

Do Economic and Geopolitical Risks Matter for Banks' Lending Decisions, Credit Risk, Performance, and Stability in South Africa?

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Abstract

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Purpose: The objective of this study was to investigate the effect of economic and geopolitical risks on the lending decisions, credit risk, performance, and stability of banks in South Africa.

Design/Methodology/Approach: To achieve this objective, ten banks were assessed for the period ranging from 2013 to 2022, and panel regressions were estimated with cross-sectional fixed effects.

Findings: The results show that economic policy uncertainty (EPU) decreases credit risk and increases stability in the South African banking sector whilst geopolitical risk (GPR) increases credit risk and decreases stability. Further, it was found that these effects are more pronounced in banks with smaller market capitalizations and higher equity capitalizations. Moreover, global GPR has a destabilizing effect on South African banks. Remarkably, both EPU and GPR do not significantly influence lending decisions and performance by banks in South Africa.

Practical Implications: This research enables a greater understanding of the determinants of banks' lending decisions, credit risk, performance, and stability which is essential for devising governance policies and regulations to reduce fragilities in the banking system.

Originality/Value: Given the scarcity of banking sector research in emerging markets, this study contributes to the existing literature by investigating the role of EPU and GPR on banking sector dynamics which remains understudied in South Africa.

Keywords: Bank lending; bank stability; credit risk; economic policy uncertainty; geopolitical risk.

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INTRODUCTION

Around the world, the efficiency of a country's financial system largely depends on the stability of its banking system. The primary role of a bank is to act as an intermediary between depositors, who have surplus funds, and borrowers, who require funds. In addition, banks promote liquidity creation, economic growth, financial inclusion, and sustainable development (Alkhazaleh 2017; Léon and Zins 2020; Kahn and Wagner 2021). However, like any business, banks can also fail. Failures in the banking sector could disrupt the flow of funds, subsequently, having a negative impact on economic activity and financial systems as a whole (Khan et al. 2017; Daly et al. 2019; Liu et al. 2021). Furthermore, bank failures could lead to contagion and systemic risks which lead to the failure of other financial institutions (Baumöhl et al. 2020). Thus, instability in the banking system is often cited as one of the main causes of the 2008 global financial crisis (Yeoh 2010; Ozili 2021). Fragility in the banking sector is caused by several factors, including economic and geopolitical risks.

Economic policy uncertainty (EPU) relates to the inability to correctly predict when and how the government will revise its current policies (Wen, et al., 2021). Uncertainties related to economic policies not only affects the real economy, but also influences the operational strategies of banks. In particular, banks assist governments in achieving economic control by implementing macroeconomic policies which may require an adjustment in deposit rates and reserve requirement ratios, subsequently, influencing the operational strategies of banks (Chi and Li 2017). For instance, economic risks which relate to EPU may influence banks' strategies for lending. Bordo et al. (2016) reported that EPU in the United States lead to a reduction in the growth of loans in order to reduce credit risk exposure, however, the effects of EPU is more prominent for larger, less liquid, and less capitalised banks. Furthermore, EPU leads to a growth in non-performing loans (Chi and Li 2017) and bad debts begin to increase as borrowers become unable to service their debt (Hamdi and Hassen 2022), subsequently, exposing banks to greater credit risk. However, the effect of EPU on credit risk is more pronounced for banks with lower profitability and lower solvency in the United States (Orden-Cruz et al. 2023). The vulnerability of banks to EPU could also influence their performance. Athari (2021) found that EPU has a negative effect on the performance of Ukrainian banks as measured by their profitability. Additionally, EPU creates informational asymmetries and resource allocation inefficiencies which adversely impacts the stability of banks (Desalegn et al. 2023). On the contrary, Nguyen, et al. (2021) reported that increased EPU is associated with better cost management efficiency and profitability for Indian banks. Given the inconsistencies in existing research, it becomes critical to further explore how economic risk, captured by EPU, impacts the banking sector.

Another key risk impacting the banking sector is geopolitical risk (GPR). By definition, GPR relates to the uncertainties associated with terrorism, wars, and any conflict between political entities that disturb the normal and peaceful course of international relations (Caldara and Iacoviello 2022). Therefore, while EPU relates to risks associated with economic stability and policy interventions, GPR relates to risks associated with war-like conflicts that are exogenous to business cycles and economic conditions. GPR may create informational asymmetries between borrowers and banks, causing banks to increase the cost of loans (Nguyen and Thuy 2023). As a result, higher GPR leads to a reduction in consumer and mortgage loans because fear causes consumers to delay spending and investment (Demir and Danisman 2021). This credit shrinkage deteriorates the performance of banks (Yildirim and Berkman 2022). Overall, GPR is associated with negative investor sentiments, reduced credit growth, increased default risk, and higher profit variations which lead to increased fragility in the banking sector (Phan, et al., 2022). However, research on the impact of geopolitical risk on the banking system remains scanty, especially in the South African context.

On this background, the objective of this study is to investigate the effect of economic risk, captured through EPU, and geopolitical risk on the lending decisions, credit risk, performance, and stability of banks in South Africa. The motivation for concentrating on the South African banking sector stems from the high levels of concentration in this sector. In particular, five prominent banks (ABSA, Capitec, First National Bank, Nedbank, and Standard Bank) control more than 90% of the market share (Ngonisa et al. 2023). Such high levels of concentration exposes the banking sector to fragilities and makes it more vulnerable to external shocks. A common shock impacting the banking sector is EPU (Desalegn, et al. 2023). In recent years, South Africa has experienced high uncertainty regarding economic policies primarily due to weak growth projections, high interest rates, low business confidence, and uncertainty regarding public finances (Burger 2023). Another factor influencing the stability of the banking sector is GPR (Phan et al. 2022). Recently, South Africa has been involved in geopolitical conflicts including its geopolitical tensions with the United States over South Africa's perceived support for Russia in the Russia-Ukraine war (Burger 2023). Further geopolitical tensions could stem from the South African Parliament's vote to suspend diplomatic ties with Israel amid the Israel-Palestine war (Panchia 2023). Given the rising economic and geopolitical risks in South Africa, it is vital to understand how these risks impact the banking sector, which is needed to foster economic growth and efficiency in the financial system.

This study contributes to existing literature in several ways. According to Orden-Cruz et al. (2023), research on the effect of EPU on the credit risk of banks is scanty. This study extends research in this domain by exploring how EPU impacts banks' credit risk as well as lending decisions, performance, and stability. Likewise, Phan et al. (2022) mention that there has not been much research on the influence of geopolitical risk on banks' stability. As such, this study contributes to existing literature on the effect of geopolitical risk on various aspects of the banking sector. Naili and Lahrichi (2022) acknowledge that there is also a scarcity of banking sector research in emerging markets. Accordingly, this study sheds light on banks in emerging markets, particularly, from the South African context. The objectives of this research also enable a greater understanding of the determinants of banks' lending decisions, credit risk, performance, and stability which is essential for devising governance policies and regulations to reduce fragilities in the banking system.

This paper is structured as follows: Section 2 reviews existing literature on the effects of EPU and GPR on banks. Section 3 outlines the data and methodology employed. Section 4 presents the results, and Section 5 concludes the study.

LITERATURE REVIEW

The effects of EPU on banks

Existing research suggests that EPU impacts various bank-related aspects. One of the earliest studies exploring the effect of EPU on the banking sector was conducted by Bordo et al. (2016). Bordo et al. (2016) discovered that EPU decrease bank loan growth in the United States. Further, it was reported that this effect is stronger for banks that are larger, less capitalised, and less liquid. With a larger sample of 19 countries (excluding South Africa), Hu and Gong (2019) reported that there is a negative relationship between EPU and credit growth so that banks can reduce their exposure to credit risk. This effect was stronger for larger and riskier banks but weaker for banks with more liquidity and greater diversification. Similar findings were reported by Danisman et al. (2020) for European banks. Notably, Nguyen et al. (2020) reported that the negative effect of EPU on bank credit growth is more pronounced in emerging markets relative to developed markets.

Regarding bank credit risk, Chi and Li (2017) found that EPU increases loan concentrations, loan migration rates, and non-performing loan ratios, subsequently, leading to an increase in the credit risk of Chinese commercial banks. Similarly, Karadima and Louri (2021) reported that EPU increases non-performing loans in Italy, France, Spain and Germany, however, this effect is moderated by the level of bank concentration. On the contrary, Ozili (2022) discovered that EPU and non-performing loans are negatively correlated for European Union and G7 countries. Hamdi and Hassen (2022) reported that EPU increase banks' credit risk but decrease loan sizes and performance in Tunisia. Similar findings are reported by Mendy et al. (2023) for U.S banks. On the contrary, Nguyen et al. (2021) found that EPU improves cost efficiency and enhances the profitability of Indian banks.

With regards to bank stability, Nguyen (2021) reported that EPU adversely impacts bank stability in European countries. The negative effect is attributed to higher bank risk-taking which increase the chances of corporate failure. According to Nguyen (2021), the higher bank risk-taking amid EPU is induced by the adverse effect of EPU on various economic activities, the reduction in banks' profitability, and herd behaviour. Similarly, Phan et al. (2021) reported that EPU negatively influences financial stability at both country- and bank-levels for 23 countries excluding South Africa. According to Phan et al. (2021), this negative effect is because EPU creates uncertainty which leads to informational asymmetries that make it difficult for banks to understand the characteristics of borrowers, subsequently, making it challenging for banks to distinguish credit risks during periods of uncertainty. In addition, Shabir et al. (2021) found that EPU negatively influences bank stability, regardless of the levels of income and development in countries.

EPU is also seen to affect other aspects of the banking sector. Ashraf and Shen (2019) found that higher EPU brings about an increase in the prices of bank loans in order to compensate banks for additional default risk. Tran (2020) discovered that banks reduce dividend payouts and share repurchases amid EPU to be more precautionary. Tran, et al. (2021) found that U.S banks are more likely to diversify their income streams into non-interest income generating streams during periods of high EPU, which may positively contribute to bank performance. On the contrary, Boungou and Mawusi (2022) reported that EPU has no significant effect on banks' non-interest income activities in Germany, Greece, France, Japan, Italy, Ireland, Spain, Sweden and the Netherlands. Berger et al. (2022) found that EPU promotes liquidity hoarding in order for banks to protect themselves against funding difficulties and liquidity shocks.

The effects of GPR on banks

Unlike EPU, research on the impact of GPR on the banking sector is relatively limited. Demir and Danisman (2021) reported that GPR leads to a decrease in consumer and mortgage loans because GPR induces fear among consumers causing them to delay spending and investment. However, the authors found

that corporate loans are not significantly influenced by GPR. Nguyen and Thuy (2023) found that GPR increases the cost of loans in the U.S in order to compensate banks for the additional risk of default. With regard to bank performance, Alsagr and Hemmen (2020) discovered that GPR has a significant, negative effect on the profitability of banks in 19 emerging countries. Similarly, Yildirim and Berkman (2022) reported that GPR has a negative effect on the profitability of banks in G7 countries. The authors attribute this finding to the credit shrinkage, amid geopolitical uncertainty, which negatively impacts performance.

Regarding bank stability, Phan, et al. (2022) found that an increase in GPR is associated with a decrease in the stability of U.S banks, and this effect is weaker for large and more capitalised banks. According to Phan et al. (2022), this finding may be attributed to reduced liquidity provision as a result of the panic caused by increased GPR and uncertainty. Furthermore, GPR fosters negative investor sentiments causing investors to become concerned about losing money, thus, moving their investments from risky to safer assets which may lead to a reduction in liquidity among banks. Phan et al. (2022) also mention that GPR induces a reduction in loan growth and an increase in credit risk as well as profit variations which expose banks to increased fragility. Likewise, Shabir et al. (2023) reported that geopolitical uncertainties induce herding behaviour among banks because of the lack proper guiding risk framework. In addition, geopolitical uncertainties promote risk-taking behaviour to search for yield. However, this herd and risk-taking behaviour does not generate the desired outcomes, instead it generates higher risk and instability for banks (Shabir et al. 2023). The limited research on the impact of GPR on banks highlights the need for further research in this domain.

DATA AND METHODOLOGY

Data sample

The sample of this study includes ten South African banks which are locally-controlled, namely; Absa Bank Limited, Bidvest, Capitec Bank Limited, FirstRand Limited, Grindrod Bank Limited, Investec, Nedbank, Sasfin Bank Limited, The Standard Bank of South Africa Limited, and Ubank. The study excludes foreign-controlled banks, mutual banks, and state-owned banks, and only includes banks with complete data for the full sample period. The ten-year sample period varies from 2013 to 2022. This study relies on financial statements which are reported annually. Accordingly, the frequency of data employed is annual. Furthermore, the use of annual data is supported by Makrelov et al. (2023) who mention that annual data allows for comparison with existing research on the banking sector which typically uses annual data and removes the noise that is present in monthly data.

Computation of variables

In order to compute the variables used in this study, financial statements are obtained from the BankFocus database. In line with existing research, banking lending decisions are proxied by the growth rate of loans while credit risk is measured by the non-performing loans ratio. Additionally, bank performance is measured by the return on average assets and bank stability is computed using the Z-score. Noteworthy is that an increase in the Z-score is associated with a reduction in the probability of bank insolvency and, thus, an increase in bank stability (Shabir et al. 2021).

Regarding the independent variables, economic risk is captured by EPU. Following Demir and Danisman (2021) and Udeagha and Muchapondwa (2022), the World Uncertainty Index (WUI), created by Ahir et al. (2018), is used as a proxy for EPU. The index is based on the frequency of the term “uncertainty” in the country reports by the Economist Intelligence Unit (Ahir et al. 2018). The index is rescaled and normalised, and an increase in the index value signifies an increase in the level of uncertainty. Following a myriad of recent literature, geopolitical risks are captured using the geopolitical risk (GPR) index created by Caldara and Iacoviello (2022). The GPR index is based on the frequency of articles in leading newspapers in the United States, Canada, and the United Kingdom that discuss adverse geopolitical events and threats (Caldara and Iacoviello 2022). Like the WUI, the GPR index is normalised and an increase in the index value signifies an increase in geopolitical risk and uncertainty. Data on the WUI for South Africa is obtained from <https://worlduncertaintyindex.com/> while GPR index data is obtained from <https://www.matteoiacoviello.com/gpr.htm>. In addition, macroeconomic data is obtained from the South African Reserve Bank (SARB) to compute some of the control variables. Table 1 summarises the computation of the variables in this study based on existing literature.

Table 1. Variables used in this study

Variable	Symbol	Computation	Source
Dependent variables			
Growth rate of loans	GRL	$\frac{\text{Change in loan amounts in current year}}{\text{Loan amount in previous year}}$	Hamdi and Hassen (2022)
Non-performing loans ratio	NPL	$\frac{\text{Non – performing loans}}{\text{Total loans}}$	Chi and Li (2017)
Return of average assets	ROA	$\frac{\text{Net income}}{\text{Average total assets}}$	Alsagr and Hemmen (2020)
Stability	Z-score	$\frac{\text{Sum of ROA and equity – to – assets ratio}}{\text{Standard deviation of ROA over past 3 years}}$	Phan et al. (2022)
Independent variables			
Economic risk	EPU	Change in World Uncertainty Index	Demir and Danisman (2021)
Geopolitical risk	GPR	Change in Geopolitical Risk Index	Phan, et al. (2022)
Bank-specific control variables (BControl)			
Size	SIZE	Natural logarithm of total assets	Chi and Li (2017);
Financial leverage	LEV	$\frac{\text{Total liabilities}}{\text{Total assets}}$	Alfadli and Rjoub (2020); Orden-
Capital adequacy ratio	CAR	$\frac{\text{Total assets}}{\text{Total assets}}$	Cruz et al. (2023)
Diversification	DIV	$\frac{\text{Risk – weighted sum of assets}}{\text{Non – interest income}} \times \frac{\text{Total operating income}}{\text{Total operating income}}$	
Market-specific control variables (MControl)			
Gross domestic product	GDP	Change in Real GDP	Orden-Cruz et al. (2023)
Inflation	INF	Change in Consumer Price Index (CPI)	Iqbal et al. (2020)

Source: Authors' own compilation.

Methodology

Based on a review of existing literature, the following panel regressions are estimated to achieve the objectives of this study:

$$Y_{i,t} = \alpha_0 + \beta_1 EPU_{t-1} + \sum_{k=1}^{K=4} \gamma_k BControl_{i,t-1} + \sum_{j=1}^{J=2} \delta_j MControl_{t-1} + \varepsilon_{i,t} \quad (1)$$

$$Y_{i,t} = \alpha_0 + \beta_1 GPR_{t-1} + \sum_{k=1}^{K=4} \gamma_k BControl_{i,t-1} + \sum_{j=1}^{J=2} \delta_j MControl_{t-1} + \varepsilon_{i,t} \quad (2)$$

In Equation (1) and (2) above, $Y_{i,t}$ represents the dependent variable, which is GRL, NPL, ROA, or Z-score. The main variables of interest are EPU which represents economic policy uncertainty or economic risk and GPR which represents geopolitical risk in Equations (1) and (2), respectively. To control for alternative explanations of the dependent variables, bank-specific control variables ($BControl$) which include SIZE, LEV, CAR, and DIV are included along with market-specific control variables ($MControl$) which include GDP and INF. All of the explanatory variables are lagged by one period to avoid the endogeneity problem (Chi and Li 2017; Alfadli and Rjoub 2020). Furthermore, to control for unobserved or omitted variables, bank-specific (that is, cross-sectional) effects that are either fixed or random are included in the model. The choice between the fixed-effects or random-effects estimators is based on the Hausman test. Furthermore, prior to estimating the panel regressions, tests for cross-sectional dependence between the series are conducted. Thereafter, if cross-sectional dependence is absent, first-generation panel unit root tests are employed to examine the stationarity of the variables; however, if cross-sectional dependence is present, second-generation panel unit root tests are employed.

RESULTS AND ANALYSIS

Preliminary Analysis

Table 2 provides a summary of the descriptive statistics for the dependent and independent variables

in their raw form. The average, annual growth in loans for banks in South Africa is 10.08% while the average, annual non-performing loans is 7.49%. The banks have also generated a return on assets of 1.69% on average, with a Z-score of 76.04. The respective standard deviations suggest that there is a high variation in these measures, as can be seen from the large ranges between the minimum and maximum values. These high variations may be attributed to extreme market events, such as the 2008 Global Financial Crisis and the COVID-19 Pandemic, which had significant implications on the banking sector. The EPU and GPR ratings exhibited an annual mean of 0.70 and 0.04, respectively, indicative of relatively stable economic policy and geopolitical conditions. It is important to note that the subsequent estimations employ the variables in their natural logarithmic form to ensure easy comparison.

Table 2. Descriptive statistics

	GRL	NPL	ROA	Z_SCORE	EPU	GPR
Mean	10.0772	7.4932	1.6901	76.0413	0.7048	0.0429
Max.	87.8990	47.6780	6.4370	437.2452	1.8211	0.0874
Min.	-18.2085	0.4697	-2.3918	2.1797	0.1364	0.0146
Std. Dev.	15.5403	8.3605	1.7406	71.8178	0.4723	0.0223
Skewness	2.0896	2.4273	0.9955	2.1296	1.0665	0.4600
Kurtosis	9.8959	9.5844	3.8507	9.5100	3.6421	2.3131
Jarque-Bera Prob.	270.9091 0.0000	278.8404 0.0000	19.5317 0.0001	252.1697 0.0000	20.6756 0.0000	5.4924 0.0642
Obs.	100	100	100	100	100	100

Source: Authors' own compilation.

Table 3. Correlation statistics

	GRL	NPL	ROA	Z_SCORE	EPU	GPR
GRL	1.0000					
NPL	-0.3552	1.0000				
ROA	0.4529	-0.1410	1.0000			
Z_SCORE	0.0708	-0.3821	0.0759	1.0000		
EPU	0.0487	-0.0182	0.1455	0.0542	1.0000	
GPR	0.1486	0.0680	-0.0012	-0.3072	-0.1839	1.0000

Source: Authors' own compilation.

The correlation statistics between the variables of interest are provided in Table 3. Interestingly, the correlation statistics imply that EPU exhibits a positive impact on the banking sector by enhancing growth in loans, performance (ROA), and stability (Z-score) whilst reducing credit risk (NPL). On the contrary, GPR increases the growth in loans, but also increases credit risk whilst reducing performance and stability. However, correlation does not imply causation, therefore, there is a need for further regression analysis. In terms of the regression analysis, the unreported results of cross-sectional dependence tests indicated that cross-sectional dependence was present, hence, second-generation panel unit root tests were used to detect stationarity. The second-generation, CIPS unit root test confirmed the stationarity of the variables in their natural logarithmic form. Further, the unreported Hausman test results confirmed that the cross-sectional fixed effects models are more appropriate for assessing the banking sector, consistent with existing literature. The next section presents and discusses the main results obtained from the cross-sectional fixed effects panel regressions.

Baseline Results

Tables 4 and 5 display the effects of EPU and GPR on the South African banking sector, respectively. The dependent variables are presented horizontally while the explanatory variables are presented vertically. The respective R-squared and F-stat for each model confirms that the models are a good fit. In terms of EPU, the results indicate that EPU significantly influences only NPL and Z-score. Specifically, EPU leads to a decrease in the non-performing loans of South African banks while increasing their Z-score. This would imply that EPU exhibits a positive impact on the South African banking sector by reducing credit risk and improving stability. The negative relationship between EPU and NPL is consistent with the findings of Ozili (2022) who reported a similar negative effect in G7 and EU countries. However, the positive effect of EPU on bank stability contradicts the existing findings of Nguyen (2021) and Phan et al. (2021) who did not consider the South African banking sector.

Contrary to the effects of EPU, GPR exhibits a positive effect on NPL but a negative effect on Z-score. This implies that GPR increases credit risk and decreases stability in the South African banking sector. Similar findings are reported by Phan et al. (2022) who found that GPR decreases the stability of U.S banks. Notably, the contrasting effects of EPU and GPR on the South African banking sector may be attributed to the negative correlation between these two variables – as reported in Table 3. Remarkably, both EPU and GPR do not significantly impact the lending decisions (GRL) and performance (ROA) of banks in South Africa.

Table 4. Panel regression estimations for the effect of EPU

	GRL	NPL	ROA	Z SCORE
CONSTANT	-300.4006	42.7177	55.9807	-147.2027
EPU _{t-1}	1.3507	-0.2020***	-0.0054	0.2102*
SIZE _{t-1}	-9.4304	0.7779**	-0.1815	-1.0190*
LEV _{t-1}	-122.0800***	-1.2753	-4.8759***	2.7759
CAR _{t-1}	0.6082	0.5305	1.1933**	-2.1409**
DIV _{t-1}	1.4983	0.0709	-0.1928	-0.4719**
GDP _{t-1}	66.7311	-3.3578	-2.1173	10.7612*
INF _{t-1}	-0.4336	-0.0093	0.0417	-0.0108
R-squared	0.4400	0.7762	0.6885	0.5408
F-stat	3.5845	15.8238	10.0827	5.3738
Prob (F-stat)	0.0001	0.0000	0.0000	0.0000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 5. Panel regression estimations for the effect of GPR

	GRL	NPL	ROA	Z SCORE
CONSTANT	673.6634	-175.0009	39.1983	338.4778**
GPR _{t-1}	-2.2010	0.4762**	0.0351	-1.0242***
SIZE _{t-1}	-9.5140	0.6948*	-0.1984	-0.5887
LEV _{t-1}	-121.1453***	-1.2122	-4.8432**	1.9806
CAR _{t-1}	1.7811	0.1835	1.1578*	-1.1626
DIV _{t-1}	1.4238	0.0692	-0.1948	-0.4237**
GDP _{t-1}	2.2141	11.1129	-0.9967	-21.6407**
INF _{t-1}	-0.1951	-0.0494	0.0400	0.0470
R-squared	0.4360	0.7736	0.6886	0.6059
F-stat	3.5265	15.5873	10.0895	7.0141
Prob (F-stat)	0.0001	0.0000	0.0000	0.0000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Further Analysis

Existing literature suggests that the effects of EPU and GPR may differ across banks of different sizes (or market capitalisations) as well as banks of different equity capitalisations (total equity to total assets). On this basis, further analysis is conducted on the effect of EPU on banks of different sizes and equity capitalisations. In addition, the effect of global EPU and GPR is examined. Tables 6 and 7 suggest that the directions of the effects of EPU and GPR on NPL and Z-score remain the same as the baseline results, however, the magnitude and significance of the effects indicate that the effects of EPU and GPR are more pronounced in small banks. Further, Tables 8 and 9 suggest that the direction of the effects of EPU and GPR on NPL and Z-score remain the same regardless of equity capitalisation, however, the magnitude and significance of the effects indicate that the effects of EPU and GPR are more pronounced in highly capitalised banks. Together, these findings indicate that the effects of EPU and GPR are stronger in banks with smaller market capitalisations and higher equity capitalisations. With regards to the global ratings, Tables 10 and 11 suggest that global EPU significantly influences only ROA, in which case the effect is positive, while global GPR only impacts the Z-score, in which case the effect is negative. These findings indicate that global economic policy uncertainty improves the performance of South African banks, however, global geopolitical risk decreases the stability of South African banks. More importantly, these findings imply that the South African banking sector is not immune to the effects of global conditions

because global EPU and GPR spills over to the South African market and significantly influences local banks.

Table 6. Effect of EPU on banks of different sizes

	LARGE				SMALL			
	GRL	NPL	ROA	Z SCORE	GRL	NPL	ROA	Z SCORE
CONSTANT	502.047	22.247	-114.583	-359.467*	-256.501	25.887	43.501	-217.09
EPU _{t-1}	0.797	-0.082*	0.050	0.083	1.828	-0.306**	-0.030	0.318**
SIZE _{t-1}	3.180	0.717**	-0.890	-2.146**	-27.885*	0.874	-0.458	0.297
LEV _{t-1}	-330.66	3.533	12.929	44.265**	-40.094	-3.379	-4.001	-4.800
CAR _{t-1}	14.364	-0.670	-0.286	0.174	-6.260	1.255	1.300	-1.533
DIV _{t-1}	1.049	-0.056	0.076	-1.029*	-2.890	0.335	-0.299	0.078
GDP _{t-1}	58.210	-3.229	4.889	13.948	61.648	-1.871	-1.267	15.672
INF _{t-1}	-0.034	0.003	0.073*	-0.034	-1.186	-0.005	0.002	0.034
R-squared	0.373	0.898	0.810	0.520	0.540	0.780	0.583	0.583
F-stat	1.784	26.345	12.768	3.245	3.527	10.631	4.200	4.196
Prob (F-stat)	0.098	0.000	0.000	0.004	0.002	0.000	0.001	0.001

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 7. Effect of GPR on banks of different sizes

	LARGE				SMALL			
	GRL	NPL	ROA	Z SCORE	GRL	NPL	ROA	Z SCORE
CONSTANT	-67.216	-34.364	-155.84	57.100	274.546	-349.94	90.359	233.662
GPR _{t-1}	1.401	0.138	0.101	-1.019*	-6.818	0.854**	-0.106	-1.024***
SIZE _{t-1}	1.997	0.720**	-0.970*	-1.778**	-27.707*	0.901	-0.418	0.296
LEV _{t-1}	-351.96	2.925	11.460	53.602*	-36.553	-3.998	-4.078	-4.169
CAR _{t-1}	12.518	-0.841	-0.419	1.473	-1.298	0.738	1.456	-0.847
DIV _{t-1}	0.527	-0.052	0.041	-0.879*	-3.254	0.393	-0.295	0.016
GDP _{t-1}	103.86	0.701	8.167	-16.936	-138.00	23.090*	-4.394	-14.277
INF _{t-1}	0.035	-0.011	0.077*	0.002	-0.775	-0.066	0.001	0.102
R-squared	0.370	0.891	0.809	0.635	0.551	0.789	0.584	0.621
F-stat	1.758	24.608	12.704	5.212	3.674	11.189	4.215	4.909
Prob (F-stat)	0.103	0.000	0.000	0.000	0.002	0.000	0.001	0.000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 8. Effect of EPU on banks of different equity capitalisations

	HIGH				LOW			
	GRL	NPL	ROA	Z SCORE	GRL	NPL	ROA	Z SCORE
CONSTANT	51.273	-19.413	83.269	-248.73*	-244.037	55.153	-148.11	-373.49*
EPU _{t-1}	2.430	-0.316**	-0.004	0.261	-0.228	-0.085*	0.003	0.090
SIZE _{t-1}	-4.500	0.841	0.026	-0.472	-18.526***	0.897***	-1.206**	-2.350**
LEV _{t-1}	-124.17*	-3.861	-5.165*	-2.078	-294.806	4.221	16.260	41.193
CAR _{t-1}	-1.878	1.242	1.231	-1.641	3.677	-0.186	0.706	1.180
DIV _{t-1}	0.661	0.353	-0.286	-0.063	3.220	-0.083	0.096	-0.895***
GDP _{t-1}	8.074	1.279	-4.047	17.866*	126.95*	-5.932*	6.361	15.817*
INF _{t-1}	-0.688	-0.009	0.016	-0.010	-0.152	-0.005	0.062	-0.003
R-squared	0.450	0.723	0.729	0.520	0.489	0.881	0.530	0.511
F-stat	2.454	7.835	8.079	3.255	2.866	22.247	3.390	3.130
Prob (F-stat)	0.023	0.000	0.000	0.004	0.009	0.000	0.003	0.005

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 9. Effect of GPR on banks of different equity capitalisation

	HIGH				LOW			
	GRL	NPL	ROA	Z_SCORE	GRL	NPL	ROA	Z_SCORE
CONSTANT	36.419	-41.69**	132.47	206.71	-207.62	-15.719	-248.34	90.218
GPR _{t-1}	-6.868	0.850**	-0.103	-0.976**	3.711	0.151	0.202	-0.943***
SIZE _{t-1}	-3.196	0.691	0.076	-0.224	-21.429***	0.886**	-1.386**	-1.656**
LEV _{t-1}	-122.92*	-4.040	-5.214*	-2.041	-296.16	4.781	16.059	41.272*
CAR _{t-1}	2.208	0.753	1.336	-0.970	-1.036	-0.377	0.450	2.377
DIV _{t-1}	0.488	0.376	-0.285	-0.081	2.841	-0.074	0.070	-0.809***
GDP _{t-1}	-203.84	27.456**	-7.338	-12.487	25.419**	-1.392	13.292	-15.814
INF _{t-1}	-0.180	-0.074	0.018	0.050	-0.303	-0.020	0.056	0.040
R-squared	0.454	0.730	0.730	0.564	0.520	0.876	0.543	0.622
F-stat	2.490	8.113	8.122	3.888	3.249	21.161	3.558	4.95
Prob (F-stat)	0.021	0.000	0.000	0.001	0.004	0.000	0.002	0.000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 10. Panel regressions for the effect of Global EPU

	GRL	NPL	ROA	Z_SCORE
CONSTANT	-176.3969	80.0342	-23.1808	-243.6236**
EPU _{t-1}	-25.8532	-2.4508	8.9992*	9.0631
SIZE _{t-1}	-10.3850	1.0575*	-0.3705	-1.4511*
LEV _{t-1}	-119.0072***	-1.9546	-4.5785**	3.7094
CAR _{t-1}	-0.7837	0.7397	1.1972**	-2.3597**
DIV _{t-1}	1.3086	0.1183	-0.2189*	-0.5409**
GDP _{t-1}	84.9001	-3.5122	-5.7987	8.2795
INF _{t-1}	-0.2363	-0.0325	0.0322	0.0070
R-squared	0.4335	0.7534	0.7028	0.5265
F-stat	3.4918	13.9373	10.7899	5.0731
Prob (F-stat)	0.0001	0.0000	0.0000	0.0000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

Table 11. Panel regressions for the effect of Global GPR

	GRL	NPL	ROA	Z_SCORE
CONSTANT	-342.9091	56.7587	62.8985	-44.7467
GPR _{t-1}	2.9456	-0.0761	0.3085	-0.8708**
SIZE _{t-1}	-10.5507	0.9942*	-0.1342	-1.0062*
LEV _{t-1}	-120.0506*	-1.8192	-5.0951*	2.6294
CAR _{t-1}	-0.7563	0.7385	1.2021**	-2.0007**
DIV _{t-1}	1.2933	0.1093	-0.1852	-0.4636**
GDP _{t-1}	69.6164	-4.3826	-2.6499	4.3159
INF _{t-1}	-0.4441	-0.0302	0.0220	0.0218
R-squared	0.4360	0.7530	0.6958	0.5462
F-stat	3.5269	13.9062	10.4360	5.4921
Prob (F-stat)	0.0001	0.0000	0.0000	0.0000

Notes: ***, **, * denotes significance at a 1%, 5%, and 10% level of significance, respectively.

Source: Authors' own compilation.

CONCLUSIONS

The survival of a country's financial system largely depends on the stability of its banking system. However, in recent years, countries around the world have been exposed to greater economic and geopolitical risks as a result of rising wars and tensions amongst nations. On this background, the objective of this study was to investigate the effect of economic (measured through economic policy uncertainty) and

geopolitical risks on the lending decisions, credit risk, performance, and stability of banks in South Africa. To achieve this objective, 10 South African banks were assessed for the period ranging from 2013 to 2022, and panel regressions were estimated with cross-sectional fixed effects. The findings of this study indicated that EPU decreases credit risk and increases stability in the South African banking sector whilst GPR increases credit risk and decreases stability. Further, it was found that these effects are more pronounced in banks with smaller market capitalisations and higher equity capitalisations. Moreover, it was found that global GPR has a destabilising effect on South African banks. Remarkably, the findings indicated that both EPU and GPR do not significantly influence lending decisions and performance by banks in South Africa. However, contrary to the findings of domestic EPU, global EPU exhibited a significant, positive effect on bank performance.

These findings have important implications for various stakeholders. For managers of banks, these findings imply that geopolitical risk is an important risk factor that needs to be acknowledged in the risk management framework of banks. In particular, banks need to devise risk management frameworks to mitigate the negative impact of geopolitical risk on banks' credit risk and stability. In addition, banks should also devise strategies to capitalise on the positive effects of EPU. For policymakers and regulators, these findings imply that it is important to maintain stability in EPU rather than attempting to reduce EPU as a reduction in EPU could have unintended, adverse effects on banks' credit risk and stability. More importantly, it is vital that governments and policymakers improve geopolitical conditions in order to mitigate the negative effects of GPR on banks. Such policies could relate to reducing wars and conflicts among countries. It is also important for bank regulators and policymakers to acknowledge that banks are not immune to global economic and geopolitical conditions. Therefore, it is essential to implement policies that protect banks from unexpected spill-overs of economic and geopolitical risks.

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