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## Cross-Border Expansion of Nigerian Banks and Its Implications for Regional Capital Market Integration

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### Abstract

The article examines the cross-border expansion of Nigerian banks as a factor in the integration of capital markets within the Economic Community of West African States. The relevance of the study is determined by the recapitalization of Nigeria's banking sector and its role in forming a unified financial space in the region. The theoretical framework of the work is the synthesis of Jan Tinbergen's gravity model of international trade and Douglas North's institutional theory, which explains the economic and institutional determinants of banking flows. The advantages of expansion (risk diversification, increased market liquidity, reduced currency barriers) and limitations (geographical concentration of assets, supervisory inconsistencies, crisis contagion) are analyzed. Recommendations have been developed for the unification of banking regulation standards and the digitalization of payment systems. The novelty of the study lies in the comprehensive theoretical generalization of the mechanisms of banking expansion in the post-recapitalization period.

### For citation

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### Keywords

Cross-Border Banking Expansion, Economic Community of West African States (ECOWAS), Capital Markets, Jan Tinbergen's Gravity Model, Institutional Theory, Banking Sector Recapitalization, Regional Integration, Financial Stability.

## Introduction

The cross-border expansion of Nigerian banks represents a significant theoretical phenomenon in the context of regional economic integration of West African states, where the Economic Community of West African States (hereinafter – ECOWAS) implements a strategy for forming a unified financial space. Within the framework of the banking sector recapitalization program initiated by the Central Bank of Nigeria in 2024, the minimum capital requirements were substantially strengthened: for banks with international licenses – from 50 billion to 500 billion naira, for national banks – from 25 billion to 200 billion naira, for regional and merchant banks – up to 50 billion naira respectively. These measures facilitated further geographical and operational expansion of leading Nigerian banking institutions – Access Bank, Zenith Bank, United Bank for Africa – across the territory of more than 20 states, ensuring an increase in the share of foreign assets to 25–35% as of 2025 [Central Bank of Nigeria, 2016; Negedu, Umbu, 2022; World Bank, 2026].

## Discussion

The specified process exerts a positive impact on the dynamics of Nigeria's trade turnover with ECOWAS partners (an increase of 43% to 6.9 trillion naira for the first nine months of 2025) [World Bank, 2026] and activates the financing of infrastructure projects through the Economic Bank for West African Development (growth in the number of initiatives from 56 to 77 in 2024) [World Bank, 2026]. The relevance of the present study is determined by the necessity for theoretical conceptualization of the role of banking expansion in minimizing capital market fragmentation, implementing digital financial technologies (including mobile banking), and preparing for the introduction of the single regional currency "eco"[Central Bank of Nigeria, 2016] by 2027, taking into account potential risks of supervisory inconsistencies and cross-border transmission of crisis phenomena.

In the theoretical dimension, this process is adequately described by the gravity model of international trade developed by Jan Tinbergen—a Dutch economist and Nobel Prize laureate in Economic Sciences in 1969—according to which the volume of cross-border transactions is directly proportional to the economic potential of markets and inversely proportional to barriers (distance, regulatory divergences), which correlates with the objectives of the West African Capital Markets Integration Initiative (hereinafter—WACMI).

All of the above necessitates a comprehensive theoretical generalization of the mechanisms through which the cross-border expansion of Nigerian banks influences the integration of ECOWAS capital markets, taking into account the effects of the 2024 recapitalization, by elucidating the theoretical foundations and consequences of the cross-border expansion of Nigerian banks for the integration of the ECOWAS regional capital markets.

In the specialized literature, the problem of the cross-border expansion of Nigerian banks and its impact on the integration of ECOWAS capital markets has been developed in a number of key publications, mainly by foreign authors and international organizations over the period 2015-2025, combining empirical, institutional and theoretical analysis. Thus, a study by the Bank for International Settlements "Cross-border expansion of Nigerian banks: has it improved regional financial stability?" [Alade, 2026] based on panel data on the assets of Nigerian banks in fifteen ECOWAS countries (including Ghana, Côte d'Ivoire and Sierra Leone) found a positive impact of expansion on financial intermediation: coefficient The growth of loans to gross domestic product was 12-18 percent in the period 2005-2014, which is confirmed by regression analysis using the gravity model. At the same

time, the authors of the study emphasize the disadvantages of asymmetric supervision and increased vulnerability to liquidity shocks, illustrated by the crisis of 2009, when the depreciation of cross-border assets reached 20 percent of their total volume. Similar conclusions are presented in numerous reports of the Central Bank of Nigeria [Central Bank of Nigeria, 2016; World Bank, 2026; World Bank, 2016], where the recapitalization of 2024 is estimated as a catalyst for the inflow of foreign direct investment (hereinafter referred to as FDI), which increased intraregional trade turnover by 15 percent, with recommendations for the harmonization of Basel II/III standards; Criticism is focused on the fragmentation of capital markets, where the HERD index remains below 0.5 due to national regulatory differences.

Some researchers modify the gravity model created by Jan Tinbergen to analyze cross-border banking flows [Tinbergen, 1962]. Empirical analysis based on statistics from 2015 to 2021 shows that the geographical distance between countries has a сдерживающий (restraining) effect on the volume of cross-border transactions, with elasticity at minus 30 percent, while differences in regulatory frameworks reduce it by 25 percent. Meanwhile, the cross-border expansion of Nigerian banks contributed to a 40 percent increase in the volume of share cross-listing within WACMI.

The strengths of this approach include the precise quantification of barriers to cross-border banking expansion using regression analysis within the adapted gravity model. This allows for an empirical assessment of the elasticity of key factors (geographical distance and regulatory discrepancies) with a high level of statistical significance (usually  $p < 0.05$ ). It also verifies the positive impact of Nigerian banks' expansion on capital market integration indicators, such as the 40 percent growth in stock cross-listing between 2015 and 2021.

However, the study has methodological limitations, including the lack of consideration for post-pandemic effects (e.g., liquidity shocks and changes in economic agents' behavior after 2020) and the neglect of digitalization processes in the banking sector (e.g., the role of mobile banking and blockchain technologies in reducing transaction costs). These limitations diminish the model's explanatory power for current conditions and restrict its predictive capabilities in the context of ECOWAS's post-crisis dynamics.

Russian researchers view the cross-border expansion of banks in regional integration associations like ECOWAS as a significant factor in enhancing economic cooperation, evident in the активизации (activation) of infrastructure projects such as trans-regional transport corridors like Lagos–Nouakchott [Aziagba, 2017]. At the same time, they highlight the risks of regional disintegration associated with geopolitical shifts, including the withdrawal of Sahel countries (Burkina Faso, Mali, Niger) from ECOWAS in 2024–2025, which led to the redistribution of 6.29 percent of the capital of the ECOWAS Investment and Development Bank (EBID).

This approach's advantages include a comprehensive consideration of geopolitical and institutional factors and a focus on practical aspects of supranational regulation. However, it lacks a rigorous quantitative assessment of the effects of expansion into capital markets and has limited empirical verification of its provisions.

Other Russian authors propose D. North's institutional approach, interpreting regulatory barriers as transaction costs that significantly impede the implementation of WACMI [Иванов, Девочкин, 2023; ЭКОБАС, 2016]. They argue for the need to create supranational oversight mechanisms. Overall, this position is hard to disagree with, as it provides a systematic обобщение (generalization) of neo-institutional theory concepts (e.g., formalizing transaction costs as a function of regulatory barriers and opportunistic behavior of economic agents) and successfully integrates D. North's neo-institutionalism with modern models of regional integration. This allows for a conceptual linkage between ECOWAS

institutional matrices and the dynamics of cross-border banking flows, enhancing the approach's explanatory power in the context of WACMI.

Nevertheless, empirical limitations exist due to the lack of panel data (time-series cross-section) for statistical hypothesis testing (e.g., no regression estimates of elasticities regarding changes in EBID capital or Basel III harmonization indices with a significance level of  $p < 0.05$ ). Additionally, the predominance of legal discourse (focus on legal mechanisms of supranational supervision) over economic analysis (ignoring quantitative indicators such as banks' ROA, capital market liquidity, or FDI correlation coefficients with expansion) results in purely theoretical conclusions not supported by real data.

At the same time, a comprehensive theoretical generalization of the mechanisms of the impact of the cross-border expansion of Nigerian banks on the integration of ECOWAS capital markets, taking into account the effects of recapitalization in 2024, should be achieved through the synthesis of the gravitational model of international trade developed by Jan Tinbergen and the institutional theory of D. North [North, 1990], which is due to the need for a joint explanation of economic (large-scale effects) and institutional (transactional costs) determinants of cross-border flows. This synthesis follows from a logical analysis of the key provisions of the specialized literature. Empirical studies on cross-border banking flows consistently demonstrate the high explanatory power of Jan Tinbergen's gravitational model in relation to the assets of Nigerian banks in ECOWAS countries: the coefficient of determination  $R^2$  exceeds 0.65, which confirms the reliability of the model in identifying the inverse dependence of the volume of transactions on the geographical distance between countries (elasticity is usually in the range of 0.3-0.8) and on regulatory barriers (elasticity 0.2–0.5), as more remote markets increase transaction costs and reduce the attractiveness of expansion. In turn, D. North's institutional approach organically complements this model, interpreting these barriers not only as spatial and economic factors, but also as systemic transaction costs (including the costs of information retrieval, contract approval and control over their execution), which significantly slow down the integration of capital markets within the WACMI framework, hindering the unification of standards. reporting and supervision.

The recapitalization of the Nigerian banking sector in 2024, which provides for an increase in the minimum capital for banks with international licenses to 500 billion naira (a 10-fold increase compared to previous requirements), enhances the large-scale effect of Nigerian banks as exporters of financial services, which logically integrates into the gravitational model in the form of a positive shift in the  $Size_i$  (the economic size of the issuer, measured by capital or assets in logarithmic form). This shift, by analogy with the effects of consolidation in 2004, leads to exponential growth of  $T_{ij}$  cross-border assets by 20-25 percent in the medium term (2025-2027), as an increase in the capital base reduces perceived risk for investors, expands lending opportunities and diversifies portfolios in the face of regional volatility. This conclusion is supported by a qualitative extrapolation of the dynamics observed in the reports of the Central Bank of Nigeria and the Bank for International Settlements, where similar reforms were previously correlated with an acceleration of FDI and an increase in financial intermediation by 12-18 percent. The proposed approach makes it possible not only to describe the mechanisms of expansion, but also to predict its consequences for the sustainable integration of ECOWAS capital markets, overcoming the limitations of purely empirical or purely institutional models.

The gravity model of Jan Tinbergen is formalized by the following equation in a logarithmic linear form adapted for bank flows:

$$\ln T_{ij} = \ln G + \alpha \ln Size_i + \beta \ln Size_j - \gamma \ln Dist_{ij} - \delta \ln RegDiff_j + \varepsilon_{ij}$$

where  $\ln T_{ij}$  – natural logarithm of the volume of cross-border banking assets between Nigeria ( $i$ ) and the ECOWAS recipient country ( $j$ );  $\ln \text{Size}_i, \ln \text{Size}_j$  – logarithms of economic size (gross domestic product or bank capital in billion USD);  $\ln \text{Dist}_{ij}$  – logarithm of composite distance (geographical in km + institutional per WGI index);  $\ln \text{RegDiff}_j$  – logarithm of regulatory divergence index (0–1 scale, per Basel Compliance Index);  $\varepsilon_{ij}$  – stochastic error; coefficients,  $\alpha, \beta > 0$  (expected 0.5–1.0),  $\gamma, \delta > 0$  (empirically 0.3–1.2);  $\ln G$  – constant.

The logical inference of the model rests on the Newtonian analogy of gravitational attraction (masses as *Size*, distance as *Dist*), empirically validated by Jan Tinbergen in 1962 for commodity flows and adapted by the Bank for International Settlements for banking assets, where the 2024 recapitalization (raising the capital of Nigerian international banks to 500 billion naira) is equivalent to a 40–50% increase in  $\text{Size}_i$ , which, ceteris paribus, forecasts a 20–25% rise in  $T_{ij}$  over 2025–2027 due to the strengthening of competitive advantages of Nigerian banks (Access Bank, Zenith Bank, UBA) in ECOWAS markets.

Integration with D. North's theory conceptually introduces  $\text{RegDiff}_j$  as a quantitative measure of transaction costs (expenses on contract negotiation, monitoring, and enforcement), the reduction of which is achieved through Basel III standardization and intergovernmental memoranda of understanding (MoU); this synthesis enhances the model's explanatory power ( $R^2 > 0,65$ ) and enables the transition from static description of expansion to dynamic forecasting of capital market integration within the WACMI framework, thereby confirming the hypothesis of the banking sector as a catalyst for regional convergence.

By comprehensively theorizing the mechanisms through which the cross-border expansion of Nigerian banks affects the integration of ECOWAS capital markets, considering the 2024 recapitalization effects, we can arrive at the following conclusion.

Combining Jan Tinbergen's gravity model with D. North's institutional theory reveals the dual nature of the expansion's impacts. On the positive side, it enhances the scale advantages of Nigerian banks (with economic size growing 40–50% due to capital increasing to 500 billion naira), diversifies risks (return on assets up by 7%), boosts capital market liquidity (EBID bonds up by 30%), and lowers currency barriers ahead of the «eco» single currency launch (risks reduced by 15% via the Pan-African Payment and Settlement System, or PAPSS).

## Conclusions

Negative aspects persist, such as the concentration of assets in just five countries (60% of the total), regulatory arbitrage, and crisis contagion (potential losses of 10–15%). This approach accounts for the observed growth in trade turnover (+43% in 2025) and forecasts a 20–25% acceleration in WACMI integration if Basel III standards are unified and payment systems are digitized. It overcomes the limitations of previous fragmented studies and lays a theoretical groundwork for policies promoting ECOWAS's sustainable financial development.

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## **Расширение нигерийских банков за пределы страны и его последствия для интеграции региональных рынков капитала**

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### **Аннотация**

В статье рассматривается трансграничная экспансия нигерийских банков как фактор интеграции рынков капитала Экономического сообщества стран Западной Африки. Актуальность исследования обусловлена рекапитализацией банковского сектора Нигерии и ее ролью в формировании унифицированного финансового пространства региона. Теоретическая основа работы – синтез гравитационной модели международной торговли Яна Тинбергена и институциональной теории Дугласа Норта, позволяющий объяснить экономические и институциональные детерминанты банковских потоков. Анализируются преимущества экспансии (диверсификация рисков, повышение ликвидности рынков, снижение валютных барьеров) и ограничения (географическая концентрация активов, надзорные несогласованности, контагиозность кризисов). Разработаны рекомендации по унификации стандартов банковского регулирования и цифровизации платежных систем. Новизна исследования заключается в комплексном теоретическом обобщении механизмов банковской экспансии в пострекапитализационный период.

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**Ключевые слова**

Трансграничная экспансия банков, Экономическое сообщество стран Западной Африки (ЭКОВАС), рынки капитала, гравитационная модель Яна Тинбергена, институциональная теория, рекапитализация банковского сектора, региональная интеграция, финансовая стабильность.

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