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Household Sector Indebtedness and Its Impact on Financial Stability Indicators in Egypt

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Abstract: The research examines with studying the problematic relationship between the indebtedness of the family sector and financial stability by studying the facts provided by economic theory, research and studies, and then studying the case of Egypt by collecting and analyzing the facts and data related to the studied variables, and the problem of the research is to question the impact of the indebtedness of the family sector on financial stability in Egypt, and the hypothesis of the research is that the developments of financial globalization and financial openness, and by collecting and analyzing the facts Economic and related historical data, as well as the adoption of the inductive approach by making hypotheses among the studied relationships, and analyzing the relationship between variables .The research reached a set of conclusions, the most important of which is the weak impact of family sector indebtedness on financial stability due to the limited amount of bank financing for the family sector and the structural imbalance in the relationship between family spending and bank credit, and the weak capabilities of the private sector in accessing and employing finance , and the most prominent recommendations were the need to follow an economic policy to enhance the role of the family sector in economic growth by increasing the credit provided to the family sector to enhance economic growth According to the levels of household debt commensurate with the requirements of sustainable financial stability.

Keywords: Employing finance, financial globalization, financial openness, historical data.

Introduction: Today, financial systems have become the main pillar in economic development, through their essential role in linking the real and monetary aspects in a way that ensures the optimal allocation of economic resources efficiently between economic activities and the ability to enhance economic stability and meet the requirements of sustainable economic growth and economic development. Financial stability is the state in which the financial system is able to perform its basic functions in mediation, assessment and management of financial risks, withstand systemic and irregular shocks and address imbalances that hinder the allocation of savings to investment opportunities and provide an effective and safe payment mechanism .the developments of financial activity in light of financial globalization have imposed levels of great financial openness, increasing the risks of financial shocks of multiple types and different levels, which strengthened the importance of the function of financial systems in achieving financial stability.

The family sector plays an important role in achieving economic stability through its essential contribution to stimulating aggregate demand through spending flows from the budget of this sector, where the budget of individuals consists mainly of deposits, real estate and financial assets, as for the side of liabilities, and the indebtedness of individuals is the main component of the obligations of individuals and families, whose main source is the credit granted to the family sector from banks and other financial institutions, and therefore the size of the indebtedness of the family sector is a key indicator-among other indicators-at central banks and multiple financial bodies, to measure the size of debts and disparities in lending, and find out how much it effects On the other hand, if there is an increase in unemployment rates or a decrease in household disposable income, there may be a need to increase credit to the family sector to boost spending and stimulate economic activity, as attention to monitoring and analyzing the volume of credit provided to the family sector is an important part of the monetary and fiscal policy strategy to promote economic and financial stability and achieve sustainable growth, and in the case of high rates of household debt and obligations In this case, it is necessary to take multiple measures to enhance financial awareness and stimulate the family sector so that it can manage its debts sustainably.

Egypt has witnessed developments in its financial systems and its relationship with the indebtedness of the family sector and its reflection on the level of financial stability, which has aroused the interest of scientific research to study the indebtedness of the family sector in this country in terms of the type, size and direction of development of its basic indicators and its impact on the level of financial stability

First: The Significance of the research: the importance of the research stems from the need to pay attention to the relationship between financial stability and the indebtedness of the family sector in Egypt, to adjust the levels of family debt in accordance with the requirements of economic stability, growth and development in light of recent developments in the reality of the Egyptian economy and its financial system.

Second: The Research problems: The research problems is that the developments of the indebtedness of the family sector represent a fundamental challenge to the ability of the financial system to achieve financial stability, which imposes on the central banks accurate scientific knowledge of the nature, limits and dimensions of the effects of changes in the size of the indebtedness of the family sector on financial stability indicators, to take the necessary measures to make the levels of indebtedness of the family sector commensurate with the requirements of growth and economic stability.

In the light of the above research problems, The posed problems can be formulated according to the following main scientific questions:

1 - What is the relationship between the indebtedness of the family sector and financial stability according to economic theory and what are the transmission paths of this relationship in contemporary financial systems in light of financial globalization and financial openness and the resulting systemic and irregular economic shocks.

2-How has the size of the indebtedness of the family sector developed in Egypt and what are its effects on the indicators of financial stability in Egypt, and what measures are needed to make the levels of indebtedness of the family sector commensurate with the requirements of growth and economic stability.

3 -What are the results of the analysis of the impact of household sector indebtedness on some indicators of financial stability in Egypt for the period (2014-2023).

Third: The Hypothesis: The research is based on the hypothesis that there is an inverse relationship between the size of household sector indebtedness and the level of financial stability in Egypt.

Fourth: The Purpose of the study: The research aims to:

1-Reference to the theoretical relationship between the indebtedness of the family sector and financial stability in light of recent developments in financial systems.

2-Study the impact of the indebtedness of the family sector on some indicators of financial stability in Egypt.

-3Analysis of the impact of household sector indebtedness on financial stability indicators in Egypt for the period (2014-2023).

Fifth: Research approach: The research uses the deductive approach, by relying on the study of theories, postulates, general rules and partial applications in economic theory about the relationship between the indebtedness of the family sector and financial stability, by collecting and analyzing the relevant economic facts and historical data, and employing them in the study of the case of Egypt, as well as adopting the inductive approach by putting hypotheses among the studied relationships, analyzing the relationship between the studied variables and using statistical analysis tools and reaching conclusions that prove the research hypothesis and possible recommendations to employ the facts that have been proven .

Sixth: Time limits: Represented by the period (2014-2023), which is the period in which the basic indicators of the relationship between the indebtedness of the family sector and financial stability in Egypt appeared.

Seventh: Spatial boundaries: Represented by the state of Egypt, which is a harmonious sample in its economic characteristics and has witnessed clear developments in its financial systems and the indebtedness of the family sector, reflected in the level of financial and economic stability.

Eighth: Research structure: Research methodology: The research was divided into three sections

The First topic: the theoretical framework and concepts of the indebtedness of the family sector and financial stability.

Second Topic: Analysis of financial stability indicators in Egypt.

The Third topic: Analyzing the impact of household sector indebtedness on financial stability indicators in Egypt.

The First topic: the theoretical framework and concepts of the indebtedness of the family sector and financial stability.

The First requirement: the indebtedness of the family sector

First: Household debt

Household indebtedness (family sector) is an economic phenomenon that many families face in several countries. Families often borrow for a variety of reasons, such as buying a house that requires a long period of saving and deferred consumption, or financing an investment in education through student loans. By boosting consumption and investment, debt can contribute to improving the distribution of resources and raising the standard of living. However, an increase in the level of borrowing in households is not always a positive effect, both at the individual level and at the level of the family sector as a whole, since experiences in many countries during the global financial crisis suggest that a sharp increase in the level of household debt can increase the risk of financial crises and economic instability. A high level of indebtedness in the household sector can significantly affect the stability of financial indicators (Bank of New Zealand Reserve, 2014, p.1).

It is defined as the total financial liabilities incurred by households and individuals, including mortgages, car loans, credit card loans, student loans, and personal loans. Household sector indebtedness is measured as a percentage of GDP, or as a percentage of disposable income (Michal and others 2016, p.3). Household sector debts can be classified into two categories: (Devine 2023: p.7)

The first category: secured debt is any loan on a secured asset, so if individuals are unable to repay this debt, the lender can seize that asset (the security asset). an example of a secured debt is a mortgage where the mortgaged property is secured.

The second category: unsecured debt, which are loans provided to individuals without the presence of security on the assets, in case of non-payment of the debt, the creditor becomes an ordinary creditor and participates with the rest of the creditors in any remaining assets of the borrower. Examples include personal loans, student loans, and credit card lending, which are not guaranteed by any tangible collateral.

Second: factors affecting the indebtedness of the family sector.There are a number of factors that affect the level of indebtedness of the family sector, including: ((Albuquerque and Krustev 2015, p.8)

1-real income: personal income also appears mostly in the traditional consumption function, where part of the income gain is translated into higher consumption (the so-called marginal tendency), the higher the household income, the greater its borrowing capacity.

2-real interest rate: high interest rates (on conventional mortgages) encourage saving and, therefore, tend to correlate with low consumption, the higher the interest rates, the more expensive it is to borrow.

3-debt-to-income ratio: total household debt, mortgage debt and consumer credit, which includes car loans and credit cards divided by personal income.

4-economic confidence: that is, when consumers are optimistic about the economy, they are more likely to borrow.

5-unemployment rate: unemployment affects the ability of households to earn income and even the unemployment rate exceeds both income expectations and uncertainty, for example, expectations of higher incomes in the future (low unemployment rate) are associated with higher consumption growth. And thus would enhance the demand for loans .

6-government policies and central bank policy: governments and central banks can influence the indebtedness of the household sector through financial and monetary policies.

7-demographic factors: demographic factors such as age, education and family status may influence borrowing behaviors.

In addition to the factors we have mentioned, there are a number of motives that lead to an increase in household sector indebtedness in most countries, including: (Reserve Bank of New Zealand 2014, pp.6-7)

A-financial liberalization and deregulation: financial deregulation and liberalization can significantly increase household access to credit and, if accompanied by increased optimism about future income and wealth prospects, can strengthen the household sector's willingness to borrow.

B-Financial innovation in the United States, for example, has greatly eased restrictions on low-income home buyers and home buyers with the proliferation of exotic mortgage products such as interest-only loans, with little verification of the borrower's income or assets, so-called loans (no income, no job or assets).the financial innovation of the United States, for example, has significantly eased restrictions on low-income home buyers and home buyers.

C-low borrowing costs: the interest rate costs facing households have decreased over the past decade compared to the nineties of the twentieth century. There are a number of factors behind this, including a decrease in the longer-term trend in real interest rates (which, equal to everything else, increases the "sustainable" amount of debt that a borrower can service), changes in borrowing rates and financing costs of financial intermediaries due to competition. More generally, the transition to a low inflation environment was a symbol of the "Great Moderation" of macroeconomic fluctuations in the pre-global financial crisis period. This may have contributed to a decrease in precautionary saving by households and increased confidence in taking on more debt.

D-the role of house prices: housing is the main asset financed by household borrowing, and the rise in house prices, perhaps driven by low interest rates, population growth, a shortage of housing supply, or some other factors, implies that any newcomer or potential entrant to the housing market must borrow more to buy any particular house. This effect caused by rising house prices increases the total household debt, and this may happen for several years, even after housing prices stop rising, because the stock of housing is slowly fluctuating. Moreover, as the value of the collateral associated with housing lending increases (i.e., the value of the house increases), households are able to borrow more to increase non-housing-related consumption, or to finance other business activities, and therefore there is a positive correlation between rising house prices and increases in household debt.

E-rising income inequality: there are macroeconomic consequences of income inequality and whether the sharp increase in inequality that occurs in some countries is related to financial pressures. There is a correlation between income inequality and consumption inequality. Consumption inequality has not increased to the same extent as income inequality, suggesting the role of credit markets in mitigating the very large differences in consumption patterns among households across the income spectrum.

Third: sources of household sector debt: There are a number of sources that provide loans to the family sector, including the following: (Nakornthab 2010, p.13)

1- commercial banks are by far the largest official provider of household sector debt in any country.

2- state development banks or specialized financial institutions play an active role in providing funds to the family sector, for example, in some countries the Agricultural Bank is the main creditor of agricultural households.

3- the sources of housing loans, via non-financial institutions, the involvement of the public sector is more visible in the field of Housing Finance. These include housing authorities, such as housing funds, and the housing loans division of the Ministry of finance as applicable in some countries such as Malaysia.

4- Non-Bank Private financial institutions play the role of commercial banks and government lenders in formal family lending, such as domestic and multinational finance companies.

Informal sources, as there are multiple informal sources through which the family sector can obtain soft loans. Examples include the amounts borrowed by individuals from relatives and friends. it is conceivable that the share of informal sources of debt is related to the stage of financial development in a country

The second requirement: the concept of financial stability, its conditions and the causes of instability.

First: the concept of financial stability

The financial system is in a range of stability whenever it is able to facilitate (rather than hinder) the functioning of the economy, dispel financial imbalances that arise internally or as a result of significant and unforeseen negative events. Financial system instability refers to conditions in financial markets that harm or threaten to harm the functioning of the economy by affecting the functioning of the financial system, can arise from shocks that originate within the financial system and are transmitted throughout that system, can weaken the financial position of non-financial units such as households, companies and governments to the point where the flow of finance to them becomes restricted, and can disrupt the operations of certain financial institutions and markets so that they are less able to continue financing the rest of the economy (Chant, and others, 2003, p.3).

Financial stability can be defined as the ability of the financial system (financial intermediaries, markets, market infrastructure) to withstand shocks and disintegration of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process that may be severe enough to significantly weaken the allocation of savings to profitable investment opportunities in the economy (Heinlein, 2022 , p.1) .There is another definition of financial stability that refers to the preservation of the basic economic functions of the financial system in directing savings to investments and providing an effective and safe payment mechanism, hence financial stability is considered to be the state in which the financial system is able to withstand shocks without giving way to cumulative processes that hinder the allocation of savings to investment opportunities and the processing of payments in economies (Schioppa, 2002,p.20)

By the previous definitions of stability, it can be said that the stability of the financial system is achieved when the financial system performs its functions in financial intermediation and risk management and the economy's ability to efficiently allocate resources between economic activities with the ability to absorb systemic and irregular shocks.

Second: The conditions of financial stability

The ECB defines three specific conditions related to financial stability: (Morgan and Pontines, 2014: p.4))

1-the financial system should be able to transfer Resources Efficiently and smoothly from savers to investors.

2-the financial system should be able to assess and price financial risks with reasonable accuracy and manage them relatively well.

3-the financial system should be in a state where it can comfortably absorb real financial and economic surprises and shocks. The third condition is perhaps the most important, since the inability to absorb shocks can lead to a downward spiral as they are propagated through the system and become self-reinforcing, which leads to a general financial crisis and widespread disruption of the financial intermediation mechanism.

Second topic: analysis of financial stability indicators in Egypt

The first requirement: indicators of financial stability in Egypt

First: financial stability indicators

The Central Bank of Egypt calculates the Financial Stability Index using the empirical normalization methodology and publishes it annually. The index is based on four sub-indicators, namely (Arab Monetary Fund 2023: P. 260(

1- macroeconomic indicator: this indicator consists of seven sub-indicators (real GDP growth rate, general inflation rate, private credit ratio to nominal GDP, budget deficit ratio to nominal GDP, domestic public debt ratio to nominal GDP, current transactions balance to GDP, net foreign reserves ratio to short-term external debt). the Central Bank of Egypt has given this indicator a relative weight of 33%.

2- Financial Markets Index: this index consists of four sub-indicators (the ratio of market capital to GDP, the volatility ratio on the Egyptian Stock Exchange, the ratio of the market value of shares to the return on equity, the credit risk swap index). the Central Bank of Egypt has given this index a relative weight of 19%.

3- the banking sector performance index: it consists of seven sub-indicators (capital adequacy ratio, ratio of total non-performing loans to total loans, coverage ratio, liquidity ratio in local currency and foreign currencies, ratio of administrative expenses to net income of activity, ratio of net profits to shareholders ' equity, concentration ratio in the side of assets of the largest 5 banks). the Central Bank of Egypt has given this indicator a relative weight of 38%.

4- the global economic climate index: this sub-index includes the real GDP growth rates and inflation rates of Egypt's main trading partners (the United Arab Emirates, China, the United Kingdom, the United States of America, Turkey, Saudi Arabia, Germany, Switzerland, France, Italy, Russia). the Central Bank of Egypt has given this indicator a relative weight of 10%.

Table No. (1) variables used in calculating the Financial Stability Index in Egypt

Sub-index	Measurement variables	Relative weight
Macroeconomic indicator	-Real GDP growth rate ; -General inflation rate -The ratio of private credit to nominal GDP -The ratio of the budget deficit to the nominal GDP -The ratio of domestic public debt to nominal GDP	%33

	-The balance of current transactions to GDP - The ratio of net foreign reserves to short-term external debt	
Financial markets index	-The ratio of market capital to GDP -The percentage of volatility in the Egyptian Stock Exchange -The ratio of the market value of shares to the return on equity - Credit risk swap index	%19
Banking sector performance index	-Capital adequacy ratio -The ratio of total non-performing loans to total loans -Coverage ratio -The ratio of liquidity in local currency and foreign currency -The ratio of administrative expenses to net income of the activity -The ratio of net profit to shareholders ' equity -The percentage of concentration in the side of large assets 6 banks	%38
The global economic climate index	-Real GDP growth rates ; -Inflation rates for Egypt's main trading partners (UAE, China, UK, USA, Turkey, Saudi Arabia, Germany, Switzerland, France, Italy, Russia)	%10

Source: prepared by the researcher based on (Arab Monetary Fund 2023, P.260).

Second: the methodology of preparing the Financial Stability Index in Egypt

The methodology for preparing the Financial Stability Index in Egypt shall be according to the following steps (Central Bank of Egypt, 2019: P. 17)

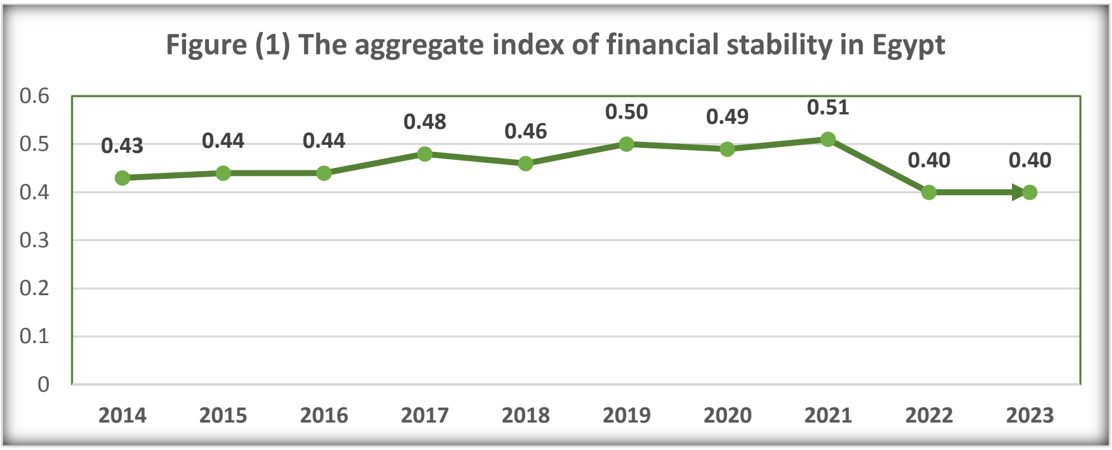
1- The Financial Stability Index is prepared as a composite quantitative measure using a variety of variables (21 variables) that fall under four sub-indicators, which are mentioned in the previous paragraph and reflect the performance of the banking sector, macroeconomic conditions, the development of financial markets, and the global economic climate

2- the indicator is prepared using the empirical normalization methodology, as the inverse value of variables that negatively affect financial stability is used. The indicator is calculated based on the average of the variables used and weighted with equal weights. It is worth noting that this methodology may lead to changes in the historical values of the indicator when adding data to update it periodical.

3- The Financial Stability Index as well as the four sub-indicators shall be prepared using the time series of variables since 2011 until the latest available date. In addition, the methodology used to prepare the value of the Financial Stability Index may be subject to some modifications, such as changing the calculation methodology or adding or deleting some variables, to name a few

Second requirement: analysis of the Financial Stability Index in Egypt

The value of the general index of financial stability in Egypt reached (0.51) points in 2021 and (0.40) points in 2022, compared to (0.49) points in 2020, (0.46) points and (0.50) points in 2018 and 2019, respectively. As shown in Figure 1, in general, the stability of the values of the Financial Stability Index in Egypt during the period from 2016 to 2022 indicates the stability of the financial and economic systems despite the challenges they face. It should be noted that the Financial Stability Index in 2020 witnessed a decrease compared to 2019, as a result of the consequences of the corona pandemic on global economies and financial systems. This was reflected in the global economic climate index, where most of Egypt's trading partners recorded negative real GDP growth rates. The financial markets index also witnessed a significant decline as a result of the turmoil in emerging financial markets, including Egypt, and the exit of foreign capital. This led to an increase in both credit risk swap rates and the EGX Volatility Index, as well as a noticeable decrease in the ratio of market capitalization to nominal GDP. Despite this, the banking sector in Egypt has proven its strength during the corona pandemic and its ability to cope. Absorbing many shocks and containing their repercussions, thanks to good levels of capital adequacy and liquidity (Arab Monetary Fund 2023, P .260).



Source: prepared by the researcher based on data (Central Bank of Egypt 2023, p.25).

Table (2) the aggregated index of financial stability and its main constituent indicators in Egypt %

The years / Indicates	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Aggregate index of financial stability	0.43	0.44	0.44	0.48	0.46	0.50	0.49	0.51	0.40	0.40
Macroeconomic indicator	0.56	0.41	0.3	0.29	0.48	0.49	0.60	0.60	-	-
Financial markets index	0.37	0.46	0.32	0.38	0.62	0.52	0.35	0.46	-	-
Banking sector performance index	0.47	0.46	0.55	0.62	0.50	0.48	0.60	0.47	-	-
Global economic climate index	0.50	0.52	0.52	0.47	0.43	0.49	0.35	0.49	-	-

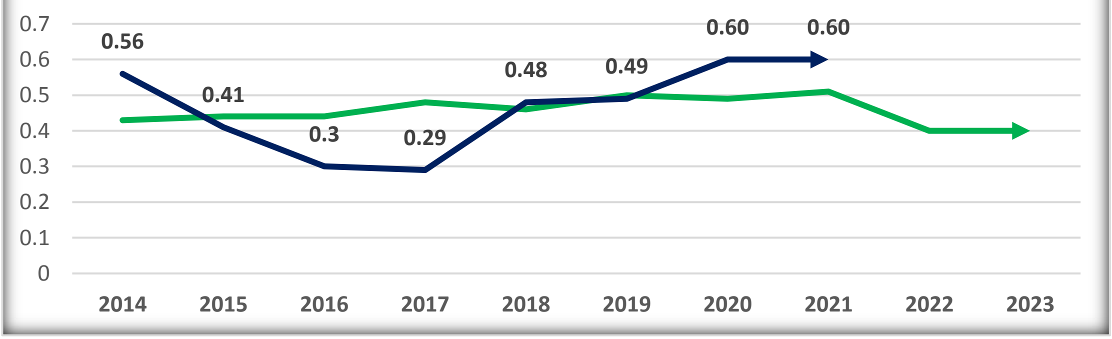
Source: prepared by the researcher based on the data of (Central Bank of Egypt)

The aggregate indicator of financial stability consists of several sub-indicators, all of which affect the final result on the value of the indicator, as follows:

1-Macroeconomic indicator: The macroeconomic index in 2020 witnessed a significant improvement in some macroeconomic indicators, such as a high real GDP growth rate, a low inflation rate and an overall budget deficit. These developments are positive and indicate an improvement in overall economic performance. However, some challenges remain, such as the high ratio of the current account balance deficit to nominal GDP and the low coverage ratio of net international reserves for short-term external debt. These points need to be followed up and addressed to ensure the sustainability of economic growth (central bank of Egypt, 2020:P.22). In 2021, there was a discrepancy in the performance of economic indicators during the fiscal year, despite the improvement in some aspects such as the high real GDP growth rate and the decrease in the ratios of the total budget deficit and the current balance deficit, there are other challenges such as the high inflation rate and the decrease in the ratio of net international reserves coverage of short-term external debt. In the fourth quarter of the fiscal year, there seems to be a slowdown in economic growth as the inflation rate continues to rise and the international reserve coverage ratio decreases. These challenges may require sustainable economic policies to address them and ensure the long-term stability of the economy (central bank of Egypt, 2021:P .20). In 2022, there was an improvement in some economic indicators during the second half, such as a decrease in the ratio of the total budget deficit and the current balance deficit, in addition to recording a surplus in the last quarter of the year and an increase in the ratio of private credit to nominal GDP. These developments indicate an improvement in financial and economic performance. However, some challenges remain, such as a decline in the real GDP growth rate and a slightly higher inflation rate, as well as a decrease in the coverage ratio of net international reserves for short-term external debt. These points need careful follow-up to ensure the sustainability of economic improvement (Central Bank of Egypt, 2022: p. 25).

In 2023, there was a discrepancy in the performance of economic indicators during the first half. Despite the improvement in some aspects such as the decrease in the current balance deficit and the recording of a surplus in the second quarter, in addition to the decrease in the percentage of the total budget deficit, there are other challenges such as high inflation rates, the decline in the real GDP growth rate and the coverage ratio of net international reserves for short-term external debt (Central Bank of Egypt,2023: P25) .

Figure (2) The weighted value of the macroeconomic index and the stability index In Egypt

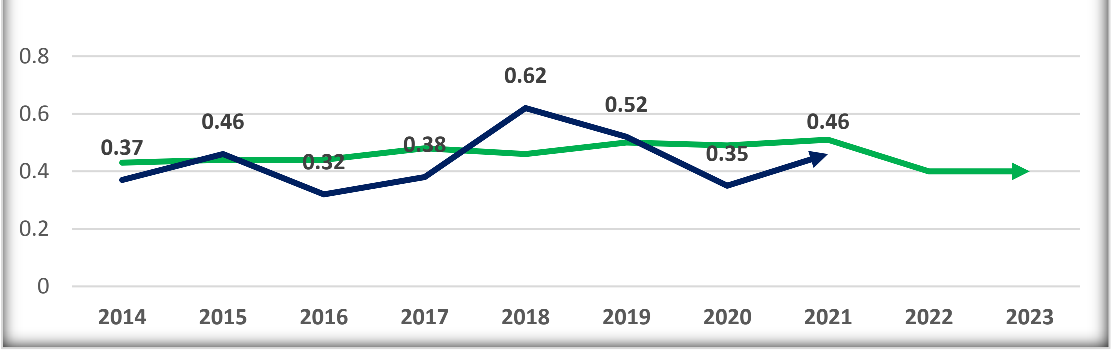


2-Banking sector performance index

The banking sector Performance Index decreased in 2020 as a result of the decline in net profit to average equity, capital adequacy ratio, liquidity ratio in local currency, the ratio of provision coverage for non-regular loans, in addition to the high ratio of administrative expenses to net income of activity. However, these indicators continued to adequately exceed the control and indicative ratios. This decrease was limited by an improvement in the ratio of non-performing loans to total loans and a higher ratio.

Liquidity in foreign currency (Central Bank of Egypt, 2020: P.22) in 2021, the performance index of the banking sector improved as a result of banks strengthening their capital bases, which was reflected in the high standard of capital adequacy. The period also witnessed a decrease in the ratio of non-performing loans to total loans, the ratio of administrative expenses to net activity income, in addition to an increase in the average ratio of foreign currency liquidity and the average return on equity (Central Bank of Egypt, 2021:P.20). In 2022, the performance of the banking sector was relatively stable, with an index of 0.48. This stability came as a result of a higher capital adequacy criterion, a lower ratio of non-performing loans to total loans, and a higher average ratio of foreign currency liquidity. In contrast, the ratio of net profit to shareholders ' equity, the coverage ratio for non-regular loans, and the average liquidity ratio in local currency decreased, with this ratio continuing to exceed the regulatory minimum set by the Central Bank (Central Bank of Egypt, 2022: p.25).

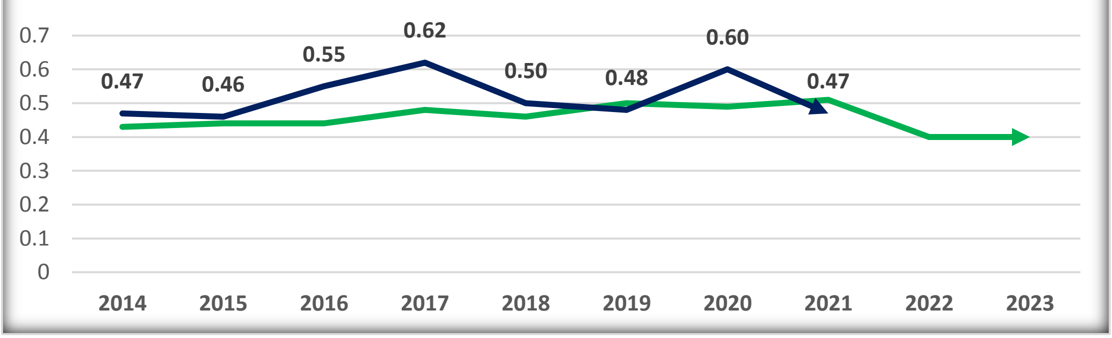
Figure (3) The weighted value of the financial markets index and the financial stability index in Egypt.



Source: prepared by the researcher based on the data of Table No. (2).

In 2023, the banking sector performance index declined as a result of a decrease in the capital adequacy criterion, due to the inflation of assets and contingent liabilities weighted by risk weights after the exchange rate appreciation. Liquidity ratios in local and foreign currencies also decreased, although they continued to exceed the regulatory minimum set by the central bank. In contrast, the ratio of administrative expenses to net activity income decreased, and the ratio of net profit to shareholders ' equity increased, with the stabilization of the ratio of non-performing loans to total loans, the coverage ratio for non-performing loans, and the ratio of concentration in assets of the 6 largest banks (central bank of Egypt, 2023: p.25).

Figure (4) the weighted value of the banking sector perfomence index and financial stability indrx in Egypt

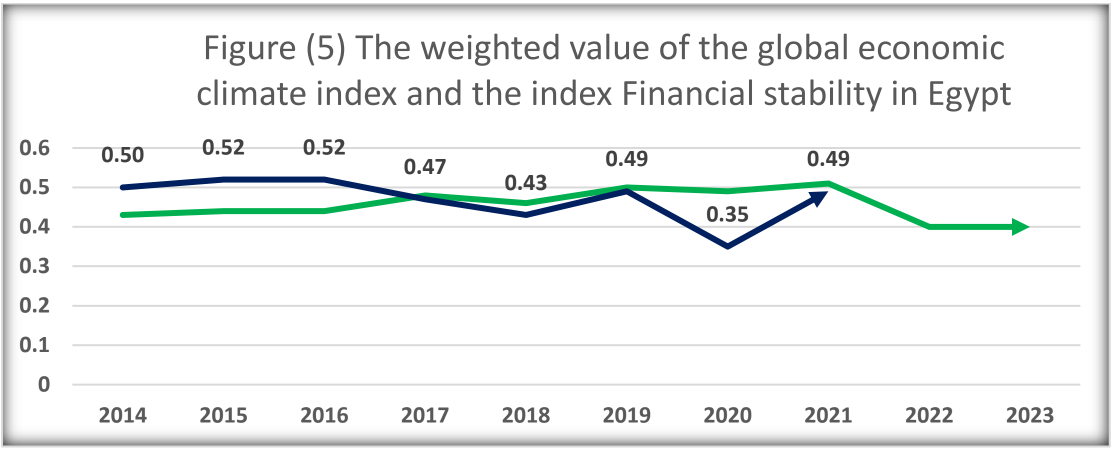


Source: prepared by the researcher based on the data of Table No. (2)

Global economic climate index-Global Economic Climate Index:

The global economic climate index has witnessed significant fluctuations, as it increased in 2020 as a result of the recovery in global real GDP growth, despite the high inflation rates globally (Central Bank of Egypt, 2020:P.22). However, the index declined during 2021 due to high inflation rates and slowing real GDP growth (central bank of Egypt, 2021:P .20). This decline continued in the second half of 2022 as a result of the sharp rise in inflation rates and the slowdown in GDP growth of the main trading partners (Central Bank of Egypt, 2022: p .25). In the first half of 2023, the index

declined again due to the slowdown in real GDP growth of Egypt's main trading partners, despite lower inflation rates compared to the same period of the previous year (Central Bank of Egypt, 2023: p.25).



Source: prepared by the researcher based on the data of Table No. (2)

Third topic: analysis of household sector indebtedness and financial stability indicators in Egypt.

First requirement: household sector indebtedness index

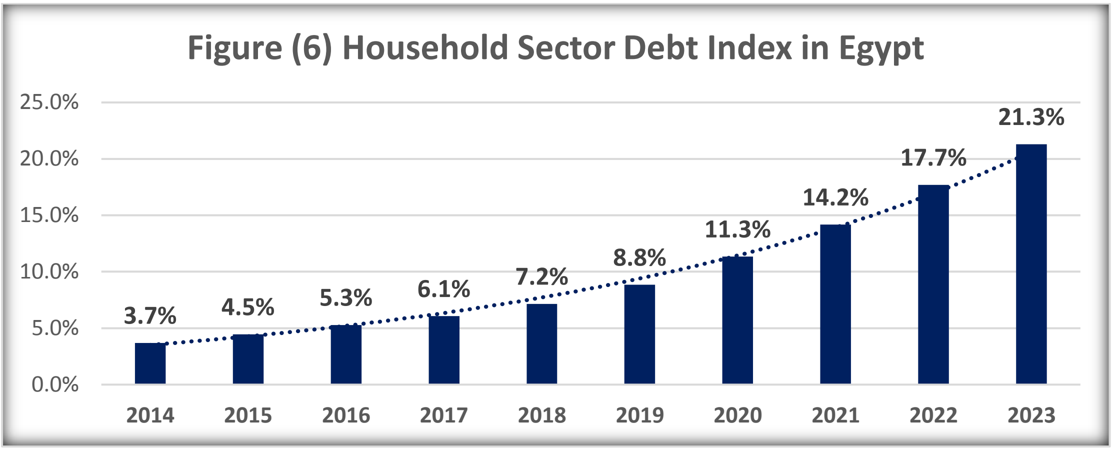
The improvement of macroeconomic and financial conditions with the end of the economic reform program led to an increase in the borrowing capacity of the household sector, as a result of the low cost of borrowing, the stability of the exchange rate and real disposable income. This improvement raised the ratio of debt service to income, which led to an increase in credit granted to the household sector(Central Bank of Egypt, 2019:P13), as shown in Figure (6), and the ratio of the maximum total loan installments for consumer purposes at the level of 50% and low interest rates contributed to supporting the ability of the household sector to obtain a greater amount of credit, supported by the central bank's initiatives for real estate financing for low and middle income(Central Bank of Egypt, 2020:P18).

Table (3) percentage of the household sector indebtedness index in Egypt

Years / Indicates	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Indebtedness of the family sector	**3.7%**	**4.5%**	**5.3%**	**6.1%**	**7.2%**	**8.8%**	**11.3%**	**14.2%**	**17.7%**	**21.3%**

Source: prepared by the researcher based on the data of the Central Bank of Egypt, statistics of the Financial Stability Department.

Through Figure (6), we note that the change in the debt ratio of the family sector is a positive change, as this percentage increased from (3.7%) in 2014 to (4.5%) in 2015 to continue this gradual increase in the volume of credit granted to the family sector in Egypt until its percentage in 2018 reached (23%) of the volume of credit granted to the private sector(Central Bank of Egypt, 2017:P6), as a result of low average inflation rates . In light of the improvement of the overall economic and financial conditions, the credit granted to the family sector increased by 23.2% of the credit granted to the private sector during the period from 2019 to 2020, as the family sector's debt ratio reached (11.3%). The recovery of economic activity during the fiscal year 2021-2022 was reflected in the purchasing power of the household sector through an increase in national disposable income at a positive real rate and the stabilization of the unemployment rate at 7.3%, with the inflation rate continuing at low levels (Central Bank of Egypt, 2022:P.18). The debt ratio of the family sector has increased (14.2%) for the year 2021 and (17.7%) for the year 2022, and the debt ratio of the family sector has continued to rise, reaching (21.3%) in 2023, i.e. (30.5%) of the volume of credit granted to the private sector (Central Bank of Egypt, 2023: P22).



Source: prepared by the researcher based on Joule data No. (3).

The second requirement: the relationship between the indebtedness of the family sector and the indicators of financial stability in Egypt

Financial development, represented by an increase in the ratio of private credit to nominal GDP, contributes to strengthening economic growth in the long term. However, the excessive growth of credit granted to the private sector may increase the likelihood of a financial crisis. Periods of growth in credit, which are often accompanied by relatively low interest rates and loosening of borrowing standards, are usually followed by periods of slowdown in the granting of credit when the financial cycle turns into a downward trend. By calculating the gap of the ratio of private credit to nominal GDP in Egypt during the period 2014-2018, we find that the average positive gaps amounted to (1.2), which indicates the lack of accumulation of systemic risks resulting from excessive credit growth during this period. The size of the negative gap - which has been formed since September 2017 and reached its maximum in December 2017-has decreased to (0.1%) in March 2019. This is due to the continued high rate of private credit growth with a stable nominal GDP growth rate (Central Bank of Egypt, 2018:P .1)

The decrease in the negative gap was contributed by the achievement of a positive gap by the family sector, which amounted to (0.3%) in March 2019. Despite the high growth rate of private credit since March 2018, the negative gap indicates the possibility of granting loans to the private sector without the formation of systemic risks (Central Bank of Egypt, 2018:P .10). The credit granted to the household sector increased by an average of (23.2%) during the period from July 2019 to March 2020. This coincided with a decrease in the average inflation rates to (5.8%). Durable consumer imports have seen a surge in growth rates, most notably automobiles. The growth continued during the period from July 2019 to March 2020, where it was recorded (48%) . The household credit to nominal GDP ratio gap turned into a positive gap in September 2019, compared to a negative gap of (0.2%) in June 2019, and continued to rise to (0.8%) in March 2020. The increase in the gap coincided with an improvement in the quality of the banking sector's assets granted to the family sector, reducing the ratio of irregular consumer loans to total loans to (3.3%) in March 2020, compared to (3.5%) in December 2019. With the ratio of household credit to its deposits remaining at a low level (14%), this indicates a decrease in the likelihood of systemic risks arising from the possible failure of the household sector (Central Bank of Egypt, 2019:P .13). The success of economic policies has supported the purchasing power of the household sector through low inflation and unemployment rates, coinciding with the stability of the exchange rate. This led to an increase in the national disposable income for spending at positive real rates of about (10.16%) in the fourth quarter of the fiscal year 2020-2021.

The continuation of the maximum ratio of total loan installments for consumer purposes to the total monthly income at the level of (50%), coinciding with low interest rates, supports the ability of the family sector to obtain a greater amount of credit, supported by the central bank's initiatives for mortgage financing for low and middle income. These policies and initiatives were proactive measures that contributed to containing the consequences of the corona pandemic, as household consumption continued to achieve positive growth rates, and was the main engine to drive economic growth and its rapid recovery during the first year of the outbreak of the pandemic. The improvement in the economic and financial conditions surrounding the household sector was then reflected in the growth rate of credit directed to the private sector. The growth rate of credit directed to the private sector took a slightly downward path during the period from December 2020 to June 2021, while stabilizing at high levels to record (20.8%) in June 2021. This coincided with the real GDP growth rate continuing on the recovery path to reach 7.7% in the fourth quarter of the fiscal year 2020-2021, with the impact of the first wave of repercussions on investments and exports receding and household consumption continuing to achieve positive growth rates (Central Bank of Egypt, 2020:P .18).

With the stabilization of the ratio of private sector loans to deposits at (38%) in June 2022, this indicates that the expansionary monetary policy until March 2022 and the initiatives launched by the central bank have contributed to supporting the credit environment without excessive risk-taking or creating systemic risks of failure of borrowers, which may threaten financial stability (Central Bank of Egypt, 2020:P .18).. The purchasing power of the household sector was negatively affected as a result of the high inflation rate according to consumer prices during the first half of the fiscal year 2022-2023, driven by rising prices for food and beverages, restaurants and hotels, culture and entertainment, furniture, household equipment, and transportation. This prompted monetary policy to raise interest rates by200 and 300 basis points in October and December 2022, respectively, in order to control inflationary pressures. The impact of purchasing power led to a decrease in imports of consumer goods in the first half of the fiscal year 2022-2023 by an average of (35.6%). The fiscal policy adopted a package of measures on wages and social benefits in order to reduce the burden of inflationary pressures and support the purchasing power of the family sector (Central Bank of Egypt, 2022:P .21). The ratio of private credit to GDP in June 2023 reached a negative level of (1.6%), which means that GDP grew at a faster rate than the growth of loans provided to the private sector. High inflation has contributed to an increase in GDP, while loan growth has not kept pace with this rise. The household sector suffered from a negative credit gap (Central Bank of Egypt, 2023:P .22).

Therefore, between 2014 and 2023, the proportion of new loans granted compared to the total value of goods and services produced in Egypt was generally stable. This means that the growth of loans has not been so rapid that it threatens the stability of the financial system.

CONCLUSIONS

1- The nature of the positive relationship between the indebtedness of the household sector and the cash credit provided to the private sector is reflected in a positive impact on GDP in the short term due to the nature of the positive correlation between the cash credit of the private sector and investment and consumption as the basic components of total spending on output.

2- In Egypt, the success of monetary policies and prudential supervision of the banking sector contributed to the creation of a favorable environment for granting credit, maximizing the ability of the economy and the financial system to contain various shocks, which reduced the likelihood of systemic risks affecting the stability of the financial system with other challenges such as high inflation rates, low real GDP growth rate and the ratio of coverage of net international reserves of short-term external debt.

3- In Egypt, the relationship between family debt and financial stability indicates that there is financial space available to the monetary authority by not reaching the size of family debt to the level that threatens financial stability according to available indicators.

Recommendations

1- Multiple measures must be taken to enhance financial awareness and stimulate the family sector so that it can manage its debts sustainably.

2- Paying attention to monitoring and analyzing the volume of credit provided to the household sector as an important part of the monetary and financial policy strategy to enhance economic and financial stability and achieve sustainable growth.

3- Building macro-prudential indicators to hedge and warn of high rates of household sector debt and repayment obligations, to avoid increasing financial risks and economic tensions.

4- Follow the monetary policy as a tool to control the amount of money in the economy, to influence the indebtedness of the family sector and financial stability through channels that are appropriate to the level of development of the banking system and the finance market, such as the credit channel based on changes in interest rates or credit volume, being the most influential in the size of family debt in Egypt.

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