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The Role Of Financial Inclusion In Enhancing Financial And Economic Stability In The Select Arab Countries In Period Empirical study In Period (2004-2020)

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Summary: In recent years, interest in Arab monetary institutions and central banks has increased in policies and programs to enhance financial inclusion. Through strategies to support growth .And achieve financial, economic stability especially for women, youth, and medium, small, and micro-enterprises. As well as working to limit individual savings; leaks from the banking and financial sectors in the Arab region. This paper examines the role of financial inclusion in enhancing financial and economic stability in the Arab region by testing the relationship between the index of financial inclusion and GDP volatility and Bank Z-score score of Z distance to narrow for banks. In the Thirteen Arab countries during 2004 to 2020. Using cross-sectional no linear regression model and linear regression model of panel data. The main result concludes that there is a positive and significant relationship between financial inclusion and volatility in growth, which shows the financial inclusion reduces volatility in growth in the studied countries. And the positive and significant relationship between financial inclusion and Bank Z-score score (financial stability).

Keywords: financial inclusion, economic growth, economic stability, financial stability, panel data

Jel Classification Codes : G10, G18, G20, G28

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I-Introduction:

Banks play an important and fundamental role in the economy, especially in the safety of the banking sector and its role in maintaining financial and economic stability and in providing liquidity and financing needs related to financing various economic activities, which leads to increased economic growth. At the beginning of the 2008 global crisis, the financial centers of many banks were stable in the United States of America, but the failure of Lehman Brothers led to the collapse of other banks one by one due to the risks of infection, which led to the transmission of infection outside the borders of the United States of America. And put the global financial system at risk, and consequently, this negatively affected the economies of the world countries, as this crisis inflicted heavy losses on them for several years. This reinforced the supervisory authorities' conviction that the stability of both the financial and economic systems can only be achieved if financial and economic risks are taken together. When policy decisions are made achieving macroeconomic stability considered the goal of any development process within the framework of macroeconomic policies, and it the main axis that the countries of the world have sought according to the degree of their progress or backwardness while giving it the plethora of importance. How is it that it worked hard to consolidate its foundations and lay its foundations to prevent the occurrence of crises that would affect the economic and social system in depth.

he economies of Arab countries face many challenges, that affect the growth of their economies, which necessitated them to develop theirs. Infrastructure while mobilizing more financial resources to increase investment rates and through financial inclusion. Which plays an important role in

accessing all groups of society and the business sector to financing and from it Creating new job opportunities. That leads to improving income distribution and raising the standard of living, which leads to lower rates of unemployment and poverty in the short and medium-term, including achieving comprehensive economic growth. The Arab countries ranked among the top ten regions in terms of unemployment in the world in 2017, which increased their interest in promoting financial inclusion by developing policy frameworks and strategies to face the challenges that hinder achieving financial inclusion in the Arab region (Yasser, Ramy, & atiya, 2019).

Building on that this paper tries to study the role of financial inclusion in enhancing financial

and economic stability in the Arab countries. Over the period 2004-2020. To discuss this problem, we formulate the following sub-questions:

I.1 Sub-questions

1-To what extent does financial inclusion contribute to economic stability in the selected Arab countries?

2-Does Financial Inclusion Improve Financial Stability in Selected Arab Countries?

I.2 The hypothesis of study

H_1: Expanding financial inclusion reduces fluctuations in economic growth rates, including economic stability in the selected Arab countries during the period (2004-2020).

H_2: The comprehensiveness of the financial system led to an increase in the demand for financial services and an increase in capital accumulation, including financial stability in the selected Arab countries during the period (2004-2020).

This article examines the contribution of financial inclusion to enhancing financial and economic stability in the Arab region. Examining the relationship between the financial inclusion index and showing how to measure it with, financial and economic stability in some Arab countries. Using an empirical study between the GDP volatility and Bank Z-score score of Z distance to narrow for banks as the dependent variable, financial inclusion index and bank position as independent variables using the no linear regression model and linear regression model according to panel data and the individual fixed and random effects test. In the second part of this article, we will present the most important previous studies about our topic. In section 3, we will examine the theoretical context of financial inclusion and its relations with financial and economic stability. In the fourth section, we will present the methodology of the study focusing on the model and data of the study. In section 5 we will analyze the most important results. Finally, section 6 will highlight the summary of the study and its perspectives.

I. 3.Studied Literature:

The recent financial crisis has shown that financial innovation can have devastating systemic effects, and international standard setters and national regulators respond to a concerted global effort to reform and tighten financial regulations. However, when designing more stringent regulations, it is imperative to avoid any negative reaction to financial inclusion. In their study of the relationship of financial inclusion to financial stability, (Alfred,stefan, 2011)argued that increasing financial inclusion provides opportunities to improve financial stability. Their arguments were based on the following ideas: (financial inclusion represents enterprise-level risks), but these are not of a systematic nature. Evidence also indicates that low-income savers and borrowers tend to maintain sound financial behavior during financial crises, keep their deposits safe and pay off their loans. The corporate risk profile at the bottom of the financial market ladder is characterized by a large number of vulnerable clients with limited balances, trading in small quantities, and negotiating small volumes. While this dossier may raise concerns about the reputational risks of the central bank and consumer protection in terms of financial instability, the risks arising from comprehensive

policies are negligible. In addition, the risks prevailing at the enterprise level can be controlled using tools known as prudential requirements and protection that are more effective for clients.

The potential costs of financial inclusion are offset by important dynamic benefits of enhancing financial stability over time through a deeper and more diversified financial system. Researchers have presented the recent current state of financial inclusion at the global level. Pointing out some of the trends and policies for financial inclusion are most effective to promote it when doing so. They also suggest that financial innovations to combat financial exclusion could help strengthen financial systems rather than weaken them. For access to deposits and use of bank deposits, (Han & Melecky, 2013)argue that increased access to bank deposits can make the deposit financing base for banks more flexible in times of financial stress. Public policy efforts to enhance financial stability should not focus solely on regulation It should also be aware of the positive impact of providing wider access to bank deposits, which allows for financial stability, according to their study of the relationship between broader access to bank deposits before the 2008 crisis and the dynamism of bank deposits growth during the crisis.

A growing body of literature indicates that widespread access to formal financial services enhances financial stability, which depends on how this access is managed within a regulatory and supervisory framework, particularly in terms of financial integrity and consumer protection. There are four factors that take into account financial inclusion, financial consumer, financial protection, integrity, and financial stability. These factors are interrelated, and in good circumstances, you are in a positive relationship. However, failure in one dimension may lead to problems for others, this was confirmed by Robert (Robert, Aslı, & Timothy,, 2012), in their study on the potential beneficial links and relationships between these factors.

The use of the term (parallel banking system) has spread in the context of the global financial crisis of 2008 to include a wide range of entities and activities that operate outside the traditional banking system and are used to perform banking functions. The Financial Stability Board defines (parallel banking sector) in a broad sense as “a credit intermediation system that includes entities and activities outside the traditional banking system" (CSF, 2011, p. 2)credit intermediation (borrowing from one source to lend it to another) lies at the heart of the banking system. Banking regulation and supervision are designed to control credit intermediation and improve banks' ability to repay their creditors, especially small creditors. Credit intermediation practiced by non-banking organizations raises two problems: First, depending on the applicable regulatory system, this mediation can be practiced without regulation, supervision, and hedging, which is usually mandatory for banks, and this means outside (the perimeter of supervision) if the total amount of this credit intermediation reaches To a high level in a particular country, the cumulative losses among non-banks affect confidence in the banking sector, especially if the public does not distinguish between supervised and non-supervised institutions, and secondly, non-bank credit intermediation can affect the stability of the banking sector, if any. Market linkages are important between banks and non-banking organizations, which may increase the risk of infection between institutions. In theory, the global definition of the banking system in the shadows includes most of the microfinance services as well as some innovations in digital finance that were initiated by non-bank organizations and presented by the G20 as basic tools to bring excluded and disadvantaged families and companies to services, so financial inclusion has been enhanced. At the same time, since the global financial crisis, especially in the period 2008-2009, where did the G20 call for monitoring parallel banking practices that contributed to the beginning of the crisis. And destabilize the innovations launched by non-bank organizations during the run-up to the financial crisis, just like complex derivatives. The prevalence of non-banking actors and the many banking-like activities that characterize financial inclusion, raising concerns about the shadow banking system, and the types of credit intermediation currently being undertaken out of the eyes of bank supervisors, appear very different from the destabilizing activities that contributed to the crisis.

Financial. But in the face of progress in financial inclusion (and continuous innovation, which can grow rapidly at times, given that the concept of shadow banking itself stems from the rapid development of market practices and the inability of regulators and supervisors to keep up with this))Zeti(2013 ، explains that the briefing is for these reasons. As a result of the lack of broad outreach approaches presently to financial inclusion that is considered potentially destabilizing features of other types of parallel banking, it identifies some of the risks that must be monitored as the situation evolves.

Concerning economic stability, (Ratna, et al., 2015) examined the links between financial inclusion and macroeconomic performance represented in economic growth, economic and financial stability and inequality, and highlighted the advantages and disadvantages of financial inclusion in terms of growth, financial and macroeconomic stability, and lack of Equality. Researchers also relied on several data sources related to financial inclusion and shed light on many aspects of financial inclusion, where they found that data gaps limit the range of econometric techniques that can be used. They also highlighted three main policy conclusions. First, financial inclusion may be consistent with other macroeconomic objectives, but macroeconomic gains diminish with increased financial inclusion and financial depth and there may be preferences with financial stability in terms of economic growth, most types of financial inclusion including a greater proportion of women use Funding increases economic growth, but marginal benefits decrease with increasing financial inclusion and depth. Sectors that rely on external financing and those with lower tangible assets are growing faster in countries with greater financial inclusion. Second, risks to economic and financial stability increase when access to bank credit expanded without adequate supervision. Banking supervision can mitigate this risk, and countries with sufficiently high supervision can reduce economic and financial stability risks. Third, unlike credit, other forms of access do not affect financial stability and can widely be promoted to mitigate their effects on growth.

I.4 Financial inclusion in the Arab region

Arab governments seek to enhance financial inclusion to facilitate access to bank accounts and other formal financial services, which can lead to debt accumulation or default on the mortgage and other loans or even to insolvency and bankruptcy cases if individuals do not have the necessary financial knowledge and skills. Financial inclusion has reached its lowest levels in the Arab region in the world. As statistics indicate that, the percentage of the adult population in Arab countries who do not have access to formal financial services reaches about 70 percent (168 million people). This percentage rises to 76 percent at Women, and 93 percent of the poor and low-income groups, or only 29 percent of the region's population, had accounts with financial institutions in 2014 (Nadine, 2017).

I.5 Economic stability in the Arab countries

The global growth slowdown began and geopolitical tensions increased, which pose economic challenges to the countries of the MENA region in 2019, and low volatile oil prices have negatively affected some countries, while other countries suffer from a significant increase in the level of debt for a year. A slowdown in growth in oil-exporting countries expected in 2019 to reach 0.4 percent, from 0.6 percent in the previous year, due to the contraction of the Iranian economy after the renewal of sanctions. On the other hand, growth expected to improve slightly in the GCC countries during 2019, reaching 2.1 percent in 2019, compared to the growth rate of 2 percent the previous year. The reduction in oil production and ongoing fiscal consolidation in countries such as Bahrain, Oman, and the United Arab Emirates is a factor contributing to the decline in growth prospects. The outlook for the global economy, which characterized by instability in the challenging macroeconomic situation, places a greater responsibility on the countries of the region, especially with regard to creating a more enabling environment for private sector investment while reducing corruption and strengthening institutions. Investing in education and technology also remains a top priority and through them together, these efforts can go a long way in creating dynamic private

sectors that can create jobs for the millions of young people who join the workforce. (Report Regional Economic, 2019)

The economic performance in Arab countries was marked by a difference between the oil-exporting Gulf Cooperation Council countries and other countries, especially those that suffer in recent years from armed conflicts. Which led to social unrest and armed conflicts, as well as political instability and a sharp deterioration in the economic indicators of a large number of countries, especially Syria, Iraq, Somalia, Yemen, Libya, Sudan, and Palestine, in addition to the forced displacement of refugees, whose number is estimated to be approximately 29 million people in the Arab region, equivalent to 7.1 percent of the population in 2017 and this coincided with the oil crisis that began in 2014, as many countries took reform measures in order to be able to keep fiscal budgets under control while privatizing national assets and facilitating development for the private sector Away from the oil sector. Despite the modest growth that these countries witnessed recently, the fiscal deficit is still slowly declining, which in turn led to a sharp increase in government debts (Arab Development Portal, 2019).

I.6 Financial stability in the Arab world

The importance of the banking sector in the Arab countries shows its importance through the vital role it plays, which is to provide the national economy with the necessary liquidity for various economic activities. The banking sector is the main component of the financial system in Arab countries. For example, the assets of the banking sector in Jordan are estimated at 94 percent, and b 90 percent in Egypt, and Kuwait and Bahrain, the proportion estimated at 88 percent and 85 percent, respectively. The banking sector in the Arab countries is large in size compared to the gross domestic product; as the volume of assets in 2018, in US dollars, was approximately 4.3 trillion dollars, or 124 percent of the GDP of all Arab countries. This is evident in the importance of strengthening this sector. The positive aspects reflect on the economic and financial stability in the Arab countries. This sector has faced many challenges and risks as a result of the global political and regional conditions that have produced them. Despite this, the positive situation continued in the performance of the Arab banking sector for the year 2018, as shown by the statistical data collected for Arab banks, with continued improvement in general in the overall main indicators of the performance of the Arab banking sector, with variation in the case of some Arab countries, where the impact of these challenges and the difficult circumstances they are going through Some Arab countries, on the performance of their banking sector (Arab Development Portal, 2019)

Banking systems in the MENA region are generally well-capitalized and have withstood the effects of the 2008 global financial crisis well, although recent political turmoil has put pressure on many GCC countries, especially those in the region. Affected directly by the Arab Spring. The banking systems dominated by state-owned banks may be under more pressure than others, due to their large volumes of non-performing loans and challenging financial conditions. Credit recovery may also be slower than expected in these countries, especially those directly affected by political turmoil. The speed and depth of credit recovery is an important issue for policymakers in the MENA region. Nevertheless, the size of the recovery may be a more important issue for the long-term performance of the region. Large sectors of the business and corporate sectors remain without credit because the financial systems in the MENA region are not comprehensive. Banking systems can be large and well-capitalized in general, but the region also has the highest loan concentration rates in the world, reflecting the fact that banks focus on large, well-connected companies. A large portion of the population does not have access to financial services, especially in remote areas. Finance and microfinance for small and medium-sized enterprisesare not well developed in most countries (Roberto R. Rocha, 2011)

II– Methods and Materials:

II.1 Measure The Financial Inclusion Index

We adopt the)Sarma(2012 ،approach measured the financial inclusion index a three dimensional indicator of financial inclusion calculated and includes:

1. The first dimension of distributed banks

A complete financial system must have the largest number of users, in that a complete financial system must penetrate widely among its users. The size of the "banker" population means that the proportion of people with a bank account is a measure of the penetration of the banking system. Thus, if each person has a bank account in an economy, the value of this measure will be one. However, data on the number of "bankers" are not readily available. In the absence of such data, the number of bank deposit accounts per 1,000 adults has used as an alternative to the number of adult bankers to measure this dimension.

2. Second dimension availability of banking services

The availability of services by the number of ATMs (per 1,000 inhabitants) and / or the number of ATMs per 1,000 inhabitants is the current banking system in many countries. ATMs play an important role, in addition to providing customers with bank details, depositing and withdrawing cash and checks (traditional teller machines) to measure the extent of availability. Use data on the number of bank branches and the number of ATMs per 100,000.

a. The third dimension is the use of the banking system

This dimension is motivated by the idea of marginal bankers "underfunded" or "passive" (Kempson, A, & O, 2004), noting that "in some countries that appear to have many banking services, a number of people with bank account do not benefit much from the services provided. "These people are described as" unconnected "or" poorly certified ". People who lack banking services, despite their access to official finance services, unable to use financial services, for reasons such as the size for banks, unsustainable financial services or simply because of negative experiences with the financial services. Service provider, these factors negatively reflect the financial system in general and, therefore, the mere existence of a bank account is not sufficient for a complete financial system; It is also necessary that the banking services used can take many forms: credit, deposits, payments, remittances, etc. Therefore, after use, they must include measures for all these different forms. However, the comparative data between countries on payments, remittances e to date are not available, and by integrating use after use into this indicator, we take into account two basic services of the banking system (credit and deposit) to measure this dimension. Use the volume of credit and deposits in the private sector. The private sector as a percentage of the country's GDP.

These dimensions depend largely on the availability of relevant and consistent data for the country in question and for the calculation of IFIs. The financial inclusion index calculated from three dimensions is between 0 and 1, with 0 indicating complete financial exclusion and 1 being full financial inclusion. As a result, the following weightings are provided: 1 for the banking penetration index, 0.5 for the availability index and 0.5 for the utilization index. Given this weight, we can represent the state K with a point (pk, ak, uk) in a three-dimensional space, so that0 = <ak<= 0.5, 0 <= uk<= 0.5, where pk, ak and uk are the dimension indicators for country k calculated using formula (1). In three-dimensional space, this point (0,0,0) will indicate the worst case (total financial exclusion) and the point (1,0,5,0,5) will indicate the ideal case or the ideal situation (inclusion financial situation) in the current context. MeasuredIFIK from the country k From the simple average of the Euclidean values, the distance between the point (pk, ak, uk) and the point (0,0,0) and the standard Euclidean inverse is the ideal distance (1, 0,5, 0.5). The annual indicator for each country calculated as follows:

$$IFI_k = \frac{1}{2}\left[\frac{\sqrt{p_k^2+a_k^2.+u_k^2}}{\sqrt{1.5}} + \left(1 - \frac{\sqrt{(1-p_k)^2+(0.5-a_k)^2+(0.5-u_k)^2}}{\sqrt{1.5}}\right)\right] ..(1)$$

II.2 Estimating The Relationship Of Financial Inclusion To Economic Stability

1.Data and methodology

To test the relationship of financial inclusion and economic stability, we use three-year GDP volatility gvol (representing economic stability) as the dependent variable, and the financial inclusion index and banking concentration with a one-year lag, IFI, and bcn as two independent variables. Using a non-linear regression Panel data model, for thirteen Arab countries, represented by (Tunisia, Algeria, Mauritania, Kingdom of Saudi Arabia, Qatar, Kuwait, Lebanon, Syria, Comoros Islands, Yemen, Libya, Egypt, and Djibouti). For a 12 year period from 2004 to 2020, based on World Bank data.

a. Standard Model

To estimate the relationship of financial inclusion to economic stability, we use cross-sectional data for the panel, a multiple nonlinear regression model, and Panel models for fixed and random effects, and to choose the best model we use the Hausman test this is based on a study (Ratna, et al., 2015)that the following form:

$$gvol_{it} = \alpha e^{\beta ifi_{it-1}} e^{\gamma bcn_{it-1}} \varepsilon_{it} \dots\dots (02)$$

Where:

$gvol_{it}$: 3-year GDP volatilityfor country i for period t.

ifi_{it-1}: is the financial inclusion index computed with a one-year delay for country i Lagged 3-year

bcn_{it-1}: bank concentration delayed by one year, for country i Lagged 3-year.

$\varepsilon_{i,t}$: random error

b. **The null hypothesis and the alternative are as follows:**

H0: The random effects model is the appropriate model.

H1: The fixed effects model is the appropriate model.

c. Results

Table 1 shows the results of estimating the relationship of financial inclusion and economic stability of the selected Arab countries, the method of least squares (OLS) in light of Panel data using a non-linear model. The results of Hausman's test showed that the probability of chi-squared is equal to Prob> chi2 = 0. 205, which is It is greater than 5%, and therefore we accept the null hypothesis H0 and reject the alternative hypothesis H1, that the Random Effects Model (RE), which is the best model . Through our analysis of this model, we notice that the coefficient of determination is estimated at less than 5% and the ifi variable coefficient is positive and therefore has an positive relationship with the dependent variable gvol GDP volatility. The statistical probability of t is estimated at 0.007 less than 5%, and therefore this variable has a statistical significance in explaining the dependent variable. The GDP volatility, as for the variable bcn, the statistical probability of t is approximately 0.396greater than 5%, and therefore this variable has no statistical significance in explaining the dependent variable the GDP volatility Probability F-statistic less than 5%wich have a statistical significance and therefore the model is good.

2. Estimating The Relationship Of Financial Inclusion To Financial Stability

a. Data And Méthodologie

The data was prepared from the World Bank database of thirteen Arab countries, represented in each of (Tunisia, Algeria, Mauritania, Kingdom of Saudi Arabia, Qatar, Kuwait, Lebanon, Syria, Comoros, Yemen Libya, Egypt and Djibouti) for a period of 12 years (2004-2015).The five dimensions of financial inclusion are: commercial bank branches per 100,000 adults, domestic credit to the private sector by banks (% of GDP), outstanding deposits with commercial banks (% of

GDP), number of deposit accounts per 1,000 adults, ATM Number of ATMs per 100,000 adults.That used to calculate the ifi composite financial inclusion index according to the Sarma method (2011), and the Bank Z-score variable derived from the global financial development database, which measures the Z score (distance to narrow) for banks. Reflecting buffers against profit shocks.

b. **Standard Model**

We use cross-sectional data for panel, the multiple linear regression model, the least -squares method for Panel data based on the individual and random -effects models, and to choose the best model we use the Hausman test and following the study (Ratna, et al., 2015) the model takes the following form

$$Z_{it} = \alpha + \beta_1 ifi_{it-1} + \beta_2 \hat{ifi}_{it-1} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (03)$$

Where:

Z_{it}: Bank Z-score score of Z distance to narrow for banks, reflecting buffers againstProfit shocks for country i for period t.

ifi_{it-1}**:**financial inclusion index measured according to the SARMA method with a one-year delay for country i for period t-1.

ε_{it}:random error.

c. **The null hypothesis and the alternative are as follows**:

H0: The random effects model is the appropriate model.

H1: The fixed effects model is the appropriate model.

d. Results

Table (02) showed the results of estimating the relationship of financial inclusion to the financial stability of the selected Arab countries using the multiple linear regression model, the least squares method in light of the Panel data. For the Hausman test, the probability of chi-squared is equal to Prob> chi2 = 0.4394. It is greater than 5%, and therefore we accept the null hypothesis H0 and we reject the alternative hypothesis H1 the Random Effects Model (RE), which is the best model. Through our analysis of this model, we find that the R-squared factor was estimated at more than 30%.Concerning the variable $ifi_{t-1,i}$ has a positive coefficient and thus has a positive relationship with the dependent variable $Z_{t,i}$(distance to narrowing for banks).The probability of the t statistic is estimated to be 0.000 less than 5%, and therefore this variable has a statistical significance in explaining the dependent variable $Z_{t,i}$(the narrow distance "for banks). As for the variable $\hat{ifi}_{t-1,i}$ has a coefficient negative and thus has negative relationship with the dependent variable statistical probability of t is approximately 0.000 less than 5%, this variable has significance statistic in the interpretation of the dependent variable $Z_{t,i}$(distance to narrowing "for banks). An F-statistic of 0.0002, which is less than 5%, is statistically significant, and therefore the model is good.

III- SUMMARY:

The results of the estimation indicated an positive relationship between financial inclusion and volatility in growth. That is, the greater the financial inclusion, the greater the access to credit, the greater the volatility in the growth rate. That is why there must be adequate supervision and regulation in the financial sector in order to reduce the volatility of growth. Our results match the study (Ratna, et al., 2015)and according to this study. The larger change in access to credit is also associated with greater volatility in growth, but this effect must be offset by the presence of regulation and supervision, and it is considered that the relationship between volatility in growth and financial inclusion. Through credit is important and positive this increase in growth volatility can be countered by the influence of regulation and supervision. This indicates that financial

inclusion if done responsibly, can contribute to stabilizing economies, but financial inclusion without proper regulation and control leads to greater volatility in rates the growth.

To analyze the links between financial inclusion and financial stability, the results showed that there is a positive relationship, and therefore financial inclusion has a positive effect on financial stability in this group of Arab countries, i.e. say that the more financial inclusion develops, the more it will have an impact on the stability of banks. Countries with higher financial inclusion tend to have more Bank performance. The result was also consistent with the research (Cull R. E., 2014), and there has been a growing body of research indicating that broad access to financial services for formal financial systems improves financial stability. And it depends on how this access is managed within the regulatory and supervisory framework and for (Robert, Aslı, & Timothy,, 2012) in terms of financial integrity and consumer protection. Four factors come into play: financial inclusion, financial consumer protection, financial integrity, and financial stability. These factors are interdependent and under the right conditions, in a positive relationship. However, failure in one dimension may cause problems for others, as increased financial stability improves confidence in the financial sector and increases the demand for bank deposits.

New evidence (Ratna, et al., 2015) shows that the stability risks of banks increase when access to credit expanded, especially without proper regulation and supervision. The stability of the bank weakens as financial reserves (capital and bank profits) erode. With supervision and regulation, this effect is mitigated. Countries with weaker surveillance could see their capital stocks significantly eroded, and as access to credit increased, countries with sufficiently strong surveillance could see gains in financial stability. Therefore, policies forcing banks to extend credit to those without adequate supervision could have a detrimental effect on the stability of the bank and the buffers could deteriorate due to the rapid increase in non-performing loans; especially in the case of losses.

- Appendices:

Table (01): The study of the relationship between financial inclusion and economic stability

R-sq	0.221118	FE		0.034393	RE		
Variable	**Coef**	**t**	**p>|t|**	**Coef**	**t**	**p>|t|**	
ifi_{t-1}	116532.4	2.945655	(0.0036)**	105805.4	2.708720	(0.0073)**	
bcn_{t-1}	-8.49E-40	-0.775562	(0.4389)*	- 9.18E-40	-0.849333	(0.3966)*	
Cons	-5319.237	-2.174816	(0.0308)**	-4655.417	-1.883330	(0.0610)**	
F-statistic	=3.185887	Prob>F=	0.000032	F-statistic=	3.882322	Prob> F=	0.022043
Test hausman		Chi2=2	.	Prob>. Chi2=0.2050			

Source: Authors.

(p) Prob; * significant at1% level; *** significant at 5% level; ** significant at10%,* level;

ns: not significant

Table (02): The study of the relationship between financial inclusion and financial stability

R-sq:	0.327095	FE		0.308125	RE		
Variabl	Coef	t	p>|t|	Coef	t	p>|t|	
$ifi_{t-1,i}$	127.9044	8.292826	0.0000	121.5222	8.325652	0.0000	
$ifi^{2}_{t-1,i}$	-212.9000	-6.810489	0.000	-201.8611	-6.720118	0.0000	
cons	-79.43746	-4.488828	0.0000	-74.21265	-4.317798	0.0000	
F-statistic	=5.455052		Prob>F= 0.0000	F-statistic	=48.54296	**Prob> F=**	**0.0000**
Test Hausman		Chi2=2		. Chi2>Prob=0.4394			

Source: Authors.

(p) Prob; * significant at1% level; *** significant at 5% level; ** significant at10%,* level; ns: not significant

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