Journal of Financial, Accounting and Managerial Studies
ISSN 2352-9962/E-ISSN 2572-0147
Volume09 Number 02- December 2022

OEB Univ. Publish. Co.

The impact of financial risks on Commercial Banks' Financial Stability: Empirical Evidence from MENA Countries.

أثر المخاطر المالية على الإستقرار المالي للبنوك التجارية : دليل تجريبي من دول الشرق الأوسط وشمال افريقيا

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Date of receipt: 09-11-2022 Date of revision: 10-11-2022 Date of acceptation:30-12-2022

Abstract

This paper examines the impact of financial risks on commercial Banks' financial stability, using a sample of 140 commercial banks listed in the stock markets operating in the MENA countries, and balanced annual data extending from 2011 to 2020. We applied a panel-corrected standard error (PCSE) estimator.

The results show that there is a significant negative impact of the operational risk, liquidity risk, and credit risk on commercial banks' financial stability, while the interest rate risk has a significant positive impact on commercial banks' financial stability.

Keywords: Financial risks, Banking stability, Commercial banks, MENA countries, PCSE Estimator.

Jel classification : G32, G21, C51

ملخص

تبحث هذه الورقة في تأثير المخاطر المالية على الاستقرار المالي للبنوك التجارية، باستخدام عينة من 140 بنكًا تجاريًا مدرجًا في أسواق الأوراق المالية العاملة في دول الشرق الأوسط وشمال إفريقيا، وبيانات سنوية متوازنة تمتد من 2011 إلى 2020. طبقنا مقدر (PCSE).

تظهر النتائج أن هناك أثر معنوي سالب للمخاطر التشغيلية، مخاطر السيولة ومخاطر الائتمان على الاستقرار المالي للبنوك التجارية، في حين أن مخاطر أسعار الفائدة لها أثر معنوي موجب على الاستقرار المالي للبنوك التجارية.

الكلمات المفتاحية: المخاطر المالية، الاستقرار المصرفي، البنوك التجارية، دول الشرق الأوسط وشمال إفريقيا، مقدر PCSE.

تصنيفات JEL : G32, G21, C51

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1. INTRODUCTION

The importance of financial institutions in promoting of a financial system and prosperity of sustainable economy of the country cannot be overemphasized; their components form the fulcrum upon which every economy depends on the mobilizing and allocation of financial sources.That one such institution is the banking sector, which plays an active role in distributing countries' financial resources, and commercial banks have always been the most important and popular financial intermediaries distributing financial resources between investors and savers more easily, and are the center of the credit inter-mediation (Raghavendra, 2011, p 6).

In developing regions such as MENA countries, commercial banks play a major role in the transfer of financial sources between economy units (Topak & TALU, 2017, p574). Consequently, contribute to the creation of demand for various types of financial resource and increase the rate of the dealing with them, diversification of their portfolios, and providing prerequisites for increase of banking services and products, and increase its capacity to attract more savings and expansion of intermediation In order to earn profits for its shareholders. Countries that have a profitable and sound banking system are considered better able to contribute to the stability of the financial system and withstand shocks of economic, and hence, instability of banks exacerbates economic cyclical fluctuations and magnifies the fragility of macroeconomics and a systemic crisis (Olalere et al, 2017, p26).

The stability of the banking sector is also an important aspect that has attracted widespread attention by economic researchers and financial analysts, especially after the global financial crisis that result to the insolvencies of many banks, and as a result of the exposure of commercial banks to many influencing factors such as risks and contemporary banking crises, given the importance and safety of the financial system as a whole.

Monetary authorities work to enhance confidence in the banking sector to support balanced and sustainable economic growth for their countries. And with the support of the International Monetary Fund and the World Bank to promote economic liberalization and financial system

reforms (Poshakwale & Qian, 2011, p 99),with introduce international standards and regulations such as Basel III with the aim of promoting a more resilient banking sector And improving the ability of the banking sector to absorb shocks resulting from financial and economic pressures to reduce the impact of the financial sector on the real economy in the event of a financial crisis.

Thus, with the development and expansion of the work of financial institutions and banks and the multiplicity of their products and practices, possibilities for many risks must arise, and bank managers as well as policy makers must manage risks in banks and constantly search for these possibilities, limit them, study them, determine their effects, manage them in an appropriate manner and control them.

Accordingly, the research problem of this study is determined based on the importance of stability of the banking sector, and the many challenges faced by banks and the increase in banking risks inherent in banking, which has become an obsession as one of the most important threats to the results and continuity of banking activity risks. Nevertheless, because of the exposure of the nature of banks activity of different types of risks, it is of great importance to recognize the effect of financial risks on commercial banks' financial stability in the MENA countries. Therefore, these studies remain a significant topic in developing regions such as MENA countries, and this paper attempts to close this research gap in the empirical literature.

The remnant of the research is structured as follows: Section 2 presents the review of the literature and hypothesis development; Section 3 presents the research methodology; Section 4 presents the empirical results; finally Section 5 presents a conclusion the study.

2. Literature Review and hypothesis development

Over the last recent decades, the financial crisis in the banking industry has attracted the attention of many financial analysts, researchers and actors in the financial system; this is largely because of bank failures

and its adverse impact on the economy as a whole. According to recent literature, many have concluded that banks are exposed to several financial risks, including interest rate risk, liquidity risk and credit risk (Ghenimi, et al. 2017, p238).

Particular attention has been given to examining the association between financial risks ratios and banks' performance measures, as most researchers focus on performance measures and examine their impact on banks' stability. Far less coverage has been given to empirical evidence that has looked at the financial risks to the financial stability of banks. One main study is by Ghenimi, et al. (2017). The authors have very straightforward opinions about financial risks and the financial stability of banks. The authors do deliver a broad analysis of the financial risks, and they focused on the relationship between credit risk and liquidity risk and its impact on bank stability in the MENA. However, the authors did not deliver a broad of sample; their research was limited to include 49 banks from 8 countries. The authors used the Z-Score ratio as a measure of banks financial stability. The empirical results suggested that each risk category has a statistical significant impact on the financial stability of MENA's commercial banks.

Al Hussaini (2019) analyzed the effect of credit risk on financial stability. Based on the sample of top 20 banks in GCC. He discovered that NPLs (credit risk indicator) to gross advances is significantly impacting on all stability measures. While, the impact of non-performing loans to equity ratio on stability is also significant for the whole sample.

Kiemo et al., (2019) investigated the determinants of the bank's financial stability for a sample of consists of 39 commercial banks in Kenya, over the time period (2000-2015). The authors used the Altman's Z-Score plus Model, as a measure of banks financial stability. The empirical results suggested that capital ratio and liquidity risk have a positive, statistically significant influence on banks' stability, while the credit risk has a negative impact on the financial stability of Kenya's commercial banks.

Koskei, L. (2020) checked the impact of non-performing loans on commercial banks financial stability in Kenya, over the time period from

2015 to 2019. The authors used the Z-Score ratio as a measure of banks financial stability. The empirical results suggested that non-performing ratio and inflation rate have a negative impact on the financial stability of Kenya's commercial banks.

Kouam (2021) constructs an algorithm, which investigates the impact of domestic credit from the financial sector, bank to capital assets ratio, claims on the central government on banking sector liquidity – a proxy for financial stability. Using a sample of CEMAC member countries, covering period : 2010–2018. The results showed a positive and statistically significant impact of the capital assets ratio on the bank's liquidity of 3.1%. It equally finds that domestic credit and claims on central government hurt bank liquidity. The study recommends that commercial banks invest in higher-value domestic projects to improve their profitability over the long-run, thereby boosting financial stability.

Anh & Phuong (2021), using a sample of 27 Vietnamese commercial banks, during 2010 – 2019, report that there is a negative effect of non-performing loans on the financial stability of banks. When commercial banks have higher non-performing loans, the lower the financial stability is bank-specific variables such as equity on asset ratio, the return on equity, the size of the bank and set of macroeconomic variables affect the bank's financial stability.

Gharaibeh et al., (2022) examined the impact of risks and financial concentration on the stability for a sample of Jordanian commercial banks, over the time period from 2012 to 2019. The authors use the variant of funding risk, credit risk, and liquidity risk as proxies of bank risks when measuring the relationship between bank risks and stability. The empirical results suggested that funding risk has a positive statistical significant influence on banks' stability, while Credit risk and liquidity risk have a negative impact on the financial stability of Kenya's commercial banks.

Chai et al (2022) showed in their study of the nexus between bank-specific risk and financial stability, for 15 scheduled banks in Pakistan during the period 2009 – 2020, that bank-specific risk, i.e. credit and

liquidity risk are detrimental to bank stability, whereas funding risk has no significant impact on bank stability. The bank size has a negative impact on bank stability, where as the return on assets revealed a positive impact.

Based on the empirical and theoretical studies, we adopt the following hypotheses:

H1: There is a significant positive impact of the Interest rate risk on banks financial stability.

H2: There is a significant negative impact of the operational risk on banks financial stability.

H3: There is a significant negative impact of the liquidity risk on banks financial stability.

H4: There is a significant negative impact of the credit risk on banks financial stability.

3. RESEARCH METHODOLOGY

3.1 Data and Sample

This paper is based on commercial banks listed in the stock markets operating in the Middle East and North Africa (MENA) countries, namely Kingdom of Saudi Arabia, Kingdom of Bahrain, the State of Kuwait, Sultanate of Oman, The State of Qatar, the United Arab Emirates, Kingdom of Jordan, Egypt, Sudan, Lebanon, Turkey, Iran, Tunisia, Morocco and Algeria. The time period was chosen as 2011–2020, yearly balanced data of 140 commercial banks, with 1400 bank-year observations. Banks with constituted missing and inconsistent data series were excluded from the sample. Table 1 shows number of banks which we have used in the sample.

Table1. Sample Characteristics

N	Country	N.Banks	Banks Obs	Percentage
1	Kingdom of Saudi Arabia	11	110	7,86%
2	Kingdom of Bahrain	6	60	4,29 %
3	The State of Kuwait	10	100	7,14%
4	Sultanate of Oman	6	60	4,29%
5	The State of Qatar	8	80	5,71%
6	the United Arab Emirates	20	200	14,28%
7	Kingdom of Jordan	16	160	11,43%
8	Egypt	11	110	7,86%
9	Sudan	5	50	3,57%
10	Lebanon	6	60	4,29%
11	Turkey	8	80	5,71%
12	Iran	10	100	7,14%
13	Tunisia	7	70	5%
14	Morocco	5	50	3,57%
15	Algeria	11	110	7,86%
Total		**140**	**1400**	**100%**

3.2 Variables Description

The aim of this paper is to discover which financial risks affect the commercial banks' financial stability in the MENA countries. The financial risks variables are interest-rate risk, operational risk, credit risk, and liquidity risk, we also extend this paper by including capital adequacy ratio and purchasing power risk as a control variables. This paper makes use of variables that were projected to have a key effect on the commercial banks' financial stability. A summary of the variables is given in Table 2, with the information by symbol, variables, definition of Proxy, statistical sources and anticipated connection with the commercial banks' financial stability.

Table2. Summary of the variables

Symbl	Variables	Definition of Proxy	Anticipated outcome	Statistical source
Dependent variables (Banking Stability)				
Z-ROAA	Z-Score ratio	$\frac{ROAA_{i,t} + (\text{equity/assets}_{i,t})}{\sigma ROAA_{i,t}}$		Bureau van Dijk And authors' own Calculation
Z-ROAE	Z-Score ratio	$\frac{ROAE_{i,t} + (\text{equity/assets}_{i,t})}{\sigma ROAE_{i,t}}$		
Independent Variables (Financial risks)				
IRR	Interest-rate risk	Net interest margin	+	Bureau van Dijk
OR	Operational risk	Cost/income ratio	-	
LR	Liquidity risk	Liquid assets/total assets	-	
CR	Credit risk	Impaired loans/gross loans	-	
Control variables				
CAR	Capital adequacy ratio	Shareholders' Equity/ total assets	+	Bureau van Dijk
PPR	Purchasing power risk	The annual inflation	-	World Bank

3.2.1 Dependent variables

In literature, Z-Score ratio of the banks is often widely included as a proxy for bank financial stability. Thus, we use the Z-score ratio based on ROAA and ROAE as main measures of commercial banks' financial stability, several previous researchers have used this variable (e.g. Phan, et al. 2019).

Banking Stability (Z-score): A higher Z-Score ratio means that the bank has implies a greater probability of financial stability and a lower level of insolvency risk (Tan, 2017, P65).

The formula of the Z-score is as follows:

$$\text{Z} - \text{Score}_{i,t} = \frac{\mu_{i,t} + \text{EA}_{i,t}}{\sigma\mu_{i,t}}$$

Where

$\mu_{i,t}$: Based on $ROAA_{i,t}$or$ROAE_{i,t}$

$EA_{i,t}$: Is the ratio of equity capital$_{i,t}$ / total assets$_{i,t}$
$\sigma\mu_{i,t}$: Is the standard deviation of the $ROAA_{i,t}$or $ROAE_{i,t}$.

3.2.2 Independent variables

The study used the variables of financial risks namely interest-rate risk, operational risk, liquidity risk, and credit risk, which are the following explanatory variable.

Financial risks indicators

Interest rate risk (IRR) : Net interest margin is employed as a measure of interest rate risk, this indicator is a measure of the difference between interest revenue earned on loans and interest expense paid on deposits relative to the amount of a bank's average assets, it reflects the cost and efficiency of bank intermediation services(Dumicic & Ridzak, 2013, P3). It is a summary measure of a bank's profitability. The higher this indicator, the better the bank is in terms of earnings generation and morestability is (Ongore & Kusa, 2013, P239). This means that as bank net interest margin increases, the stability of the bank increases and vice versa. Several previous researchers have used this variable to explore the association between net interest margin and bank stability (e.g. Uhde & Heimeshoff, 2009; Shijaku, 2017; Ozili, 2018). Hence, it is expected there will be a significant nexus between indicator of interest rate risk and bank stability.

Operational risk (OR) : Cost-to-income ratio is employed as a measure of operational risk, this indicator is a demonstrates how well a bank manages lessens its expenditures and how it's efficiently in hedging against its risk dimensions, it is a summary measure of a bank's costs management, the higher this indicator, the worse the bank is in terms of earnings generation and lower the stability of a bank, this means that as expenses ratio reduce, may generate of the probabilities improves banking stability and vice versa. Previous researchers have used this variable to explore the association between banking efficiency and bank stability (e.g. Uhde & Heimeshoff, 2009; Shijaku, 2017; Ozili, 2018).

Liquidity risk (LR) : Liquid assets-to-total assets ratio is employed as a measure of liquidity risk, this indicator is a demonstrates how capability a bank manages meet its fiscal commitments in the event of anticipated or unanticipated money demands by clients, the higher this ratio, the more liquid the bank is and the margin of safety, and vice versa. While higher Liquidity cut into the profits of banks. Nevertheless, banks sacrifice opportunities if they pursue greater profits while holding on to liquid resources (Olalere et al., 2017, p29). Hence, we are expected to have a positive relationship between indicator of liquidity risk and banking stability.

Credit risk (CR) : Impaired loans-to-gross loans ratio is employed as a measure of credit risk (e.g. Capraru & Ihnatov, 2015; Tan, 2017; Ghenimi, et al. 2017), This indicator has to do with the likelihood of loss as a result of a borrower's inability to make payments on any kind of obligation(Petria et al., 2017, p 520). The higher this ratio, the more level of credit risk is. While higher impaired loans cut into the profits of banks. Hence, it is expected there will be a significant nexus between indicator of credit risk and banking stability.

3.2.3 Control variables

The present paper also incorporates capital adequacy ratio and inflation rate as a control variables that might affect the banking stability:

Capital adequacy ratio (CAR) : Equity-to-total assets ratio is employed as a measure of capital adequacy, this indicator widely used In literature as the key capital ratio (Athanasoglou, et al., 2006, P11), it is a demonstrates how capability a bank manages tolerate financial shocks and absorb losses, the higher this ratio, the more the bank is the margin of safety as a buffer against unpleasant conditions and risks. Consequently, it is expected there will be a significant nexus between indicator of capital adequacy and bank stability.

Purchasing power risk (PPR) : Annual inflation rate is employed as a measure of purchasing power risk, this indicator widely used in literature as

proxy to reflect the macroeconomic character; it refers to a general climb in the prices of goods and services. Inflation rate is considered to be one of the factors impacting for bank activity and the economic environment. Consequently, it is expected there will be a significant nexus between indicator of purchasing power risk and bank stability.

3.3 Research Method and Model Specification

Panel-corrected standard error (PCSE) estimator promoted by Beck and Katz (1995) is used in this paper due to the fact that a number of problems in estimating the regression analysis including heteroskedasticity, autocorrelation and cross section dependence.

Therefore, according to the diagnostic results of the three aforementioned problems, we therefore use the OLS-PCSE method to estimate multiple linear regression models as follows:

$$\mathbf{Z-score}_{i,t} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}\mathbf{IRR3}_{i,t} + \boldsymbol{\beta_2}\mathbf{OR}_{i,t} + \boldsymbol{\beta_3}\mathbf{LR}_{i,t} + \boldsymbol{\beta_4}\mathbf{CR}_{i,t} + \boldsymbol{\beta_5}\mathbf{CAR}_{i,t} + \boldsymbol{\beta_6}\mathbf{PPR}_{i,t} + \boldsymbol{\varepsilon_{it}}$$

Where:

$\mathbf{Z-score}_{it}$ = The financial stability of bank (1,..,140) at year t (1,..., 10).

β_0 = is the constant parameter.

$\beta_{1-}\beta_9$ = are model coefficient parameters.
ε_{it} = residual term.

4. EMPIRICAL RESULTS

4.1 Descriptive Statistics

This paper uses a balanced panel data of commercial banks listed in the stock markets operating in (MENA) countries for the period of 2011 to 2020. Table 3 shows a summary of the descriptive statistics data regarding the variables of the paper; this includes the values for mean, minimum, maximum and standard deviation. It is observed from the minimum values that at some of the variables under study recorded negative values. It is also observed from the minimum and maximum values that data are non-normality and the presence of outliers in the variables.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LnZROAA	1400	3.531	.987	-.353	6.23
LnZROAE	1400	2.011	1.026	-2.999	4.583
IRR	1400	3.839	2.549	-4.68	28.779
OR	1400	47.64	17.967	13.725	165.958
LR	1400	25.349	13.351	1.753	95.202
CR	1400	6.573	7.073	.035	97.882
CAR	1400	12.796	6.339	-5.418	79.931
PPR	1400	6.848	13.507	-3.749	150.323

4.2 Correlation matrix

Table 4 shows a summary of the correlation matrix between the explanatory variables and (Z-ROAA, Z-ROAE) as indicators for commercial banks' financial stability. It is observed high correlation is between Z-ROAA and Z-ROAE, This explains they are both measures of financial stability. It is also observed from the matrix that the correlation among the explanatory variables have small coefficients. Hence, we ensure absence multicollinearity problem among the explanatory variables in the models.

Table4. Correlation Matrix

Variables	Z-ROAA	Z-ROAE	IRR	OR	LR	CR	CAR	PPR
Z-ROAA	1							
Z-ROAE	0.880***	1						
IRR	-0.0584*	0.00899	1					
OR	-0.333***	-0.430***	-0.0398	1				
LR	-0.0523	-0.0560*	-0.00504	-0.115***	1			
CR	-0.171***	-0.182***	0.299***	0.211***	-0.140***	1		
CAR	0.204***	0.280***	0.0850**	-0.149***	0.0496	-0.101***	1	
PPR	-0.346***	-0.281***	0.342***	0.183***	0.0955***	0.297***	-0.0605*	1

Denotes significance at the (1%)***, (5%)** and (10%)* levels

4.3 Interpretation and Discussion of Empirical Results

Table 5 shows the results for two models were used to inspect the impact of financial risks on commercial banks' financial stability : the first column reports the regression results when including Z-ROAA as the dependent variable, and the second column reports regression results when including Z-ROAE as the dependent variable.

Regarding the significance of the relationship between financial risks variables and commercial Banks' financial stability, it is shown that the effect of net interest margin as a proxy for interest rate risk (IRR) on the bank financial stability measured by the ratio Z-ROAE is statistically significant and have positive effect with confidence level of 1%. However, it was insignificant when measured by the ratio Z-ROAA. As described earlier, a high net interest margin means low interest rate risk. Consequently, these effects should to be interpreted in reverse —i.e. a positive result for the interest rate risk (IRR) means a positive impact on bank stability, the implication is that a 1% increase in interest rate risk will increase the bank stability by approximately 1%. This outcome of a proportionally optimistic is consistent with our expectations and also stands in line with previous empirical studies (Uhde & Heimeshoff, 2009; Shijaku, 2017; Ozili, 2018) that there is a strong link between the interest rate risk indicator and bank stability.

The coefficient of the banking efficiency, our operational risk (OR) measure, turns out to be a negative and statistically significant effect on the bank financial stability with confidence level of 1% for both models. The implication is that the degree to which banks increase their expenses increases their financial instability, a fact that is essential in the banking industry.This negative finding is consistent with our expectations and also stands in line with previous empirical studies (Shijaku, 2017; Ozili, 2018) that there is a strong link between the operational risk indicator and banking stability.

The liquidity risk (LR) impact on financial stability measures is negative and statistically significant effect with confidence level of 1% in almost both models. The implication is that the degree to which banks

increase their Liquidity increases their financial instability, while higher liquid resources cut into the profits of banks. A high this ratio value indicates high liquid assets.In other words, the higher the ratio of liquid assets to total assets, the more ability the bank is in fiscal commitments solvent and the worse its performance in gains. Therefore, investments with usable liquid assets tend to have not gains, it is the opportunity cost. Hence, high liquidity risk decreases the bank financial stability, which is in line with our research expectations and also result is consistent with Gharaibeh et al., (2022).

The coefficient of the impaired loans to gross loans ratio, our credit risk (CR) measure, turns out to be a negative and statistically significant effect on the bank financial stability with confidence level of 1% for both models. The implication is that the degree to which banks increase impaired loans increases their financial instability, a fact that is essential in the banking industry. This negative finding is consistent with our expectations and also stands in line with previous empirical studies (Uhde & Heimeshoff, 2009; Ghenimi, et al. 2017; Anh & Phuong, 2021) that there is a provide impact of credit risk indicators on banking stability.

Regarding the estimated results between the control variables and bank financial stability ratios, empirical evidence showed that the impact of capital adequacy ratio (CAR) measured by Equity-to-total assets ratio of bank financial stability measures is positive and significant at the 1%level for both models. The implication is that the degree to which banks increase capital adequacy ratios increases their financial stability. This finding is consistent with Anh & Phuong, (2021).

Finally, the coefficient of the annual inflation rate, our purchasing power risk (PPR) measure, turns out to be a negative and statistically significant effect on the bank financial stability with confidence level of 1% in almost both models. This implies that, withhigher inflation, the bank increases their financial instability, as the result of the failure of banks to forecast future inflation rates.

Table2. Regression Results for (Z-ROAA, Z-ROAE) as measures of financial stability

Variable	Z-ROAA			Z-ROAE		
	Coef.	**St.Err.**	**t-value**	**Coef.**	**St.Err.**	**t-value**
IRR	0.009	0.009	0.99	0.031***	0.007	4.52
OR	-0.011***	0.002	-5.56	-0.022***	0.002	-10.11
LR	-0.004**	0.002	-2.2	-0.008***	0.002	-3.89
CR	-0.008***	0.003	-2.93	-0.009***	0.002	-4.21
CAR	0.032***	0.006	5.42	0.044***	0.003	14.55
PPR	-0.006**	0.003	-2.12	-0.005***	0.002	-3.34
Constant	3.781***	0.191	19.8	2.388***	0.13	18.35
Wald-test	*χ2 (6) = 131.74****			*χ2 (6) =* 1092.67***		
R-squared	0.7285			0.3862		
N. Banks	140					
T. periods (years)	10					
N. Obs	1400					

Denotes significance at the (1%)***, (5%)** and (10%)* levels

5. CONCLUSION

In this paper, we investigate the impact of financial risks on commercial Banks' financial stability by studying 140 commercial banks listed in the stock markets operating in the MENA countries, over the period from 2011 to 2020.Using multiple linear regression analysis by applying a Panel-corrected standard error (PCSE) estimator, in this paper, the Z-score indicator were used to measure the commercial Banks' financial stability, while banking, financial risk indicators such as the interest rate risk (IRR), operational risk (OR), liquidity risk (LR) and credit risk (CR), in addition to the controlling variables represented in the capital adequacy ratio (CAR), and purchasing power risk (PPR) as explanatory variables for banking stability.

Regression results concluded that there is a significant negative impact of the operational risk, liquidity risk, and credit risk on commercial banks' financial stability, while the results concluded that the interest rate

risk measured by net interest margin has a positive and statistically significant effect on commercial banks' financial stability, that what confirms all our four hypotheses.

As regards the impact of control variables, results concluded that capital adequacy ratio has a positive and statistically significant effect on commercial banks' financial stability, while the results concluded that the purchasing power risk has a negative and statistically significant effect on commercial banks' financial stability.

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