic Ordinary Least Squares method

Variables	Financial development	Financial development
	Credit from institutions	Credit from banks
Internal conflicts	-1,457***	-1,862***
	(0,519)	(0,481)
Conflicts*Interest rates	-0,139**	-0,171***
	(0,058)	(0,053)
Exchange rates	0,003	-0,138
	(0,097)	(0,090)
Interest rates	1,294**	1,555***
	(0,514)	(0,476)
Inflation	-0,101	0,093
	(0,112)	(0,104)
Imports	0,420***	0,290***
	(0,071)	(0,066)
Public investment	0,395	0,757***
	(0,243)	(0,225)

Variables	Financial development	Financial development
	Credit from institutions	Credit from banks
Money supply	0,304*** (0,058)	0,279*** (0,054)
Observations	112	112
R-squared	0,944	1,058
Number of Countryld	7	7

Note: Standard errors in brackets *** p<0.01, ** p<0.05, * p<0.1

Source: Author

The specificity of Table 8 presents the effects of the interaction variable between internal conflicts and the inflation rate. The individual coefficients for internal conflicts and the inflation rate are initially insignificant. On the other hand, the coefficient associated with the interaction variable between internal conflicts and the inflation rate has a negative and significant sign (columns 1 and 2). These results therefore indicate that an increase in the inflation rate leads to an increase in the risk of internal conflicts on financial development. Thus, higher inflation tends to amplify the effects of political conflict on financial development. This amplification of internal conflicts can be explained by discontent and, above all, the decline in purchasing power, which tend to fuel these conflicts.

Table 8. Estimation of financial development using the Dynamic Ordinary Least Squares method

Variables	Financial development	Financial development
	Credit from institutions	Credit from banks
Internal conflicts	-0,977 (0,856)	-1,110 (0,842)
Conflicts*Inflation	-0,303** (0,147)	-0,331** (0,145)
Public investment	0,468 (0,380)	0,776** (0,374)
Imports	0,594*** (0,106)	0,439*** (0,104)
Inflation	1,707 (1,153)	1,956* (1,134)
Observations	112	112
R-squared	0,812	0,815
Number of Countryld	7	7

Note: Standard errors in brackets *** p<0.01, ** p<0.05, * p<0.1

Source: Author

Conclusion

Financial development explains a country's economic growth. However, the effects of political instability are likely to affect the development of the financial sector. The aim of this paper is to analyze the effects of political instability on financial development in the WAEMU region. In order to achieve this objective, the usual tests and econometric estimates are carried out on a set of 7 WAEMU countries over the period from 2002 to 2021. The results obtained using the ARDL method indicate that political instability significantly and negatively affects financial development.

In terms of economic policy implications, the governments of WAEMU countries are invited to seek the necessary means to reduce political instability in order to allow the emergence of the financial sector. It is also a question of combating inflation, which amplifies political instability, to enable businesses to sell their goods easily and to support households with low purchasing power. The governments of the WAEMU countries also need to promote financial services by facilitating the refinancing of financial institutions by the Central Bank. Finally, it is a question of encouraging imports of machinery and capital goods, which will rapidly lead to financial development and the development of the private sector.

This work is limited by the number of countries in the WAEMU area. The WAEMU area comprises 8 countries, whereas this article, due to a lack of data, only analyses 07 countries. Other works could consider this analysis by considering all the countries of sub-Saharan Africa.

Credit Authorship Contribution Statement

This article was written without the contribution of anyone else.

Acknowledgments/Funding

Thanks to fellow researchers for their practical advice.

Conflict of Interest Statement

This article has no conflicts of interest or other financial conflicts.

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