



FINANCIAL STABILITY REPORT

2016

Financial Stability Department

PREFACE

The 2016 Financial Stability Report (JFSR2016) is issued as part of the CBJ's continuous efforts to enhance the stability of the financial and banking sector in Jordan and to provide a sufficient database of various aspects of the economy and financial sector in Jordan. Pertinent to the amended Law of the Central bank of Jordan for the year 2016, the objectives of the CBJ have been extended to include explicitly maintaining financial stability besides monetary stability. Financial stability is meant to enhance the capacity of banks and other financial institutions to withstand risks and to limit any structural imbalances.

The financial stability level continued to improve in the Kingdom during 2016 despite the challenges and risks resulting from the political and economic conditions in the neighboring countries and their effect on the economic and financial conditions in Jordan due to the government and CBJ's policies that helped mitigate the effects of these challenges. This is attributed to the fact that Jordan has a sound and solid banking system that is generally capable of withstanding shocks and high risks due to the banks' high levels of capital and comfortable levels of liquidity and profitability.

The CBJ will keep developing its Financial Stability Report taking into consideration the developments of risks at local, regional, and global levels to enhance the pillars of financial stability in Jordan. The JFSR2016 is published online on the CBJ's website <http://www.cbj.gov.jo>.

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EXECUTIVE SUMMARY

GLOBAL FINANCIAL STABILITY

The global financial stability continued to improve at the end of 2016, compared with the developments documented in the October 2016 Global Financial Stability Report published by the International Monetary Fund (IMF). In its report of April 2017, the IMF made it clear that the momentum of the economic activity had increased in the context of monetary and financial conditions that are generally facilitative. This raised hope of economic recovery as long- term interest rates have increased, helping to boost profits for banks and insurance companies. The achieved gains in many asset prices indicate that prospects are becoming more optimistic. In 2016, the world economy witnessed a slight improvement in the real GDP growth rate to reach 3.2% compared to 3.1% at the end of 2015. The IMF projections indicate improvements in the real GDP growth rate in 2017 and 2018 to reach 3.5% and 3.6% respectively.

JORDANIAN ECONOMY

Regarding Jordanian economy, it faced, and is still facing, several challenges and risks, the most important of which are the political turbulences in the neighboring countries. Despite this, the real GDP achieved a moderate growth rate in 2016 of 2.1%, though less than the previously projected figure of 3.2%. The IMF projections indicate improvements in the real GDP growth rate in 2017 and 2018 to reach 2.3% and 2.5% respectively.

FINANCIAL STABILITY INDEX IN JORDAN

The CBJ developed a new index that reflects the status of financial stability in The Hashemite Kingdom of Jordan. The aggregate index is composed of three sub- indices of the Banking Sector, Macro-Economy, and Capital Market. The value of the index ranges from zero to one. The closer the index value to zero, the weaker the financial system is. The closer the index value to one, the greater the stability of the financial system is. This index has been developed after reviewing the experiences of several countries in building their financial stability index. The value of the Financial Stability Index in Jordan approximated 0.50 at the end of 2016 which shows that the degree of financial stability in Jordan is relatively satisfactory considering the political and economic developments in the region and their impact on financial stability in Jordan. The comparison of the banking sector stability index in particular with other countries that developed a similar one reveals that Jordan enjoys a healthy, sound, and stable banking sector to a high degree as Jordan ranked fourth among 19 European countries.

FINANCIAL SOUNDNESS INDICATORS OF THE BANKING SECTOR

The financial soundness indicators of the banking sector in Jordan continued to improve. Following are some indicators that shows resilience and the soundness of the banking sector and its capability of withstanding shocks and high risks.

CAPITAL ADEQUACY

The banking system in Jordan enjoys a high capital adequacy ratio that is one of the highest in the MENA region. The capital adequacy ratio of the banking system in Jordan ranged between 18.0% and 21.0% during the period (2007- 2016), with a comfortable margin that is above the CBJ lower bound of 12.0% and the Basel Committee rate of 10.5% according to Basel III. However, the capital adequacy

ratio decreased slightly at the end of 2016 to 18.5% compared to 19.1% at the end of 2015 due to the continued improvement in the level of credit granted by banks to the private sector that usually includes relatively high risks.

ASSET QUALITY

The ratio of non-performing loans to total loans continued to decline in 2016 to 4.3% against 4.9%, 5.6%, 6.8%, and 7.7% for 2015, 2014, 2013 and 2012, respectively, with Jordan being the sixth lowest among 13 Arab countries for which data is available. Moreover, Jordan's ranking with regards to this ratio has improved in 2016 compared to 2015. The provision coverage ratio for non-performing debt is 78%, which makes Jordan sixth among 13 countries of the region.

LIQUIDITY

The Jordanian banking system enjoys safe liquidity as total high liquidity assets accounted for 48.9% of total assets at the end of 2016 compared to 51.8% at the end of 2015. This decrease is due to the continued improvement in the level of credit granted by banks. That was clear in 2015 and continued in 2016.

PROFITABILITY

The banking system maintained moderate levels of profitability. The rate of return on assets of the banking system in Jordan approximated 1.1% in 2016 compared to 1.3% in 2015. The return on equity was 8.9% in 2016 compared to 10.3% in 2015. However, the rates of return in Jordan are evidently low compared to most Arab countries. This is because banks in Jordan are generally conservative and avoid risks. Moreover, banks in Jordan enjoy high levels of capital. In addition, the income tax level in Jordan is relatively high.

CONCENTRATION IN THE BANKING SECTOR

The concentration ratios are low and competitiveness level is high in the banking sector in Jordan. The assets of the top five banks out of the 25 banks accounted for 54.3% of the total assets of licensed banks at the end of 2016 compared to 60.0% 10 years ago. The reason for the improvement in competitiveness is the improvement and development in banks' businesses and products to increase their competitive capabilities, in addition to the increase in the number of banks after the licensing of three new banks during 2009.

CREDIT GROWTH

The year 2016 witnessed a continuation of the improvement in the level of credit granted by banks which started clearly in 2015. The credit facilities granted by banks during 2015 and 2016 grew by 9.6% and 9%, respectively, compared to 6.3% and 5.3% during 2013 and 2014 respectively.

STRESS TESTING

The stress testing results that are used to measure the ability of banks to withstand shocks showed that the Jordanian Banking Sector is generally capable of withstanding high shocks and risks. A hypothetical scenario was assumed. This scenario was built on the further exacerbation of regional geopolitical situation surrounding the Kingdom, the continuous decline in oil prices and its clear impact on the financial situation of the Gulf states, and the transfer of this impact to Jordan in the form of the considerable decline in the remittances of Jordanians working in the Gulf, a decline in grants and aid extended to Jordan from the Gulf countries, and a decline of capital inflow from tourism and direct

investment, which will, in turn, lead to a decrease in economic growth rates in the Kingdom, an increase in unemployment rates, and a contraction of the financial market. The testing results showed that the capital adequacy ratio of the Banking Sector in Jordan for the years 2017, 2018 and 2019 are expected to be 17.9%, 16.8% and 15.3% respectively assuming the occurrence of the above scenario. In other words, under the very severe case scenario, the capital adequacy ratio will be well above the lower bound applied in Jordan of 12.0% and the lower bound determined by Basel Committee of 10.5%.

OPERATIONAL EFFICIENCY

The Cost- income ratio average for the banking sector in Kingdom increased from 50.6% at the end of 2015 to 55.7% at the end of 2016. Despite this increase, the CIR average was still close to the internationally acceptable upper bound of 55.0%. However, this entails that some banks in Jordan should improve their control and cutting down of their operational expenses.

HOUSEHOLD SECTOR

The household debt to income ratio in 2016 kept its level of 2015 of 69.3%. This implies that the risks of lending to the household sector did not increase in 2016 relative to 2015. However, the ratio is still relatively high and banks should maintain cautiousness of the risks of lending the household sector and take into consideration the evolution of these risks when considering any expansion.

CORPORATE SECTOR

Both industrial and services companies sectors maintained the stability of their financial positions during the period (2012-2014) through maintaining high levels of assets and high profits despite the tough political and economic conditions that the region is facing and their impact on Jordan. However, the real estate companies sector witnessed an apparent decline in its business size and profitability during the period (2012-2014). Nevertheless, it started to improve in 2015. The results of the stress testing of companies showed that about 90.0% of the companies were capable of withstanding the two shocks of interest rate increase or corporate profits decline. Yet, the real estate companies sector was impacted more significantly. This entails that banks should consider these risks when expanding the credit extended to the real estate sector.

REAL ESTATE SECTOR

The real estate credit facilities or credit facilities granted against real estate collaterals represented about 33.3% of total credit facilities granted by banks at the end of 2016, compared to 35.6% at the end of 2015. Total credit facilities granted to the real estate sector for commercial and residential purposes reached JD 4.96 billion at the end of 2016, accounting for 21.8% of the total facilities granted by banks, compared to JD 4.53 billion at the end of 2015, with a growth rate of 9.6%. On the other hand, it is noted that the growth rate of Real Estate Assets Price Index in Jordan was slightly higher than general inflation rate. Moreover, the increase of real estate witnessed a notable slowdown in 2015 and 2016 in line with deflation. This indicates that the rise in the prices of real estates in Jordan, especially during the post- crisis recovery phase, is normal and poses no threat to financial stability.

FINANCIAL INCLUSION

The CBJ efforts have focused on two main dimensions, namely: enhancing financial inclusion in a deliberate and prudent manner and enhancing the legislative scheme of the financial system. Regarding promoting financial inclusion, the CBJ at the end of 2016 announced to the public and all

major partners of the public and private sectors the vision of the National Financial Inclusion Strategy. It aims at enhancing the access of various groups in the society to the financial services provided by the formal financial sector in a fair, transparent, and responsible way and in line with the pillars of the National Agenda and strategic trends in the Kingdom in order to establish an inclusive and a sustainable financial system in Jordan. The National Financial Inclusion Strategy includes five pillars: financial education, financial consumer protection, small and medium- enterprises (SMEs), microfinance services, and digital payments. A database that supports these five pillars should be established to ensure the accuracy and implementation of the goals of each pillar as well as the clarity of the vision of these pillars. The strategy is expected to be launched at the end of 2017. The report detailed the most important accomplishments and steps taken for each of the pillars of the strategy. It is worth mentioning that the National Financial Inclusion Strategy will include an analysis of the status quo and a specification of all obstacles that stand against achieving financial inclusion. It will also include targets that are measurable and achievable within a determined timeframe and a clear mechanism for measuring the success in achieving the goals and desired accomplishments. As part of joining the Global Alliance for Financial Inclusion, the CBJ has announced its commitment with Maya Declaration. It declared its commitment in achieving an ambitious goal of increasing financial inclusion of the adult population from its current level of 24.6% at the end of 2015 to 36.6% by the end of 2020, as well as reducing the gender gap in the access to finance from 53% to 35%.

LEGISLATIVE FRAMEWORK

The CBJ continued in 2016 the comprehensive review of the legislative framework governing the practices of the banking and financial institutions that are under its supervision umbrella. Chapter three of the report detailed the major supervisory amendments conducted by the CBJ during 2016 and 2017, especially the Amended Central Bank Law No (24) of 2016 and the Law for Organizing Dealing with Foreign Stock Exchange No (1) of 2017, as well as some important banking instructions that were issued to keep pace with the latest developments and best international practices and experiences regarding the role of central banks in maintaining monetary and financial stability. For example, the CBJ issued on 12-06-2017 the Instructions for Dealing with Domestic Systemically Important Banks No. (2/2017) in order to promote the ability of the Domestic Systemically Important Banks (D-SIBs) to maintain the safety and the soundness of their financial positions and mitigate the adverse effects that might result in case they face substantial dangers on the stability of the financial system and the economy in general. This piece of instructions is prepared in compliance with the pertinent international practices and the application of Basel Committee on Banking Supervision principles about "Dealing with Domestic Systemically Important Banks." The systemic banks are the banks that are big in size and possess high market share, interconnected with other banks and financial institutions, and whose weakness or failure leads to adverse substantial consequences on the financial system and the economy as a whole. The report stated that most banks that were classified as D-SIBs are capable of meeting the additional capital surcharge requirements without any need for increasing capital. This is attributed to the sufficiently high capital adequacy ratios and to the possession of high-quality Tier1 capital, of which most are CET1 that reflects positively on enhancing financial stability in Jordan.

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CHAPTER ONE

DOMESTIC AND GLOBAL ECONOMIC AND FINANCIAL DEVELOPMENTS AND OUTLOOK

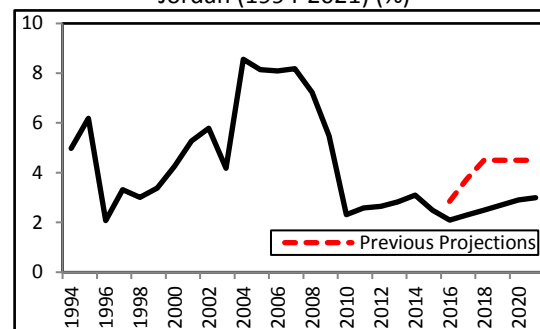
1.1 INTRODUCTION

Global financial stability continued to improve at the end of 2016, compared with the developments documented in the October 2016 Global Financial Stability Report published by the International Monetary Fund (IMF). In its report of April 2017, the IMF made it clear that the momentum of the economic activity had increased in the context of monetary and financial conditions that are generally facilitative. This raised hope of economic recovery as long-term interest rates have increased, helping to boost profits for banks and insurance companies. The gains in many asset prices indicate that prospects are becoming more optimistic. The US stock market indices registered record highs in last March as investors watched the tax reform processes and infrastructure spending. Markets outside the US have also witnessed accelerated upward trend over the past six months, driven in part by increased growth expectations and higher basic commodity prices. At the same time, risk premiums decreased and volatility became less severe. According to the IMF forecast for the April 2017 World Economic Outlook, 2016 global growth was expected to reach 3.6%, but fell to 3.2%. However, the IMF raised its global growth forecast for 2017 from 3.4% to 3.5%, while the forecast for 2018 remained unchanged at 3.6%. Regarding Jordanian economy, it faced, and is still facing, several challenges and risks, the most

important of which are the political turbulences in the neighboring countries.

Despite this, the real GDP achieved a moderate growth rate in 2016 of 2.1%, though less than the projected figure of 3.2%. The IMF projections indicate improvements in the real GDP growth rate in 2017 and 2018 to reach 2.3% and 2.5% respectively (Figure 1-1).

Figure 1-1. Real GDP Growth Trend & Outlook for Jordan (1994-2021) (%)



Source: IMF World Economic Outlook Database, April 2017.

The growth rates of the Jordanian economy are expected to improve slightly in the coming five years to range between 2.5% and 3.0%. Even though these projections are less optimistic compared to the previous ones (2.5% - 4.0%), they show that the economic environment is expected to be relatively stable for the financial sector in the short and medium terms.

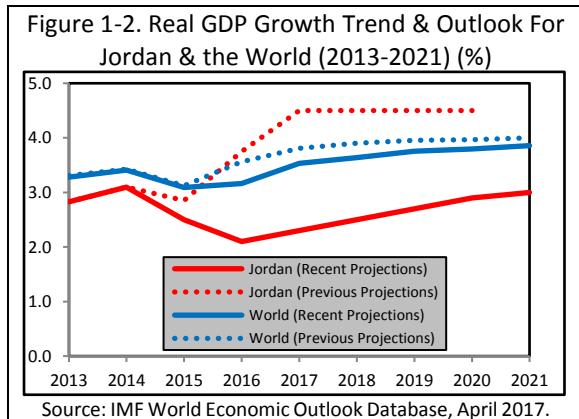
1.2 GLOBAL ECONOMIC DEVELOPMENTS

1.2.1 ECONOMIC GROWTH DEVELOPMENTS AND OUTLOOK

The global economy witnessed a slight improvement in 2016 compared to 2015. The growth rate of real GDP reached 3.2% in 2016 compared to 3.1% in 2015.

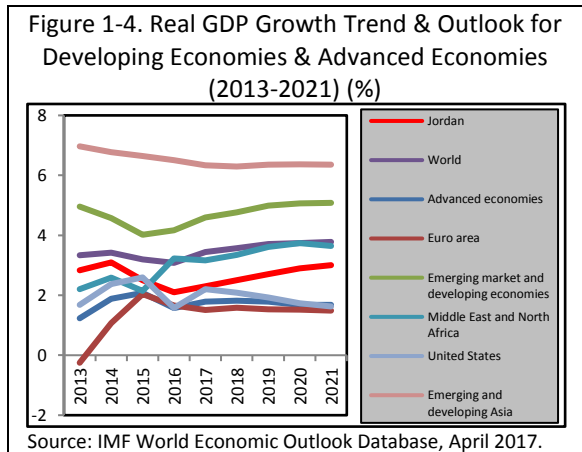
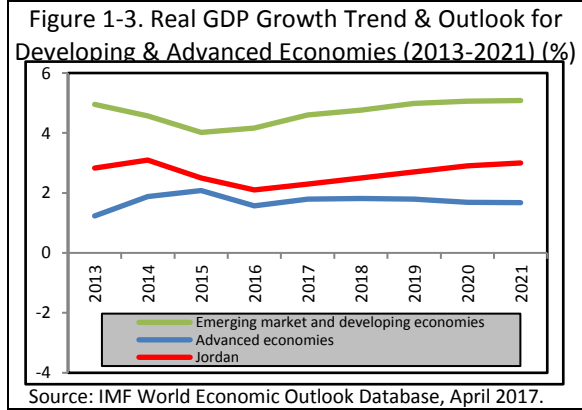
In the latest updates of its forecasts, the IMF projected this rate to reach 3.5% and 3.6% in 2017 and 2018 respectively as the global activity is expected to improve in these two years more than 2016, especially in 2017 and beyond. This improvement is driven by the improved conditions in the developing countries and emerging economies in general, excluding the basic commodities exporting countries that are

expected to continue suffering from the continuous decline in oil prices, the slow recovery of the global economy, and the relatively weak growth rates in the long term despite the improvements in the short and medium terms (Figure 1-2).

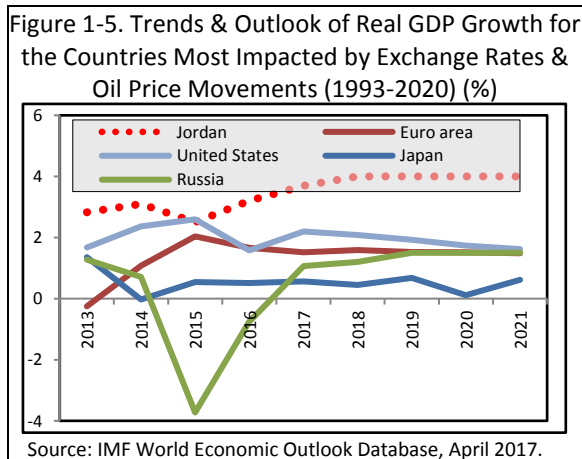


There are still substantial counter- side risks for the medium- term outlook that might have really intensified since the last IMF projections, despite the possible achievement of growth that exceeds the projected levels in the near term, as indicated previously. In spite of the limited changes to the global growth forecast for 2017 and 2018 since the October 2016 WEO report, there have been meaningful changes to forecasts for country groups and individual countries. In line with the stronger- than-expected momentum in the second half of 2016, where the forecast envisages a stronger rebound in advanced economies, and as growth is still expected to pick up notably for the emerging markets and developing economies group; the declining activity in some large countries has led to small downward revisions to the group's growth prospects for 2016 (Figure 1-3).

Figure 1-4 shows the growth trends and outlook for seven major economic groups besides Jordan. They include the world, advanced economies, euro zone, emerging markets and developing economies, MENA, USA, and developing countries of Asia.



As it appears from the figure, the developing countries of Asia dominate the other main economic groups in achieving high growth rates both in the past and in the future that exceed 6.0%, followed by the emerging markets and developing economies group with growth rates that hovered around 5.0% during the period (2013- 2021). As it appears from the figure, Jordan is expected to occupy the middle position among the groups in the future economic growth forecasts.



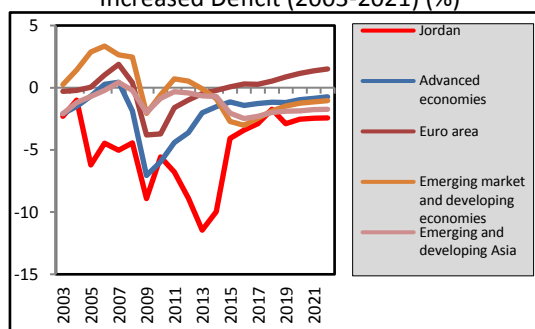
1.2.2 PUBLIC FINANCE DEVELOPMENTS

The April 2017 Government Fiscal Monitor stated that the global economy is undergoing major transformations, including a productivity slowdown, technological change, and global economic integration. This creates a need for public policies to facilitate these transformations, while controlling any potential negative effects. The report showed that fiscal policy may have a greater role to play in fostering sustainable and comprehensive growth. The report showed also that the high degree of uncertainty surrounding the government finance outlook requires a better understanding and management of risks.

The report pointed also to changes in the public finance positions and to increasing risks. Regarding the advanced economies, they eased their fiscal stance through increasing government spending by 0.2% of GDP in 2016, after adopting a gradual austerity public finance in the past five years. The public finance stance in these countries (as a percentage of the GDP) is expected to remain broadly neutral in 2017 and 2018.

In emerging market and developing economies, the worsening in government finance seems to have ended. However, the expected improvement depends significantly on the developments in commodity markets. Oil exporting countries are executing large spending-control plans to realign spending with revenues. Moreover, their public finance deficits are expected to fall by about \$150 billion between 2016 and 2018. The improvement next year will be coming mostly from the non-oil balance. Regarding oil importing countries, including Jordan, the public finance deficit is expected to remain broadly stable in 2017 followed by a gradual control process over the medium term (Figure 1-6).

Figure 1-6. Fiscal Budget Stance – Expectations of Increased Deficit (2003-2021) (%)



Source: IMF Fiscal Monitor, April 2016.

1.3 GLOBAL FINANCIAL SYSTEM STABILITY

1.3.1 GLOBAL FINANCIAL STABILITY

The global financial stability continued to improve in 2016 as shown in April 2017 Financial Stability Report published by the International Monetary Fund (IMF), which showed that the momentum of economic activity and long-term interest rates had increased, and, thus, helped to boost profits for banks and insurance companies. Despite these positive developments, the threats to the financial stability are attributed to the high uncertainty of the political conditions and government policies all over the world. And if the developments in the policies of advanced economies make the path to growth and debt less optimistic, the risk premiums and fluctuations might increase sharply. In addition, the shift towards protectionism in the advanced economies might limit international trade and economic growth, hinder capital inflow, and weaken the market spirits.

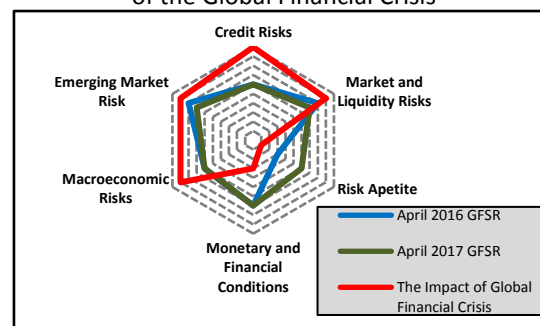
The report stated that the high uncertainty about the political situation and government policies are the biggest challenges and risks. In the USA, the policies adopted might increase the imbalances in the public finance and global risk premiums. This outcome might have adverse repercussions on the emerging markets and might reactivate capital outflows, and, hence,

increase credit and financing risks for banks due to the deterioration in the external environment. These developments lead to vulnerabilities in the financial system. The shift towards protection policies in the advanced economies might adversely affect global economic growth and trade, as well as capital flows.

Nevertheless, what about the consequences of these policies? Inevitably, there will be negative consequences on several emerging market economies as several countries in this group will be subject to increased vulnerabilities in their relatively weak banks due to the challenges of asset quality and provisions after the credit boom in the long term that eventually led to increasing leverage in the corporate sector. Based on the global financial stability map, Figure 1-7, the developments in risks and financial and monetary conditions for April 2017 compared to the same month in 2016 were as follows:¹

- There was no change in credit risks and macroeconomic risks. The relevant numbers of these risks stayed moderate to some extent (0.6). Similarly, the monetary and financial conditions settled at 0.7. Nevertheless, the risk appetite improved substantially to jump from 0.3 in 2016 to 0.6 in 2017, or an increase by 100.0%.
- Emerging markets risks and market and liquidity risks both declined from 0.8 in 2016 to 0.7 in 2017.

Figure 1-7. Global Financial Stability Map for October 2016 & April 2017 - A Comparison with that of the Global Financial Crisis



Source: IMF, Global Financial Stability Report, April 2017.

The report included an important comparison between the short-term developments in the global financial stability indicators and those of the global financial crisis. Despite the challenges that the global financial stability encounters in general and that vary in the short term, the general trend in the global financial stability is improvement as it appears in comparing the developments of risks and financial and monetary conditions with those that prevailed during the global financial crisis. As it appears in Table 1-1 and figure 1-7, the average of all risks during the Global Financial Crisis decreased from 0.93 to less than 0.7 in the past near period. Whereas, the average of financial and monetary conditions and risk appetite improved from 0.2 during the global financial crisis to 0.65 in the past near period.

Table 1-1. A Comparison of Developments of Monetary & Financial Conditions and Risks to the Numbers of the Global Financial Crisis

	Global Financial Crisis	April 2016	April 2017
Credit Risks	1.0	0.6	0.6
Emerging Markets Risks	0.9	0.8	0.7
Macroeconomic Risks	0.9	0.6	0.6
Monetary and Financial Conditions	0.3	0.7	0.7
Risk Appetite	0.1	0.3	0.6
Market and Liquidity Risks	0.9	0.8	0.7
Average of All Risks	0.93	0.70	0.65
Average of Risk Appetite and Monetary and Financial Conditions	0.20	0.50	0.65

Source: IMF, Global Financial Stability Report, April 2017.

¹ The global financial stability map is composed of four types of risks represented in the map individually with values in the range (0-1) from the lowest risk, to moderate risk to high risks. These types are market and liquidity risks, credit risks, emerging markets risks, and macroeconomic risks. The map also contains two types of surrounding conditions: monetary and financial conditions and risk appetite. The higher the values of these conditions, the better the global financial stability.

1.3.2 DOMESTIC FINANCIAL STABILITY

As it will appear from the analysis of the financial sector later in this **JFSR2016**, the banking and financial sectors in Jordan are generally stable. Jordan enjoys a sound and solid banking system that is capable to a large extent of withstanding high shocks and risks due to the high and satisfactory levels of capital, in addition to the comfortable levels of liquidity and profitability.

1.4 DOMESTIC ECONOMIC AND FINANCIAL DEVELOPMENTS AND OUTLOOK

1.4.1 DOMESTIC ECONOMIC POSITION AND OUTLOOK

Jordan is still facing tough external environment. The repercussions of the political situations in the region, especially in Syria and Iraq and their consequences at all levels, affect Jordanian economy as an economy that is small, open, and oil importing.

Generally, and despite challenges, the prudent economic policies helped the Jordanian economy to maintain its relative stability through the appropriate monetary and fiscal policies that helped maintaining relative economic and monetary stability by sustaining positive economic growth rates and high levels of foreign reserves stocks despite the continuous decline in price levels in this period that is attributed mainly to the decline in world oil prices.

Even if it had achieved a general relative improvement, the Jordanian economy in 2016 witnessed a decline in some economic indicators compared to 2015 due to the exacerbation of the regional circumstances and the closure of borders with Iraq and Syria. The following is a comparison of some economic indicators between the two years:

- 1- A decrease in the growth rate of real GDP from 2.4% in 2015 to 2.1% in 2016.
- 2- A decrease in the budget deficit to GDP from 3.5% in 2015 to 3.2% in 2016.
- 3- An increase in the current account deficit to GDP from 9.1% in 2015 to 9.4% in 2016.
- 4- A decrease in total national exports from 18.0% of the GDP in 2015 to 15.9% in 2016.
- 5- A decrease in imports from 54.6% of the GDP in 2015 to 49.7% in 2016.
- 6- Relative inflation rate stability through the slight decline in deflation from 0.9% in 2015 to 0.8% in 2016. This continuous deflation is mainly attributed to the decline in oil prices and the prices of commodities and services related to it, as well as to the weak economic growth.

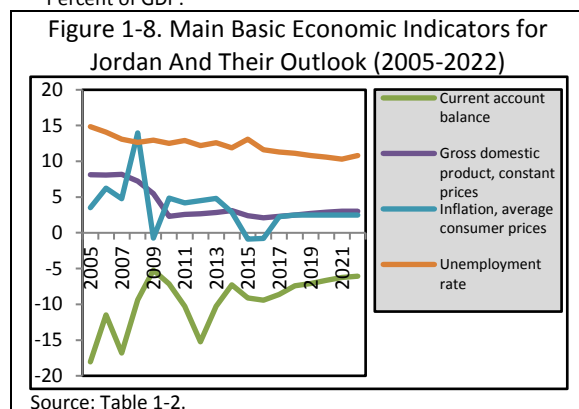
Table 1-2 and Figure 1-8 show the major economic indicators of the domestic economy and their outlook, as well as the developments of some of them in Jordan. As it is shown clearly, and in spite of some negative developments expected for 2017, the medium term looks more optimistic with regards to improvements in the economic growth rates, the stability of inflation, the decline in unemployment rate, and the decline of current account deficit.

Table 1-2. Some of the Main Economic Indicators for Jordan & Their Outlook for the Period 2005-2022

Year	GDP*	Inflation (Period average) *	Unemployment Rate (% of Labor Force)	Population (Million)	Gross Debt ***	Current Account ***
2005	8.14	3.49	14.84	5.47	100.27	-18.05
2006	8.09	6.26	14.06	5.60	88.00	-11.46
2007	8.18	4.74	13.10	5.72	90.30	-16.80
2008	7.23	13.97	12.65	5.85	60.24	-9.36
2009	5.48	0.74-	12.94	5.98	64.78	-5.23
2010	2.31	4.85	12.50	6.11	67.11	-7.13
2011	2.59	4.16	12.90	6.25	70.73	-10.26
2012	2.65	4.52	12.20	6.39	80.72	-15.23
2013	2.83	4.83	12.60	6.53	86.68	-10.28
2014	3.10	2.90	11.88	6.68	89.05	-7.28
2015	2.38	0.88-	13.08	9.50	93.39	-9.10
2016	2.10	0.78-	11.60	9.80	94.99	-9.42
2017	2.30	2.26	11.30	10.02	95.78	-8.61
2018	2.50	2.50	11.10	10.25	93.25	-7.42
2019	2.70	2.50	10.80	10.48	90.12	-7.08
2020	2.90	2.50	10.60	10.71	85.58	-6.64
2021	3.00	2.50	10.30	10.95	81.21	-6.26
2022	3.00	2.50	-	11.20	77.00	-6.08

Source: IMF World Economic Outlook Database, April 2017. Estimations for the years (2016- 2022) have been taken from the IMF private Database. * Y-o-Y growth rates in percent. ** Population count numbers are based on the data of the Department of Statistics. A long- term growth rate of population of

2.25% has been used to forecast population for the coming years.
*** Percent of GDP.



1.5 CHALLENGES TO STABILITY

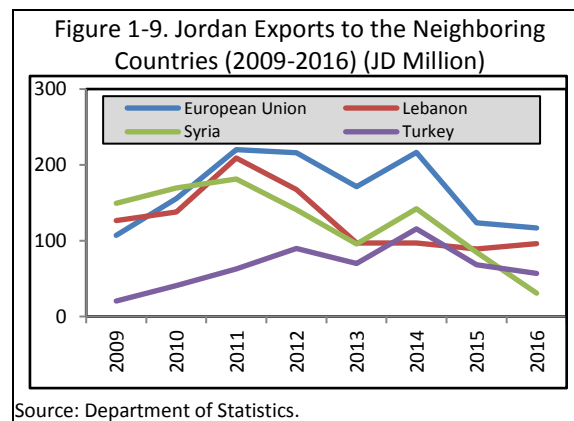
1.5.1 DECLINE IN ECONOMIC ACTIVITY RATE

There are several challenges to financial stability in Jordan, the most important of which are the low growth of GDP, high unemployment rates—especially among the youth and women— and the turbulent regional political and security conditions resulting from the long lasting conflicts and their repercussions like the huge influx of Syrian refugees into Jordan. These challenges have put a pressure on Jordanian economy in various sectors, especially education and health sectors and labor market through the increase in unemployment rates and decline in wage rates.

1.5.2 THE EXACERBATION OF THE REGIONAL SITUATION

The conflicts in Syria and Iraq are still taking place, even though the influx of Syrian refugees declined. The large number of Syrian refugees have put pressure on the limited available resources, especially in the education, health, and infrastructure sectors. These conflicts have led also to severe adverse effects on the trade paths for Jordan. As shows, Jordan's exports to the neighboring countries continued in their downward trend and approached their levels seven years back (i.e. the year 2009's levels). These conflicts also reflected on the investment

decisions of the foreign investors and led to a rise in the public debt.



1.5.3 THE INCREASING STRENGTH OF THE DOLLAR

The expectations of international institutions talk about the increase in the strength of the US economy compared to the other advanced economies. For example, growth rates are forecasted to reach 2.3% and 2.5% during 2017 and 2018 compared to rates not exceeding 2.0% in the European Union States. Inevitably, the improving economic conditions in the USA compared to the rest of the world will enhance the strength of the US Dollar, which could consequently affect the competitiveness of the Jordanian economy adversely. This requires keeping the adaptation of a prudent monetary policy and undertaking structural reforms to improve the competitiveness of the Jordanian economy.

1.5.4 A REALISTIC OUTLOOK

As a realistic outlook at the same time, and regardless of the above- mentioned situations and conditions, there are evidences that the economic performance of Jordan in terms of productivity and growth of per capita income was lower than that of its counterpart in other emerging market economies since the global financial crisis, even before the occurrence of the adverse shocks. These challenges impose the

continuous improvement of economic policies and implementation of reforms to promote investment and productivity effectively, besides aligning the public debt to a downward trend towards more sustainable levels.

1.6 OTHER INDICATORS

1.6.1 TRANSPARENCY AND ANTICORRUPTION

Transparency and anticorruption indicators are prepared by Transparency International Organization. This organization has been publishing corruption indicators since 1995 through the preparation of an annual report that includes a ranking of the world countries based on their adoption of transparency and fighting corruption schemes.

Among about 140 countries in the world, Jordan was ranked 57 with a score of 48 in 2016 (Table 1-3). Next to Jordan, Hungary, Bulgaria, and Tunisia are ranked (Table 1-4 and Figure 1-10).

Table 1-3. Jordan Rank among World Countries in Anti-corruption (2016)

Rank		Score				
2015	2016	2012	2013	2014	2015	2016
45	57	48	45	49	53	48

Source: <http://www.transparency.org/research/cpi/overview> .

Table 1-4. Jordan Rank among Some World Countries in Anti-corruption in 2016 compared to 2015

Country	2016			2015		
	Rank	Order	Score	Rank	Order	Score
Finland	3	12	89	2	12	90
Switzerland	5	11	86	7	11	86
Singapore	7	10	87	8	10	85
Ireland	19	9	73	18	9	75
Uruguay	21	8	71	21	8	74
Lithuania	38	7	59	32	7	61
Georgia	44	6	57	48	5	52
Croatia	55	5	49	50	4	51
Jordan	57	4	48	45	6	53
Hungry	57	3	48	50	3	51
Bulgaria	75	2	41	69	2	41
Tunisia	75	1	41	76	1	38

Source: <http://www.transparency.org/research/cpi/overview> .

Figure 1-10. Rank of Jordan and Selected World Countries in Anticorruption (2006-2016, average)

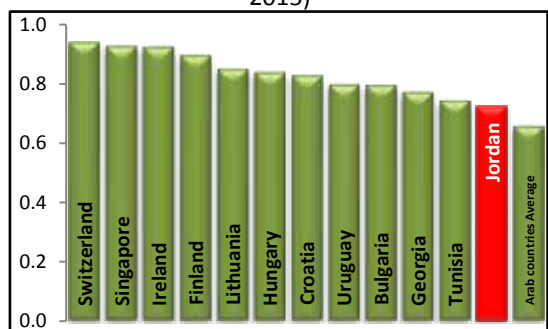


Source: <http://www.transparency.org/research/cpi/overview>

1.6.2 HUMAN DEVELOPMENT

The United Nations Development Program (UNDP) issued the 2016 Human Development Report that includes a measurement of human development index (a summary average of the achievement in the three key dimensions of human development: enjoying a long and healthy life; being knowledgeable, educated, and literate; and having a decent standard of living). The report includes many sub- indicators related to human resource development. Jordan holds a relatively low rank compared with some other countries involved in the comparison process in this context (Figure 1-11).

Figure 1-11. Rank of Jordan and Some Other Countries in Human Development Index (HDI) (1990-2015)



Source: <http://hdr.undp.org/en/composite/trends>

Despite this, Jordan's figure exceeds the average of the Arab countries as it appears in Figure 1-11 and follows a relatively stable upward trend as indicated by the historical data (Figure 1-12). Besides, Jordan does not differ from the pattern of some selected countries (Figure 1-13).

Figure 1-12. Human Development Index for Jordan (HDI) (1990-2015)

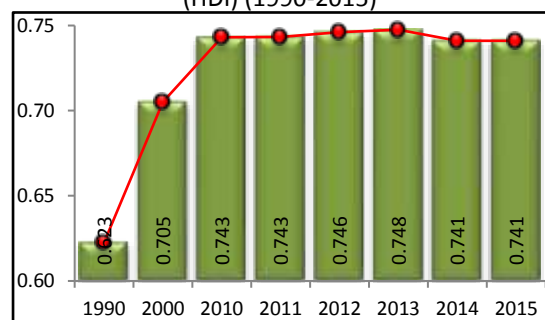
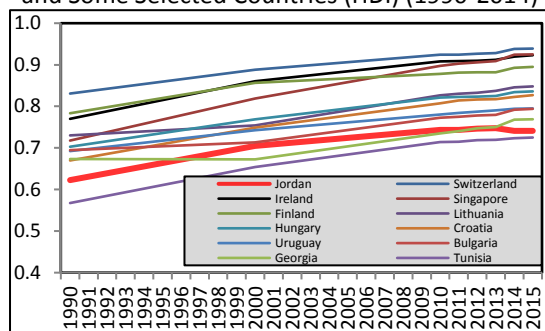

 Source: <http://hdr.undp.org/en/composite/trends>

Figure 1-13. Human Development Index for Jordan and Some Selected Countries (HDI) (1990-2014)


 Source: <http://hdr.undp.org/en/composite/trends>

1.6.3 COMPETITIVENESS

Competitiveness indices are prepared by the World Economic Forum (WEF). The degree of competitiveness is measured for 140 world economies through a set of factors and sub-indicators that result in one number that reveals the competitive stance for a given country. These indices and sub-indicators for Jordan are shown in Table 1-5.

Table 1-5. Pillars of International Competitiveness Index for Jordan (1980-2015 average)*

No	Index and Pillar	Score	Rank
	Sub index A: Basic requirements	4.5	75
1	1st pillar: Institutions	4.4	36
2	2nd pillar: Infrastructure	4.0	70
3	3rd pillar: Economic environment	3.4	130
4	4th pillar: Health and education	6.0	54
	Sub index B: Efficiency enhancers	4.1	67
5	5th pillar: Higher education and training	4.7	50
6	6th pillar: Market efficiency	4.6	39
7	7th pillar: Labor market efficiency	4.0	93
8	8th pillar: Financial market development	3.8	71
9	9th pillar: Technological readiness	3.7	76
10	10th pillar: Market size	3.7	76
	Sub index C: Innovation and sophistication factors	4.0	40
11	11th pillar: Business sophistication	4.3	40
12	12th pillar: Innovation	3.7	40
	Index	4.2	64

* Rank is 1-7. The higher the score, the better. The rank is among 140 countries in 2015. No updates of 2016 numbers were issued within averages.

In terms of score, as shown in Figure 1-14, Jordan ranks eighth among a group of selected countries for the average score for 2015 and 2016. In terms of ranking, Jordan has a good ranking to some extent among these countries

as it appears in Table 1-5 that includes the averages for the years (1980-2015). There may have been, however, some decline in the current decade over the past decade, as shown in Figure 1-15, but, generally, Jordan exceeded four countries in the rank in the year 2006 and continued to exceed four countries in 2016, although the combination of the countries varied.

As it can be noted from Figure 1-14, Jordan exceeds Georgia, Uruguay, Croatia, and Tunis. Syria, Libya, and Yemen have left the ranking due to the severe security and political situation they are passing. Jordan, also, tops the ranking of Arab countries except for the six Gulf States.

Figure 1-14. Rank of Jordan and Selected Countries in Competitiveness (2015-2016, Score average)

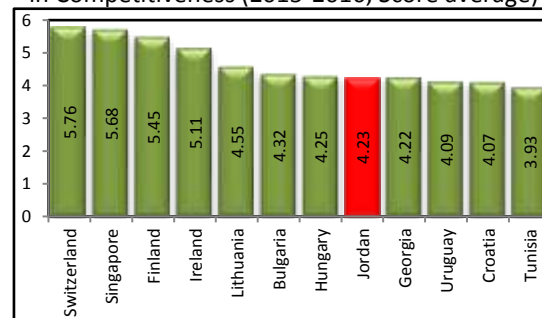
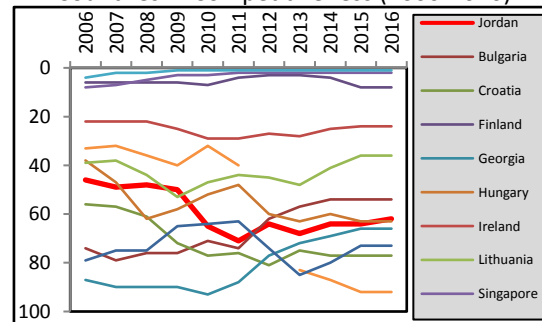

 Source: <http://reports.weforum.org/global-competitiveness-report-2015-2016/economies/#economy=JOR>

Figure 1-15. The Rank of Jordan and Selected Countries in Competitiveness (2006-2016)


 Source: <http://reports.weforum.org/global-competitiveness-report-2015-2016/economies/#economy=JOR>

Although the competitive situation for Jordan fell relatively during the past few years, including 2016, the improvement in the average ranking for Jordan, accompanied by a setback in the competitiveness position for some countries reflects the determination of the Jordanian government to reflect a positive image of the competitiveness of the Jordanian economy despite the very complex developments that hit, and are still hitting, the region in general and Jordan in particular.

1.7 CONCLUSION

Despite the negative developments that affected the region in particular and the world in general during the last years that touched the economic, political, and social conditions in a number of countries around the world, particularly the Middle East

countries. Which also reflected on increasing the challenges that Jordan is facing; the prudent government policies and the CBJ policies both have helped to reduce the effects of these challenges, and, hence, helped to maintain economic, monetary, and financial stability in Jordan.

CHAPTER TWO

FINANCIAL STABILITY INDEX

2.1 INTRODUCTION

The financial crises are the most prominent challenges that face the financial and banking systems and threaten their stability. Withstanding crises and fluctuations and maintaining financial stability in the Kingdom are of the main objectives that the Central Bank of Jordan works on achieving. Therefore, the need evolved for building an index that describes the status of the financial system through a set of variables that represent the components of this system through which the fragilities and vulnerabilities can be pinpointed and this index is considered an early warning indicator.

The experiences of several countries in building their financial stability index were reviewed. Inevitably, the methodologies used varied in terms of variables, statistical tools and weights, as well as other dimensions. Based on these experiences, the best international practices in this regard were taken into consideration in building the financial stability index in the Hashemite Kingdom of Jordan in line with the privacy of the financial and economic system in Jordan as an aggregate index composed of three sub- indices each of which represents a major component of the Jordanian financial system. They are Banking Sector Index, Macro- Economy Index and Capital Market Index. These three indices were composed of nine, six, and two variables respectively. This implies that the major index is composed of 17 variables that were calculated and historically analyzed during the last ten years (2007-2016).

Before describing this index, it is worth noting that the process of selecting the variables that compose the Macro- Economy Index and Capital Market Index and analyzing their developments was conducted within their relation to financial stability. This implies that building and analyzing these two indices independently might require a variable selection and development analysis process different from what is done in the present framework in this report.

COMPONENTS OF FINANCIAL STABILITY INDEX

2.2 BANKING SECTOR INDEX

The Banking Sector Index is composed of nine sub indicators that represent the so-called Financial Soundness Indicators that reflect the major aspects of the performance of banks in Jordan. They include capital adequacy, asset quality, liquidity and profitability.

2.2.1 CAPITAL ADEQUACY

The capital adequacy ratio is one of the most important ratios that measure the resilience and the soundness of the financial positions of banks. The satisfactory capital adequacy enhances the ability of banks to withstand shocks and substantial risks, and, hence, to protect the depositors' money. The higher the capital adequacy ratio to some certain limits is, the more favorable its impact on the financial stability will be.

2.2.2 ASSETS QUALITY

Two ratios were used to express assets quality at banks: the ratio of non- performing loans to total loans, and the net ratio of non- performing loans after deducting net of impairment provisions to capital. These two ratios are inversely related to financial stability. The lower they are, the better the quality of banking sector assets will be.

LIQUIDITY

The last global financial crisis revealed that there was an apparent weakness in liquidity risks management at some banks in the world. This entails monitoring liquidity levels at banks through the implementation of some standard ratios. To express liquidity levels at banks in Jordan, both of the legal liquidity ratio and the ratio of liquid assets to total assets were used. The higher the liquidity ratio to some certain limits is, the more the financial stability status in the kingdom will improve.

PROFITABILITY

Profitability could be indicated using return on assets, return on equity, and the ratio of interest to income. In addition, the ratio of non-interest expenses to total income was used. The latter ratio is one of the most important ratios that measure operational efficiency in banks. The lower this ratio than 55.0% is, the higher the operational efficiency in banks will be – as stated later in Chapter 3 of this report.

2.3 MACRO-ECONOMY INDEX

2.3.1 THE GROWTH OF GROSS DOMESTIC PRODUCT

The growth rate of Gross Domestic Product (economic growth rate) is used as one of the main economic variables that affect non-performing loans. Economic literature indicates that the decline of economic growth rate causes increases in non-performing loans because of the slowdown in economic activity. Consequently, the ability of clients to repay their debts decreases.

2.3.2 CREDIT TO GDP GAP

The gap is calculated as the difference between the ratio of credit granted to private sector to the GDP and the long-term average of this ratio.

This indicator is one of the most important indicators and measures that are used to monitor the systemic risks that might affect the financial system as a whole. A bigger gap between the growth of credit and the growth of gross domestic product indicates directing bigger portions of credit to financing consumption needs, which in turn might lead to an increase in the prices of assets, especially real estate and stock assets and, hence, increasing the probability of forming price bubbles that adversely affect financial stability.

2.3.3 CURRENT ACCOUNT DEFICIT TO GDP

A substantial deficit in the current account is a judgment of the presence of imbalances in the macro economy that adversely affect financial stability.

2.3.4 HOUSEHOLD DEBT TO INCOME RATIO

As shown later in Chapter 4, high household debt to income ratio adversely affects the ability of individuals to spend, save, and meet their obligations towards banks.

2.3.5 FLUCTUATIONS IN REAL ESTATE PRICE INDEX

The higher and more continuous the increase in the real estate price index is, the greater the possibility of an emergence of a price bubble in the real estate market will be, which is considered a source of systemic risks that threaten financial stability.

2.3.6 INFLATION RATE

Macroeconomic stability is primarily the price stability in the medium and long terms. That is, the higher the inflation rate is, the lower the purchasing power of the currency will be. This, then, has a negative impact on financial stability.

2.4 CAPITAL MARKET INDEX

2.4.1 PRICE- TO- EARNINGS RATIO

This variable compares the stock price with the return (earnings) that might be obtained if the stock is purchased. A high value of the stock compared to the earnings means that the stock is overpriced, which might lead to price bubbles in the stock market in case the increase of the price was notable.

2.4.2 MARKET VALUE OF STOCKS TO GDP

The market value of stocks to GDP measures the size of the financial market relative to the size of the economy. It helps to determine the impact of the developments in the financial market on the economic and financial stability.

2.5 METHODOLOGY

The methodology used to construct a Financial Stability Index for Jordan is one of the most widely used methodologies in many countries that have worked to develop such an index.²It has been benefited from the experiences of many countries in this regard and the best practices have been adopted to implement taking into account selecting the variables that reflect the privacy of the Jordanian financial sector, especially the domination of the banking sector compared to the rest of the components of the financial system. Therefore, the indicators of the banking sector accounted for more than half of the indicators used in the development of the overall index. The following box provides a brief explanation of the methodology used in calculating the financial stability index in Jordan.

Box 2-1. Calculating the Financial Stability Index

Box 2-2. Calculating the Financial Stability Index

1. Data Normalization

The rescaling methodology was used to re- measure the sub indicators or indices by deducting the minimum value of the sub-indicator from the indicator's value and then dividing the outcome on the range of the sub- indicator as follows:

$$d_i = \frac{A_i - \min_i A_n}{\max_i A_n - \min_i A_n} \quad (1)$$

Where:

A_i: The actual indicator value.

d_i: The rescaled (normalized) indicator.

Min & max: The minimum and maximum value of the sub-indicator.

2. Calculating the Sub- Indices

The sub- index is calculated by using the weighted average of all sub- indicators in their normalized form while taking into account the relative importance of the indicators when determining the weights. In this regard, several ways can be used to determine the weights of the indicators. The opinions of professionals and specialized experts are of the best- used methods in this context, where weights are set based on the importance of the sub-indicator and its impact on the financial stability in Jordan. The following weights were allocated to the banking sector indicators (Table 2-1).

Table 2-1. Weights Allocated to the Banking Sector Indicators

Variable	Weight
Capital Adequacy	%28.3
Asset Quality	%28.3
Liquidity	%28.3
Profitability	%15.0
Total	%100.0

The banking sector, macro economy, and capital market sub-indices were calculated as follows:

The Banking Sector Index:

$$BS_i = \frac{\sum_1^9 W_b d_b}{9} \quad (2)$$

The Macro Economy Index:

$$ES_i = \frac{\sum_1^6 d_E}{6} \quad (3)$$

The Capital Market Index:

$$MS_i = \frac{\sum_1^2 d_M}{2} \quad (4)$$

Calculating the aggregate financial stability index:

These are then used to calculate the Aggregate Financial Stability Index (JFSI) as the weighted average of the three sub- indices in equations (2), (3) and (4) above according to the following equation:

$$JFSI = 9/17 BS_i + 6/17 ES_i + 2/17 MS_i \quad (5)$$

Given that the value of the index ranges from zero to one.

²Banking Stability Index: A Cross-Country Study.

2.6 ANALYZING THE RESULTS

2.6.1 BANKING SECTOR INDEX RESULT, BSI

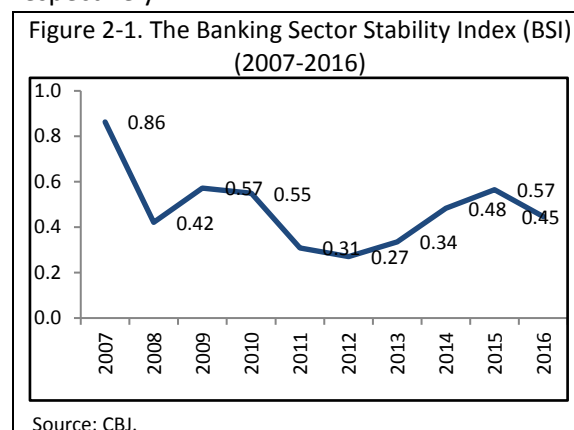
As shown in Figure 2-1 that depicts the Banking Sector Stability Index for the years (2007-2016), the BSI was 0.86 at the end of 2007, and then declined substantially during the last global financial crisis to reach 0.42 at the end of 2008. Analyzing the sub- variables of this index reveals that the driving reason for the decline in the index is the decline in capital adequacy ratio from 21.0% at the end of 2007 to 18.4% at the end of 2008. Even though it was still comfortably above the ratio determined by the Central Bank of Jordan of 12.0% and the one determined by Basel Committee on Banking Supervision of 8.0%, this decline, however, had a substantial effect on the index in general.³

Of the other drivers for the decline in the index is the decline in the legal liquidity ratio from 158.0% at the end of 2007 to 141.0% at the end of 2008, In addition to the decline in the return on assets and the return on equity from 1.6% and 13.0% at the end of 2007 to 1.4% and 12.0% at the end of 2008 respectively.

After this decline, the index started to increase and reached 0.57 and 0.55 at the end of 2009 and 2010 respectively. This increase is attributed mostly to the improvement in the legal liquidity ratio. This ratio approximated 159.0% and 161.0% at the end of 2009 and 2010 respectively, compared to 141.0% at the end of 2008. Besides, there was an improvement in capital adequacy ratio that reached 20.0% at the end of 2009 and 2010 compared to 18.4% at the end of 2008.

However, the index declined substantially again at the end of 2011 and 2012 to reach its minimum level of 0.27 at the end of 2012 as a result of the Arab Spring and the accompanying

repercussions, especially the tight economic situation. This led to a setback in the banking sector indicators. The non- performing loans increased from 8.2% at the end of 2010 to 8.5% at the end of 2011. In addition, the capital adequacy ratio declined from 20.0% at the end of 2010 to 19.0% at the end of the years 2011 and 2012. Similarly, the legal liquidity ratio declined from 161.0% at the end of 2010 to 153.0% and 143.0% at the end of 2011 and 2012 respectively.



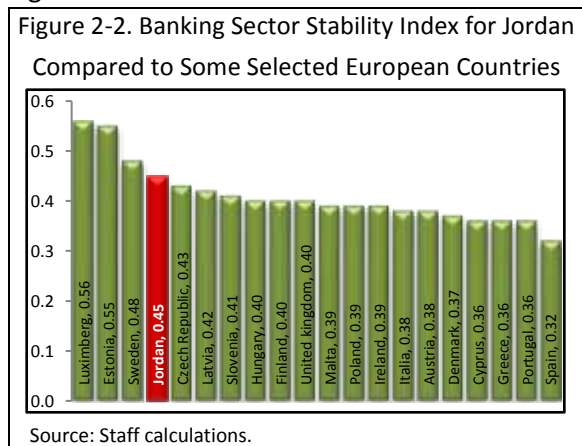
The index resumed an upward trend during the period (2013- 2015) to reach 0.34, 0.48, and 0.57 at the end of 2013, 2014, and 2015 respectively as a result of the decline in the ratio of non-performing loans to total loans. This ratio continued its downward trend during the years (2013-2015) to reach 4.9% at the end of 2015 compared to 7.0% at the end of 2013. This decline is attributed to the increase in credit facilities and the decline in the non- performing loans due to the improvement in the economic conditions and, hence, the ability of clients to repay their debts. These developments reflected positively on the financial stability in the Kingdom. Besides, this decline is also attributed to the improvement in banks' profitability as the profitability ratios increased while the ratio of non- interest expenses to income decreased

³ One of the main drawbacks of the financial stability index as recognized by most of the countries that developed it is that this index is highly sensitive to any changes in the values of the sub-indices that are included in its calculation, regardless of the size of these changes.

from 54.2% at the end of 2013 to 50.6% at the end of 2015.

However, the index decreased to 0.45 as a consequence of the decline in the legal liquidity ratio from 149.0% at the end of 2015 to 138.0% at the end of 2016 due to the improvement in the credit granted by banks (expansion of credit facilities), in addition to the decline in the profitability of banks, where the return on assets and return on equity both declined from 1.3% and 10.0% at the end of 2015 to 1.2% and 9.0% at the end of 2016 respectively.

In order to assess the Jordanian banking sector stability index, the index was compared with 19 European countries that developed their index using nearly the same methodology that was used by us. The Jordanian banking system ranked fourth after Estonia, Luxemburg, and Sweden, which in turn shows that Jordan has a resilient, a sound, and a stable banking system compared to many other countries as shown in Figure 2-2.

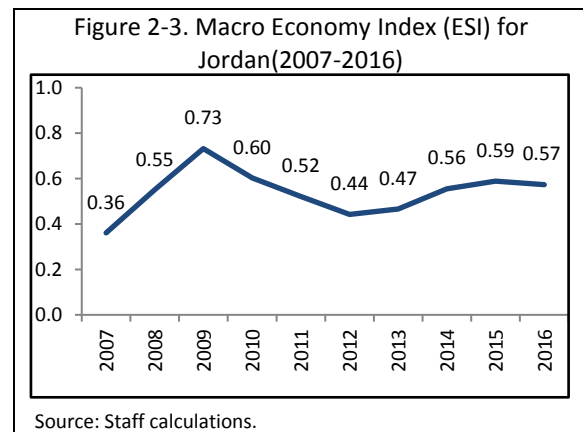


2.6.2 MACRO ECONOMY INDEX RESULT, ESI

Regarding the macro economy index and its relation to financial stability (Figure 2-3), the index had a value of 0.36 at the end of 2007. It then gradually increased to reach 0.73 at the end of 2009 impacted by the decline in the ratio of current account deficit to gross domestic product due to the decrease in oil bill cost that is imposing a huge burden on the national economy. It was also impacted by the decline in inflation rate from 4.7% at the end of 2007 to -7.0% at the end of 2009 as a result of the direct and indirect effect of the decline in oil prices on several goods and services, in addition to the decline in the credit to GDP gap. It declined from

11.0% at the end of 2007 to 3.0% at the end of 2009. The reason for this decline in the gap is attributed to the reluctance of banks to grant credit facilities during the global financial crisis. The index began to decline at the end of 2010. It reached 0.59 and continued to decline to reach 0.43 at the end of 2012. This decline is attributed mainly to the tight economic conditions that the Kingdom faced during that period, especially in 2012, when household debt to income ratio increased from 53.6% at the end of 2010 to 57.5% at the end of 2012. This is attributed to the rise in the household's debt (obligations) at a higher rate than the growth in their income. In addition, the deficit in the current account balance to GDP increased from -7.1% at the end of 2010 to -15.2% at the end of 2012 due to the disruptions in the Egyptian gap supply to Jordan in that period.

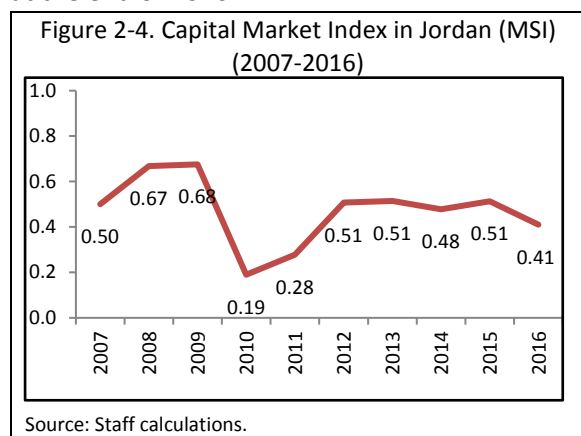
At the end of 2013, the macro economy index resumed its upward trend and reached 0.46. It continued its increasing trend to reach 0.57 at the end of 2016. The bulk of this increase was due to the decline in inflation rate to -0.9% at the end of 2016 from 5.6% at the end of 2013 because of the decline in oil prices. Of the other reasons of the increase in the index is the decline in the growth of real estate price index from 5.5% at the end of 2013 to 1.9% at the end of 2016.



2.6.3 CAPITAL MARKET INDEX RESULT, MSI

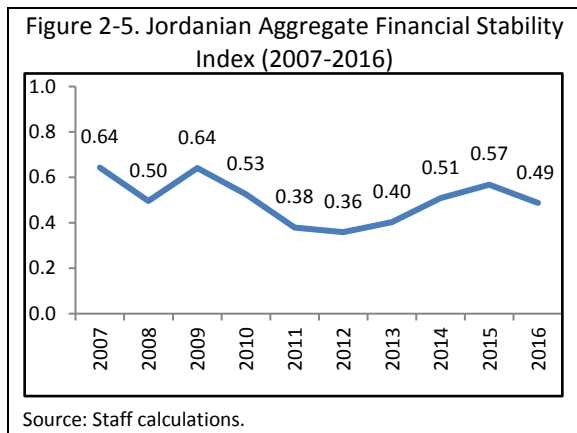
As shown in the graphic illustration of the capital market index and its relation with financial stability, the capital market index was 0.5 at the end of 2007. It then setback to its minimum at the end of 2010 to reach 0.19 as a result of the large drop in the ratio of market value of stocks

to gross domestic product. It reached 122.7% at the end of 2010 compared to 289.0% at the end of 2007. Besides, this setback is also a result of the decline in the profits of the companies enlisted in the financial market impacted by the repercussions of the global financial crisis in that period. However, the index started to increase starting from 2011 when it reached 0.28. It continued to increase and reached 0.41 at the end of 2016. This rise is mainly attributed to the decline in the price- to-earnings ratio – that declined from 22.6x at the end of 2011 to 16.5x at the end of 2016.



2.6.4 AGGREGATE FINANCIAL STABILITY INDEX IN JORDAN

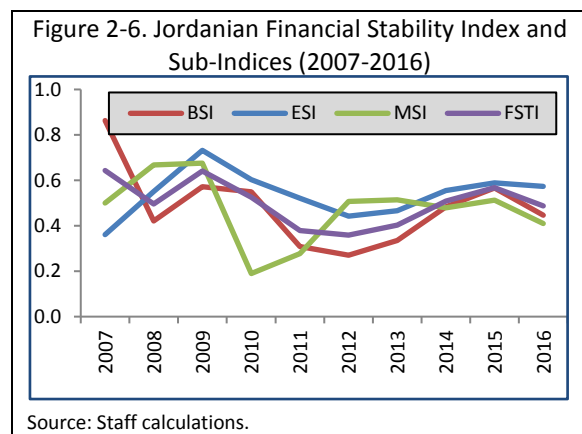
As we have previously mentioned, the value of the financial stability index ranges from zero to one. The closer the index value to zero is, the weaker the financial system will be. The closer the index value to one is, the greater the stability of the financial system will be. The Financial Stability Index in Jordan was 0.64 at the end of 2007 – before the global financial crisis. It then dropped to 0.50 at the end of 2008 due to the global financial crisis. Afterwards, it rose to 0.64 at the end of 2009 and declined again during the period (2010-2012), where it recorded its lowest value at the end of 2012, which is 0.36, impacted by the turbulences caused by the Arab Spring, the refugee crisis, and difficult Economic circumstances that the Kingdom faced, especially in 2012. After that, the index began to recover to reach 0.49 at the end of the year 2016 (Figure 2-5).



These developments in the “aggregate” Financial Stability Index suggest that the degree of stability of the financial system in Jordan is relatively satisfactory when taking into consideration the economic developments in the Kingdom, the region, and their impact on financial stability.

The banking sector stability index in particular compared with other countries that developed such a similar one shows that Jordan has, to a large extent, a sound, solid, and stable banking sector.

The results of the aggregate Financial Stability Index were a good representation of the empirical situation in Jordan. They demonstrate the degree of financial stability as a whole during the period of study. They also reflect the development of financial stability in Jordan as they very well capture the periods of tension and pressures during this period (Figure 2-6).



CHAPTER THREE

INFRA AND LEGISLATIVE STRUCTURE OF THE FINANCIAL SYSTEM

3.1 INTRODUCTION

The proper infra and legislative structures are of the main elements and factors for achieving financial stability. During the previous period, the CBJ continued its efforts to develop the financial system's infrastructure and the relevant financial legislations. These CBJ efforts have focused on two main dimensions, namely: promoting financial inclusion in a deliberate and prudent manner and enhancing the legislative scheme of the financial system.

3.2 PROMOTING FINANCIAL INCLUSION

3.2.1 THE FINANCIAL INCLUSION CONCEPT

Financial inclusion is the state wherein individuals and businesses can access various financial products and services (payment transactions, savings, credit, remittances, and insurance), which are delivered suitably and appropriately in a reliable and a sustainable way at a reasonable cost that meets their needs and eventually improves their standards of living.

The access and use of various financial products and services are very important at macro levels in strengthening inclusive and sustainable growth, developing economy, increasing employment rates, reducing poverty and unemployment rates, achieving equality among different social sections, and contributing to the achievement of the financial sector's stability and integrity. On individual and business levels,

they contribute also to improving day- to- day businesses, encouraging saving and investment, planning for the future, and encouraging and focusing on sustainable economic and social development.

In this context, fiscal and monetary policy makers in the developing and emerging market countries have embraced financial inclusion as a priority within their policies and objectives to achieve inclusive and sustainable growth.

Jordan recognizes financial inclusion as a principal pillar in achieving inclusive and sustainable growth in the Kingdom. The Jordanian government embarked on a process to build a robust infrastructure along with setting forth legislative and legal frameworks suitable for achieving an inclusive financial system.

The Central Bank of Jordan has assumed the leadership role in this process, with the support from various public and private sector stakeholders in order to ensure coordination and cooperation in formulating and implementing a number of key initiatives in this regard.

At the end of 2016, the Central Bank of Jordan announced to the public and to the major partners of the public and private sectors the vision of the National Financial Inclusion Strategy. This was done in line with the pillars of the National Agenda and strategic trends in the Kingdom in order to establish an inclusive and a sustainable financial system in the country. The strategy was made available to everyone.

National Financial Inclusion Strategy sets five pillars:

- Financial education
- Financial consumer protection
- Small and medium- enterprises (SMEs)
- Microfinance services
- Digital payments

In addition, it includes data collection, measurement, and analysis to set evidence-

based financial inclusion policies and targets, so as to lead to building a database that supports these five pillars and ensures the accuracy of implementing the targets as well as the clarity of the vision of each pillar.

3.2.2 RATIONALE FOR THE NATIONAL FINANCIAL INCLUSION STRATEGY

The need for a National Financial Inclusion Strategy is derived from a number of factors. First, the percentage of financial inclusion of adults in Jordan rested at 24.6%, which is low when compared with that of other countries falling within the same category of income levels across the globe, even though it is the highest among the peers in the MENA region. This means that the largest proportion of the adults remain excluded from the formal financial system without an opportunity to participate actively in the development process and benefit from it.

Addressing this flaw in the formal financial system is a highly essential process to ensure inclusive and sustainable economic growth. Active participation of the majority of the population in the formal financial system primarily as savers and borrowers leads to greater efficiency of financial intermediation through mobilizing domestic savings for investment and financing activities which in turn results in better allocation of limited resources, achieving greater economic growth, reducing poverty and unemployment levels, and limiting inequality among different social categories.

Considering the increasing growth of the volume of different financial products and services, financial exclusion becomes a real hurdle for capturing income generation opportunities and elevating economic welfare. The exclusion problem deepens among women, youth, and migrants in particular.

Our strategy for the coming three years (2018-2020) will focus in the first place on excluded and non-served adults of low-income and marginalized categories; micro, small, and medium enterprises (MSMEs); the youth; women; non-nationals; and refugees. The National Financial Inclusion Strategy will establish and strengthen the relation between financial inclusion and the Sustainable Development Goals (SDGs) for 2030 announced by the UN General Assembly.

3.2.3 PRIORITIES OF THE NATIONAL FINANCIAL INCLUSION STRATEGY

The formulation and implementation of the National Financial Inclusion Strategy will be based on an efficient collaborative and cooperative approach with major partners from the public and private sectors where each party will work within a clear coordination framework and scheme under the monitoring and follow up of the CBJ who will be providing the assistance and the continuous support via the secretariat of the National Financial Inclusion Committee.

Gender equality is one of the goals and priorities in the National Financial Inclusion Strategy. There will be a commitment to enhance women's financial inclusion in accordance with the Denarau action plan that is endorsed in the 2016 Global Policy Forum of the Alliance for Financial Inclusion by all alliance members. As with most of the developing countries, gender gap is a hot issue in Jordan. Addressing this problem efficiently requires a comprehensive and a well-organized approach.

The small and medium-sized companies in Jordan play a vital and prominent role in enhancing economic growth and job creation. About 95% of all businesses in Jordan are classified as SME's and micro enterprises.

Yet they face barriers and obstacles in accessing proper finance. The National Financial Inclusion Strategy focuses on SMEs' access to financial services through work programs that were set and are under implementation with relevant partners who are working rigorously to create an encouraging environment that is conducive to SMEs financing.

On another strand, the payment systems are considered an integral part of the financial system infrastructure in the market economy. In this regard, the CBJ has developed a modern, safe, and efficient national payment system, and created equal opportunity for all partners to capitalize on the benefits obtained from reducing costs and risks, as well as increasing efficiency and access to payment systems, which will make it possible to provide a full range of various digital financial services.

Recognizing the strong connection between the responsible provision of financial services and protecting the financial consumer and enhancing his/ her financial literacy, the National Financial Inclusion Strategy will set the necessary measures to build a comprehensive framework for protecting the financial consumer. Work has already started in this context, where an action plan for financial consumer protection is being prepared, and the program for spreading financial education in Jordan is being implemented.

Recognizing the importance of data and measurement in enhancing financial inclusion, and in order to set evidence-based policies and targets that strengthen the process; work will continue on strengthening the national statistical capacity in order to provide reliable and permanent data sources and to improve the quality of data.

The preparation and implementation of the National Financial Inclusion Strategy will

maintain the balance between four main objectives: financial inclusion (I), financial stability(S), financial integrity (I) and financial consumer protection (P) (collectively I-SIP).

A special attention will be paid to the innovations and technological advances in the field of enhancing the financial inclusion for all concerned parties, and in compliance with the G20 principles and action plan for innovative financial inclusion.

The CBJ has joined the Alliance for financial inclusion - AFI and its task forces that both directly aim at promoting the best practices in designing policies and setting the criteria related to financial inclusion.

As part of joining the Global Alliance for Financial Inclusion, the CBJ has announced its commitment with Maya Declaration. It declared its commitment to achieving an ambitious goal of increasing financial inclusion of the adult population from its current level of 24.6% by the end of 2015 to 36.6% by the end of 2020, as well as reducing the access to finance gender gap from 53% to 35%.

Moreover, in continuation of its efforts in promoting financial inclusion in Jordan and the region, the CBJ and the Arab Monetary Fund, in cooperation with the German International Cooperation Agency (GIZ), organized the second high-level regional conference on "Advancing Women's Financial Inclusion in the Arab World" under the patronage of Her Majesty Queen Rania Al Abdullah. The conference declared a regional initiative aiming at enhancing the participation of women in the financial sector.

Following are the main accomplishments and steps taken for each of the five main pillars of financial inclusion strategy.

3.2.3.1 IMPROVING THE ACCESS TO FINANCE, ESPECIALLY FOR THE MSMEs

SMEs are one of the main pillars of the economy in most world countries, and one of the most important job creators. SMEs account for about 95.0% of all companies in the vast majority of countries in the world. They provide between 40.0% and 60.0% of jobs. A recent study released by the International Finance Corporation (IFC) revealed that the “official” SMEs contribute to 33.0% of the GDP of developing economies. They also contribute up to 45.0% of jobs. These figures go up significantly when including the “unofficial” SMEs. In high- income countries, SMEs contribute to approximately 64.0% of the GDP, and provide 62.0% of jobs.

The CBJ continued its role in supporting and encouraging MSMEs. During the past four years, and in collaboration with the Ministry of Planning and International Cooperation and some international and regional financing institutions, the CBJ has been attracting funding for the SMEs sector that roughed \$320.0 million at competitive interest rates and for suitable maturities. The funds transferred to Jordan amounted to \$170.0 million. The amount used to finance SMEs as at 31-12-2016 reached about \$134.0 million granted to about 16,470 MSMEs, more than 60.0% of which are located outside the Capital Amman. The financing created more than 3,168 jobs. The CBJ intends to withdraw the remaining balance which amounts to almost \$150 million during 2017 and 2018, besides the European Bank for Reconstruction and Development senior unsecured facility of \$120.0 million. The CBJ facilitated and provided the necessary support to banks to utilize the loan amount optimally. Additionally, the EBRD signed agreements with three banks totaling \$60.0 million.

As mentioned in previous reports, the CBJ has already established financing programs targeting industry, tourism, renewable energy, agriculture, and information technology (including SMEs). It set an interest rate of 1.0% for the financing of the projects that are located in the governorates outside the Capital Amman and 1.75% for the financing of the projects that are located in the Capital and allocated about JD1.0 billion for such projects. A total of 429 projects have benefited from these programs and obtained JD311.0 million as at 31-12-2016. The distribution of loans across sectors approximated JD164.7, JD33.6, JD90.3, and JD21.5 million to industry, tourism, renewable energy, and agriculture respectively. The information technology sector obtained finance for the first time in 2016 with an amount of JD1.4 million. In this regard, the CBJ has been improving the lending terms and conditions in this program since 2015 to comply with the lending programs of Islamic banks by signing a limited investment agreement with the Islamic banks interested in the program.

Regarding the provision of collaterals necessary to the financing of SMEs, the Jordan Loan Guarantee Corporation (JLGC) was restructured and its capital was raised. In addition, its procedures were improved and its scope was expanded so that the JLGC can provide the required guarantees for the financing of SMEs. As a result, the number and the value of projects guaranteed by (JLGC) doubled. In addition, a fund was launched to support the newly established companies through providing the required guarantees to access the financing through the JLGC.

The CBJ allocated JD100.0 million to the JLGC to establish an export guarantee fund to provide the required guarantees against the credit to the export sector.

It is worth mentioning that establishing a special fund with a capital of JD100.0 million for investing in the capital of entrepreneurial companies is being under progress in cooperation with the ministry of Planning and the International Bank for Reconstruction and Development (IBRD).

3.2.3.2 DEVELOPING MICROFINANCE SECTOR

A study conducted by the IBRD entitled "Impact of Government Regulation on Microfinance" stressed that the organizational reform of the microfinance companies contributes to strengthening the integrity of the financial system, and facilitates the expansion of micro-financing and its integration with the formal financial sector. In this regard, the CBJ made a strategic decision to expand its supervisory umbrella to include the microfinance sector. The cabinet approved on 14-12-2014 the Microfinance Bylaw No (5) for 2015, which became effective on 01-06-2015 to constitute a legal reference for the licensing, control, and supervision of the microfinance companies by the CBJ. In April 2016, the CBJ issued instructions for the licensing and existence of microfinance companies. It (the CBJ) intends to issue the detailed instructions needed for starting actually monitoring and supervising this sector.

3.2.3.3 SPREADING FINANCIAL AND BANKING LITERACY (FINANCIAL ILLITERACY ERADICATION)

Spreading Financial and Banking Literacy is considered one of the most important factors that lead to expanding the financial inclusion and enhancing the protection of the financial consumer. Several studies have indicated that raising the level of financial literacy to individuals is a key factor to increasing the level of their savings, and, thus, to promoting economic growth through the provision of liquidity needed

for investment. In turn, this enhances the ability of the countries to withstand financial and economic crises. In Jordan, the CBJ pays the subject of financial literacy a high attention because of its importance in strengthening the financial, economic, and social stability in Jordan. This is especially important because studies and statistics have indicated that Jordan has a modest ranking in the level of financial literacy among world countries. A survey study was carried out by experts from George Washington University and the World Bank entitled "Financial Literacy around the World" to measure the level of financial literacy in the various countries of the world. It included basic questions covering four major aspects: risk assessment (investments), inflation, simple interest calculation, and compound interest calculation. Any respondent who answered at least three out of four questions is considered financially literate. Based on this definition, the results of statistical analysis revealed that 33.0% of adults in the world are financially literate. The study showed also that most people who had a trouble in understanding the basic financial concepts are from emerging economies. Moreover, the study found that the level of financial literacy in the world ranges between 13.0% and 71.0%. In this regard, Jordan occupied the rank 116 among the world countries surveyed.

Believing in the importance of the financial literacy in the Kingdom, the CBJ initiated a project to spread and deepen financial literacy in the Kingdom with the aim of enabling the Jordanian Citizen to:

- Comprehend the fundamental principles and concepts in the financial and banking context.
- Manage their savings and personal possessions and optimally invest them.

- Increase the chances of benefiting from financial sources, services, and facilities provided by banks and financial institutions.
- Increase financial inclusion and enhance financial, economic, and social stability in the Kingdom.

The project, therefore, targets several major sectors in the society through several programs. The main part of the program represented by financial education in schools has already started in collaboration among the CBJ, the Ministry of Education, and INJAZ (a Jordanian non-profit entity). The offering of seventh grade curriculum started in the academic year 2015/2016. The eighth and eleventh grade courses were offered in the academic year 2016/2017.

Besides the financial education program at schools, the project will include in the future several other programs as follows:

- Financial education in the higher education institutions.
- Spreading financial literacy via mass media.
- Financial literacy to develop businesses.
- Financial education at workplace.
- Financial education for woman and rural areas.
- Electronic financial education

3.2.3.4 FINANCIAL CONSUMER PROTECTION

Several studies published by international agencies stressed the importance of financial consumer protection and its positive impact on the financial inclusion. The global financial crisis revealed the importance of enhancing the protection of financial consumer in achieving financial stability on the long term. The leaders of the G20 summit, which was held in Toronto in 2010, identified the protection of financial customers and financial education among the nine principles of financial inclusion based on creativity and innovation.

After issuing the Instructions on Dealing with Customers Fairly and Transparently No. 56/2012 on 31-10-2012, the CBJ established on 19-12-2016 a separate department for the protection of financial consumer in general to include protecting bank's consumers as well as the customers of the other financial institutions that are supervised by the CBJ.

3.2.3.5 PROVIDING THE INFRASTRUCTURE REQUIRED FOR ENHANCING THE FINANCIAL INCLUSION

3.2.3.5.1 The Issuance of Individual Savings Bonds

The CBJ, on the behalf of the government, issued for public subscription two releases of the savings bonds targeting the individuals named "individual savings bonds (ISBs)" during 2016. This aims at providing saving tools for individuals that enable them to utilize and manage their savings safely at a constant return for medium and long terms. This issuance of the ISBs will enhance the financial inclusion in the Kingdom since having a bank account for the individual is one of the conditions for participating in the subscription. Furthermore, the savings bonds are considered a tool for attracting national savings, an investment tool for the owners of small financial portfolio, and a means to increase the remittances of Jordanians working outside Jordan. The interest rate of the ISB for both releases is 4.25%, which is higher than the average interest rate on deposits with banks with five years maturity. The subscription amount approximated JD28.0 million for the first release and JD11.0 million for the second release. To review the manual on the subscription and payment procedures for the ISB, please refer to the following link:

http://www.cbj.gov.jo/uploads/individual_ponds_user_manual.pdf

3.2.3.5.2 Developing payment, clearance and settlement systems

The CBJ initiated a process of developing and restructuring payment, clearance, and settlement systems in the Kingdom in collaboration with the banks operating in Jordan and the other relevant partners. The process aims at maintaining the soundness and efficiency of national payment system through intra-system operations of payment systems, setting forth comprehensive legal frameworks to promote financial inclusion, encouraging increasing acceptance of modern payments tools, mitigating systemic and credit risks, and facilitating the circulation of money in the economy to enhance economic efficiency. The CBJ led this process supported by the commercial banks that are represented in the national payment council.

In this regard, the CBJ undertook the following:

- Regarding the payment and settlement systems, The CBJ released the new Real-Time Gross Settlement system (RTGS) that complies with new standard (ISO 20022). With this, Jordan will be the first country in the region and the second in the world to implement this standard during the last year. In addition, on 03-10-2016, the CBJ announced the release of the second phase related to banks' sending of messages in accordance with the new standard. The new system continued to carry out the orders of transferring funds among the accounts of member banks in Jordanian Dinar, US Dollar, Euro, and Sterling Pound, in addition to secondary market operations. The number of transfer orders executed through the system in 2016 was about 627.4 thousand orders with an amount of JD107.6 billion compared to 634.6 thousand orders and JD104.4 billion during 2015. The number of

secondary market operations that were completed during 2016 through the system was 7,673 transactions with an amount of JD1,885 million.

- The Automated Clearing House system that complies with the new ISO standard (ISO 20000) was released on 30-10-2016. The Automated Clearing House is an automatic payment, transfer, and authorization system that provides a secure infrastructure for executing retail payments among member banks and their clients, including the Central Bank of Jordan. The system includes credit and debit transfers, and managing debit authorizations and the payments of government and financial institutions, as well as of other private sector institutions. The number of transfer orders executed during this year reached 121,234 thousand orders with a total value of JD120,502 million.
- The CBJ launched a system for the Settlement and Deposit of Government Financial Securities (DEPO/X) on 07-02-2016. DEPO/X is a system for managing the government debt and auctions in an integrated automatic environment and a center for depositing and settling government financial securities. DEPO/X allows the safe access to government auctions system of government securities issuances for the CBJ, banks, insurance companies, Social Security Investment Fund, and the related parties. The CBJ and the banking system can also handle all Shariah-compliant monetary policy instruments.
- The CBJ continued to operate the national switch board system to pay by mobile phone (JoMoPay) during 2016. The number of participants in the system reached five banks (Bank of Jordan, Jordan Commercial Bank,

Housing Bank for Trade & Finance, Arab Bank, and Amman Cairo Bank), and four financial institutions (Al-Mutamayiza Company for Electronic Payment Services Through Mobile Phones, Al-Hulool Financial Company for Mobile Payment Services, Aya Company For Mobile Payment Services, and Al-Mutakamilah for Payments Services via Mobile Phone “dinarak”). The number of payment transactions executed through the system reached 8,898 transaction totaling JD198.8 thousand in 2016 compared to 835 transaction and JD25.3 thousand in 2015.

- The CBJ continued to provide the electronic bill viewing and collection service using eFAWATEERcom system that is operated by Madfoo3atcom for e-payments Company and links all the banks operating in the Kingdom, with the exception of two banks, to provide the service through various banking channels. Besides, Jordan Post Company, Emerging Markets Payments Group (EMP), Trust For Electronic Services, Al Rajhi Bank, Middle East Payment Services (MEPS), and JoMoPay were also linked in order to provide services to the users who do not have bank accounts so that they can inquire and pay bills, which will, in turn, help promoting financial inclusion in the Kingdom. On another hand, the number of billers participating in the system reached 75 billers in 2016, compared to 38 billers in 2015. The number of payment transactions executed through the system approximated 1.84 million transaction totaling JD560.8 thousand during 2016, compared to 478.286 transaction totaling JD41.6 million during 2015.
- The CBJ continued in 2016 to provide the electronic bill viewing and collection service (eFAWATEERcom) through the Electronic Payment Portal in order to enable all Jordanian citizens who reside in the Kingdom or anywhere in the world to inquire and pay their bills and execute other payments using the payment credit cards issued by various banks all over the world easily and safely. The manager and operator of the system (Madfoo3atcom for e-payments Company) takes the responsibility of operating the electronic payment portal on the behalf of CBJ through one of the payment services providers linked with eFAWATEERcom system.
- The CBJ, in collaboration with German International Cooperation Agency (GIZ) and with the support and financing of €2.3 million from the German Federal Ministry for Economic Cooperation and Development (BMZ), started to work on a project named Digi#ances – Digital Remittances that extends until the end of 2018. The project aims at improving the electronic access to money transfer services as well as other financial services in a way that targets disadvantaged groups that are not covered by the formal financial system such as women, refugees, and others.
- By the end of 2016, the CBJ completed the project of Promoting Financial Inclusion via Mobile Financial Services in Jordan that was granted by the European Investment Bank (EIB) with an amount of JD426.0 thousand. The project aims at improving financial inclusion in Jordan by providing innovative mobile financial services, which target in particular the low- income Jordanians who are not covered by the official financial system. Besides, the project aims at providing the suitable tools for measuring the economic indicators that are related to financial inclusion, and at conducting a study

for assessing the risks related to payment systems in the Kingdom in an approach that helps the CBJ to strengthen its supervisory role in the analysis and development of its own strategy.

3.2.4 CREDIT INFORMATION COMPANY

The CBJ established the legislative and legal framework necessary for the work of companies that deal with the exchange of credit information. The temporary *Credit Information Law* No (15) for the year 2010 and *Credit Information Companies Bylaw* No (36) for the year 2011 were issued. According to these legal references, the CBJ is responsible for the licensing of such companies, as well as for monitoring, supervising, and organizing their business. On 15-12-2015, the approval to license the first credit information company in the Kingdom was granted. On 06-04-2016, it was approved that licensed banks provide *CRIF Jordan* Company with credit information related to their customers without the prior consent of these customers. The banks are also requested to provide the company with these information for the previous three years. The company plans include building a comprehensive credit information database about the clients of banks and other financial institutions that extend credit. This is expected to help these entities rationalize the credit decision making so that a right and a fair credit decision is made based on a precise evaluation of the abilities of the clients to repay their loans. It will also help these entities price their financial products (loans) based on clients' risks. In turn, this will enhance the effectiveness of risk management at banks and other financial institutions and improve the

chances for the clients (particularly SMEs) to access potential financing. The establishment of this company is expected to reflect positively on sustaining financial inclusion and, hence, on financial stability in the Kingdom.

3.3 LEGISLATIVE INFRASTRUCTURE OF THE FINANCIAL SYSTEM

Undoubtedly, the presence of an appropriate legislative framework for the financial system enhances the financial stability, as experiences have demonstrated that inappropriate supervisory and regulatory legislations for the financial system contributed significantly to the deepening of systemic financial crises once they occurred.⁴ In this regard, the CBJ continuously verifies the work and performance of the banking and financial institutions that are subject to its supervision, and ensures the compliance of their financial positions with the laws, regulations, valid instructions, and banking practices to achieve the requirements of the banking safety and monetary and financial stability. In line with the strategy of the CBJ which targets effective banking supervision that complies with best international standards and practices, and in complementing the efforts it exerted in establishing sound banking and financial bases, the CBJ continued in 2016 the comprehensive review of the legislations governing the practices of the banking and financial institutions that are under its supervision umbrella.

3.3.1 LAWS AND BYLAWS

3.3.1.1 THE CBJ LAW

As mentioned in JFSR 2015, a Royal Decree was issued approving the Amended Central Bank Law

⁴ Taylor M. and Quintyn M. 2002. Regulatory and Supervisory Independence and Financial Stability. IMF Working Paper WP02/46. International Monetary Fund.

No (24) of 2016 that was then published in the Official Gazette on 16-06-2016.

The amended law included several amendments, the most important of which is the expansion of the CBJ's objectives by stating explicitly that one of the objectives of CBJ is maintaining financial stability besides the primary goal of monetary stability. The amended law came to entrench legally the CBJ's role in contributing to the achievement of financial stability in the Kingdom as one of its primary goals, in addition to strengthening the governance of the CBJ's board of directors and expanding its supervisory authority, as well as strengthening the independence of CBJ and its decisions.

Of the main tasks that were assigned to the CBJ in the amended law was the explicit and absolute authorization of the CBJ to establish the corporate governance rules in all of the banks and financial institutions that are under its surveillance and supervision.

Regarding the electronic payment systems, the amended law granted the CBJ the authority to regulate, monitor, and supervise the national payment system and develop it in a way that guarantees providing secure and efficient payment, clearance, and settlement systems in the Kingdom; besides anchoring the most important international principles adopted in payment systems, such as treating the fund transfer orders or the settlements resulting from clearance of operations in the payment systems as final and irrevocable and cannot be, for any reason, undone or cancelled after their termination without prejudice to the rights of the parties involved.

The amended law reaffirmed the role of the CBJ as a depository center for the government financial securities, and enhanced its role in granting advances that target financing business sectors and economic activities such as

industrial, agricultural, microfinance, and renewable energy projects, and other business sectors and economic activities. It also provided the possibility of expanding the monetary policy parties in accordance with the terms and conditions that the CBJ's board of directors deems appropriate to include any financial institution that the CBJ realizes that its activities do impact any of its objectives and tasks.

The amended law also detailed the role of CBJ in providing exceptional liquidity facilities as a lender of last resort to the banks that might need liquidity in case of emerging situations that threaten monetary or financial stability in the Kingdom, besides expanding CBJ's authorities to set the required compulsory reserve ratio in order to improve this tool in a way that facilitates the implementation of the CBJ tasks.

In line with the outputs of the action plan aiming at strengthening the national integrity system; the amended law came with a number of provisions that aim at strengthening the independence of the CBJ in all aspects including, but not limited to:

1. Eliminating all the legal provisions that allow the CBJ to grant facilities to the government.
2. Amending the mechanism of appointing and accepting the resignation so that the decision to appoint and accept the resignation of the governor/ chairman of the board of directors and the other board members, including the two deputy governors, is made by the cabinet and approved by a Royal Decree with the abolition of the requirement of having representatives of banks and other specialized lending institutions in the membership of the board of directors. This will strengthen the independence of the CBJ's administration.

3. Increasing the number of members of the CBJ's board of directors to become nine in order to enable the CBJ to form various committees that are needed to carry out its tasks, including Audit Committee and Risk Management Committee.

3.3.1.2 THE LAW FOR ORGANIZING DEALING WITH FOREIGN STOCK EXCHANGE

The Law for Organizing Dealing with Foreign Stock Exchange No (1) of 2017 was published in the Official Gazette on 29-12-2016. The previous Temporary Law for Organizing Dealing with Foreign Stock Exchange No (50) of 2008 was eliminated. The new law restricted the practice of dealing with foreign exchanges or mediation therein for the benefit of a third party to banks and financial services companies. The CBJ's Board of Directors and the Jordan Securities Commission Board of Commissioners will also issue instructions and decisions necessary to implement the provisions of this law.

3.3.2 INSTRUCTIONS

3.3.2.1 STRESS TESTING INSTRUCTIONS

On 06-12-2016, the Central Bank of Jordan (CBJ) has released to banks new **Stress Testing Instructions** that are used to measure banks' ability to withstand shocks and high risks, and evaluate their financial position under severe assumptions and scenarios. These tests have a future outlook in evaluating risks and help the board of directors and the senior executive management to understand the bank's circumstances during crises. Stress tests are also considered a key element in risk management process in banks.

The CBJ's issuance of these instructions aims at keeping pace with the latest developments in this area, in line with the best international practices in this regard. Putting these

instructions into practice is expected to promote the risk management process at banks and consequently enhance their capacity in confronting and withstanding severe situations and financial shocks in the event they occur (God forbid).

The CBJ provided the banks with a list of tests that should be conducted based on the financial statements as at the end of 2016. The CBJ will also provide the banks with the required tests on annual basis taking into considerations the developments of risks on domestic, regional, and international levels.

3.3.2.2 INSTRUCTIONS FOR DEALING WITH DOMESTIC SYSTEMICALLY IMPORTANT BANKS (D-SIBS)

The Central Bank of Jordan (CBJ) has released the **Instructions No. (2/ 2017) for Dealing with Domestic Systemically Important Banks** on 12-06-2017 in order to enhance the ability of the Domestic Systemically Important Banks (D-SIBs) to maintain the safety and the soundness of their financial positions and mitigate the adverse effects on the stability of the financial system and the economy in general that might result in case they face substantial dangers. This piece of instructions is prepared in compliance with the pertinent international practices and the application of Basel Committee on Banking Supervision principles about "Dealing with Domestic Systemically Important Banks." The systemic banks are the banks that are big in size and possess high market share, highly interconnected with the other banks and financial institutions, and whose weakness or failure leads to adverse substantial consequences on the financial system and the economy as a whole.

These instructions were issued after the last global financial crisis that started in 2007 has

revealed that the weakness or the failure of large banks has had severe adverse effects on the stability of both the financial system and the real economy in the country and sometimes across the world due to the relatively huge size of these banks, their significant interconnectedness with other banks and financial institutions, the complexities of their operations, the lack of ability for bridging the gap that could result from their failure on the financial services, and their cross-border spread. To face these risks, the efforts have been intensified on the international level to set a framework for dealing with these risks to protect financial stability, in order to include not only the banks and the financial institutions that are globally systemically important, but also the banks and financial institutions that are systemically important at the domestic level.

The instructions described an objective methodology to determine the DSIBs that depends on the size of the bank, its interconnectedness with other banks, its contribution to providing banking services, and the complexity of its operations as represented by its presence outside the Kingdom and the degree of involvement in investment in the financial markets. The instructions also included imposing additional capital requirements (surcharge) to sustain the capacity of these banks in confronting and withstanding shocks and high risks. Besides, they included some other requirements that aim at enhancing the corporate governance at these banks and strengthening their risk management capacities. The instructions have focused also on strengthening the supervisory framework on these banks by strengthening the CBJ's communication with their board of directors and the senior executive management and enhancing their supervision.

As per these instructions, these banks were requested to have recovery plans approved by the board of directors for dealing with the risks that the bank might be subjected to when facing highly serious and critical situations. The bank shall, within such plans, set and document a list of procedures to be followed in such cases.

DSIBs were given a one- and- a- half- year period to comply with the qualitative requirements requested from them and which pertain to corporate governance, risk management, and recovery plans. As for the additional surcharge capital requirements, they shall start gradually with the end of 2017 and continue until the end of 2020.

3.3.2.3 REGULATORY CAPITAL INSTRUCTIONS IN ACCORDANCE WITH BASEL III

In light of the interest of the CBJ in applying the latest international standards in banking supervision, the instructions of Regulatory Capital in Accordance with Basel III standard No. (67/2016) dated 31/10/2016 have been issued. They came into effect starting from the statements of the third quarter of 2016.

These instructions have focused on improving the quality and quantity of capital in order to enhance banks' ability to face risks.

3.3.2.4 LICENSING AND EXISTENCE INSTRUCTIONS FOR MICRO FINANCE COMPANIES

The instructions for the **Licensing and Existence of Micro Finance Companies No. (62/2016)** were issued on **10-04-2016**. The instructions cover the following main subjects: microfinance standards, financing in compliance with Shariah principles, licensing and conformity requirements, eligibility standards for board members / board of directors and senior executive management, Shariah supervisory board and local and external existence.

3.3.2.5 AMENDED INSTRUCTIONS OF CORPORATE GOVERNANCE FOR BANKS

In light of the international supervisory developments in the field of corporate governance of banks, the Amended Instructions of Corporate Governance for Banks No. (63/2016) Dated 1/9/2016 were issued. The most important amendments in these instructions include adding some flexibility in the requirements of the independent member of the board of directors in terms of qualifications and expertise, the need for allocating sufficient time for the Bank's works by the members of the board of directors, changing the composition of some committees emanating from the board of directors in light of the contents of the Basel Committee on Banking Supervision's working paper issued in July 2015, and the necessity that banks should provide the CBJ with the reasons of resignation or terminating the services of audit, compliance, and risk management officers before making any subsequent decision. Regarding the Islamic banks, the **Amended Instructions for the Corporate Governance of Islamic Banks No. 64/2016 dated 25-09-2016** were issued. In addition to the aforementioned amendments for the commercial banks, the amendments included the necessity of obtaining a non-objection from the CBJ upon the resignation or termination of the services of the General Manager and the internal Sharia audit officers.

3.3.2.6 INSTRUCTIONS FOR THE BANKING SERVICES PROVIDED BY BANKS TO PERSONS WITH DISABILITIES

In light of its interest in enhancing financial inclusion through the delivery of banking services to all the groups and classes of the Jordanian society, and in order to promote the values of fairness and transparency, and in light

of the social responsibility of the CBJ and the banking sector in the Kingdom, the CBJ issued the **Instructions for the Banking Services Provided by Banks to Persons with Disabilities No. 66/2016** dated 25-10-2016. The instructions stated that the banks are prohibited from not providing banking services to persons with disabilities under any pretext. Banks should also take appropriate and effective measures to ensure the right of equality for the disabled persons with others in managing their financial affairs; obtaining banking services, credit facilities, and other financial services; and using them independently, confidentially, and in strict privacy, without incurring any additional expenses or fees.

3.3.2.7 INSTRUCTIONS FOR THE EXTERNAL AUDIT OF BANKS

The Instructions for **the External Audit of Banks No. 69/2017** dated 28-02-2017 were issued by CBJ. They included such issues as the requirements for external audit policy, parameters for selecting the auditing firm and the auditing team (team leader and members), mechanism for nominating and recruiting auditing firm, minimum requirements for attaining independency and objectivity of auditing firm and team, the duties and responsibilities of the Audit Committee of the Board of Directors of the bank, the follow up mechanism of the work of the auditing firm during the auditing process, the reports that must be furnished to the Audit Committee by the auditing firm, and the duties of the auditing firm towards the CBJ.

3.3.2.8 INSTRUCTIONS FOR COMPULSORY RESERVE REQUIREMENTS

The **Instructions for the Compulsory Reserve Requirements No. 68/2016** dated 21-12-2016 were issued pursuant to the Amended Central

Bank Law No (24) of 2016. The law stated that the CBJ shall request the banks to deposit compulsory monetary reserve with it (CBJ) at a certain ratio or ratios of their various deposits. These ratios are to be determined via special orders issued by the CBJ for this purpose. The instructions included the requirements for the compulsory reserve in Jordanian Dinar and foreign currencies.

3.3.3 SUPERVISORY CIRCULARS

The CBJ issued several supervisory memos in 2016 and the first half of 2017, the most important of which are:

Circular No. 10/1/1271 dated 25-01-2016 directed to the banks operating in the Kingdom requesting them to adopt financial statements approved by a certified auditor when making credit decisions and emphasizing that banks shall obtain the authentication of the Jordanian Society of Chartered Accountants on the accuracy of the signature of the chartered accountant on the clients' data.

Circular No. 10/2/4/8352 dated 20-06-2016 directed to the banks operating in the Kingdom to emphasize their return of the interest received (in advance) and not due on the loans and advances of clients who are willing to make early repayment. The credit of interest should include the period from the early repayment until the actual repayment date, with the possibility of imposing an early repayment commission not exceeding 1.0%.

Circular No. 10/2/4/370 dated 08-01-2017 addressed to banks operating in the Kingdom regarding the application of Risk- Based Approach (RBA) in combating money laundering and the financing of terrorism.

Circular No. 10/6/4999 dated 06-04-2016 addressed to banks operating in the Kingdom regarding the approval of the Central Bank for banks to provide *CRIF Jordan* Company with credit information related to their clients without the prior consent of these customers, in

addition to providing the company with the information for the previous three years.

Circular No. 10/2/4/6027 dated 25-4-2016 addressed to banks operating in the Kingdom emphasizing the need for the SMS messaging service as mandatory for all retail customers and not optional. The service must be linked to the nature of the transaction and not limited to just withdrawals. Moreover, they must be at no additional costs to clients. By the memorandum, the CBJ targets attaining integrity of the financial transactions carried out by banks through electronic means, and security of their systems and information.

Circular No. 10/2/4/7293 dated 24-05-2016 addressed to banks operating in the Kingdom where it was emphasized that banks should stop granting facilities to their clients under various names (e.g., personal loan to refinance real estate, home improvement loan or equity release) for more than eight years, as these actions are inconsistent with Article (9/b) of the instructions of dealing with customers fairly and transparently No. (56/2012) dated 31-10-2012 related to not granting personal loans with repayment periods of more than eight years.

Circular No. 10/1/2510 dated 14-02-2017 addressed to licensed banks operating in the Kingdom including amendments of some provisions of Instructions for Classification of Credit Facilities and Calculating Impairment Provisions and Reserve for General Banking Risks No. 47/2009 dated 10-12-2009. The circular also stressed the need for banks to give a maximum consideration to the financial positions of their clients and the compatibility of their payment schedules with the expected cash flows of their businesses, especially for clients whose credit facilities will be restructured or rescheduled without imposing any additional burdens on the interest rates that are determined on their facilities so that their ability to repay is sustained.

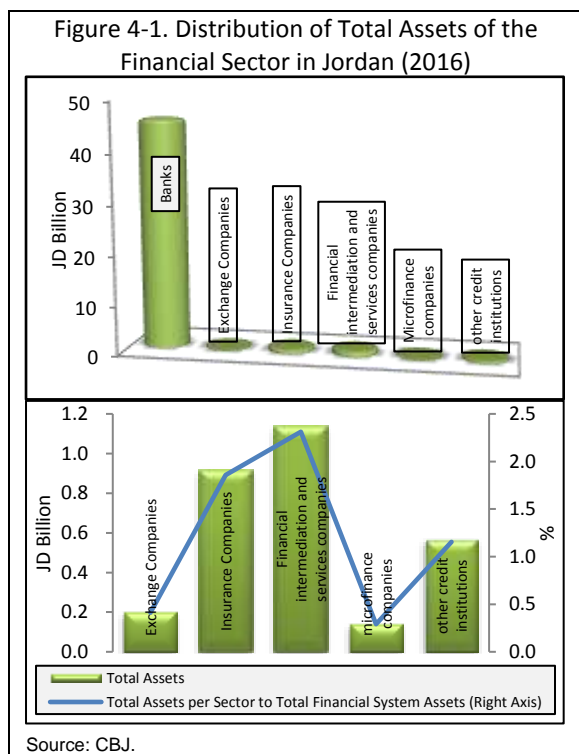
CHAPTER FOUR

FINANCIAL SECTOR DEVELOPMENTS AND RISKS

4.1 INTRODUCTION

The financial sector in the Hashemite Kingdom of Jordan encompasses banks, insurance companies, financial intermediation and services companies, exchange companies, microfinance companies, and other specialized lending institutions.

The CBJ undertakes the responsibility of monitoring and supervising the banking sector and foreign exchange sector, besides the microfinance companies that became part of the CBJ's supervisory umbrella on 01-06-2015.



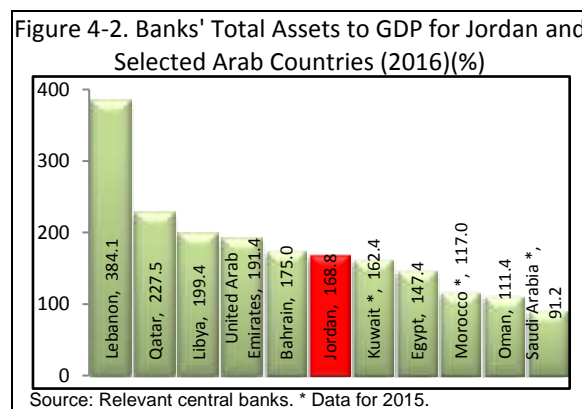
Whereas the Ministry of Industry, Trade, and Supply and Amman Stock Exchange are

responsible for monitoring and supervising insurance companies⁵ and financial intermediation companies, respectively. Regarding the other lending institutions, there is no entity that is responsible for supervising and monitoring their works. However, the Ministry of Industry, Trade, and Supply is responsible for registering these institutions.

The licensed banks are the major component of the financial sector in Jordan whose assets totaled JD49.3 billion at the end of 2016, of which the assets of licensed banks formed 94.0% (Figure 4-1).

4.2 THE MOST IMPORTANT DEVELOPMENTS IN THE BANKING SYSTEM IN JORDAN (ASSETS AND LIABILITIES) AT JORDAN BRANCHES LEVEL

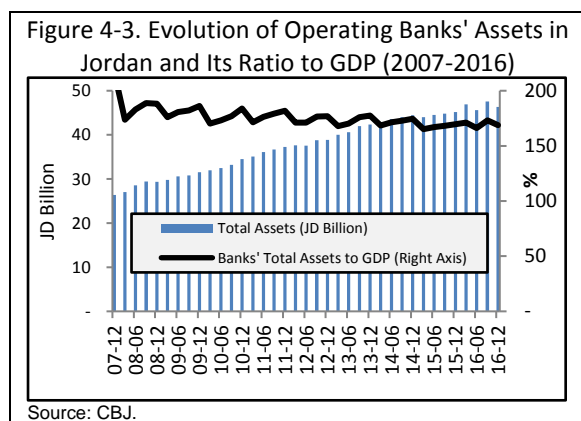
The licensed banks' assets reached JD46.3 billion at the end of 2016, forming 168.8% of GDP compared to 169.7% at the end of 2015. Jordan comes in the middle rank amongst Arab countries selected for comparison. (Figure 4-2).



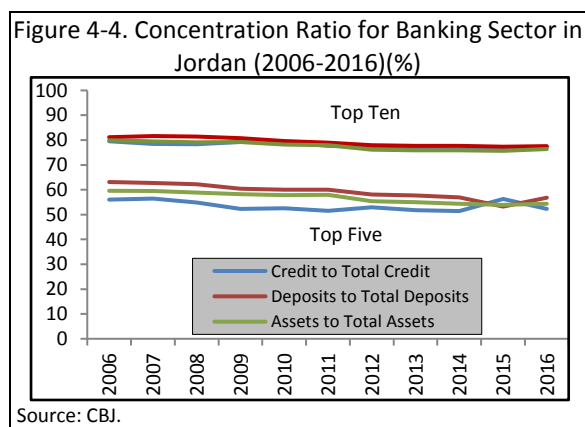
Despite this high ratio of assets to GDP in Jordan, it followed a declining trend during the last seven years. It reached 217.2% at the end of 2007 and decreased to 168.8% at the end of 2016. The reason for this trend is attributed to the growth

⁵ The cabinet made a decision on 24-02-2016 so that the CBJ undertakes the responsibility of supervising the insurance sector. This is planned to take effect within two years.

of GDP at higher rates than the growth of banks' assets (Figure 4-3).

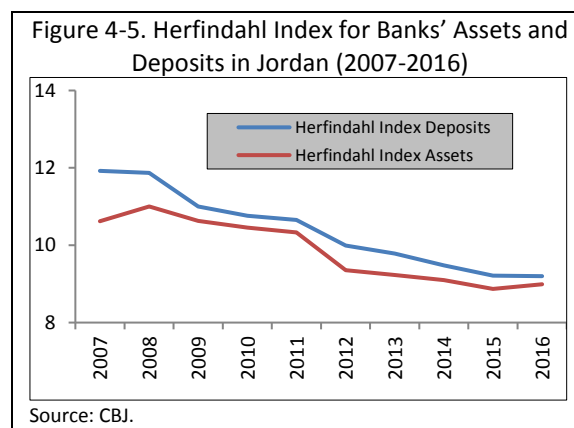


Regarding the market share for banks (concentration), the assets of the largest five banks out of 25 banks approximated 54.3% of total assets of the licensed banks at the end of 2016. Whereas the assets of the largest ten banks out of 25 banks approximated 76.4% of total assets of the licensed banks at the end of 2016. It is worth mentioning that the market share for the largest five and ten banks is witnessing a continuous decline, as they reached 59.6% and 79.9% respectively in 2006. Therefore, the concentration ratios of the licensed banks are following a downward trend (Figure 4-4). Despite this, the concentration in the banking sector in Jordan is still relatively high.



As for competitiveness based on Herfindahl Index (HI) for the banking sector's assets, there was an improvement in the competitive stance

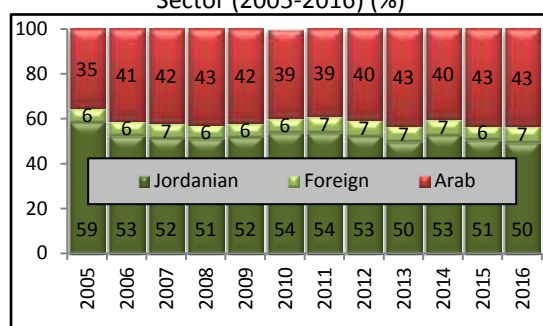
of the banking sector in Jordan. The value of HI reached 10.6% at the end of 2007 and declined to 9.0% at the end of 2016. These numbers suggest that the competitiveness of the banking sector in Jordan is continually improving. The main reason for the improvement in this competitiveness indicator is the increase of the number of banks through licensing three new banks during 2009, besides the improvements and developments in banks' products and works to increase their competitive capabilities. It is worth mentioning that the decline in the concentration ratios and the increase in the competitiveness in the banking sector in Jordan have positive impacts on the financial stability in Jordan (Figure 4-5).



4.2.1 OWNERSHIP STRUCTURE IN BANKS

The capital share of foreigners (Arabs and Non-Arabs) in the total capital of Jordanian licensed banks approximated 50.0% at the end of 2016. This high share of foreigners in ownership is one of the highest shares in the region due to the absence of any kind of restrictions on these ownerships. It is worth mentioning that this share declined in 2010 and 2011. However, it returned to rise during the last five years, reflecting the increased investors' confidence in the banking system in particular, and the Jordanian economy in general, given that most of these properties are stable strategic contributions (Figure 4-6).

Figure 4-6. Ownership Structure in the Banking Sector (2005-2016) (%)

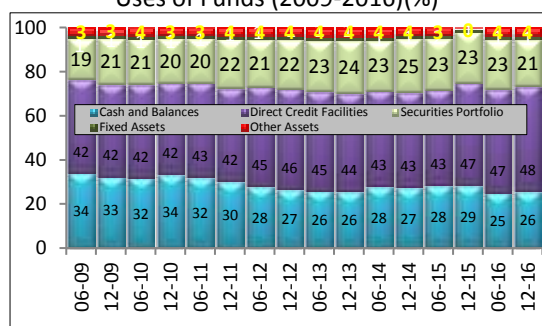


Source: CBJ.

4.2.2 USE OF FUNDS (ASSETS)

By reviewing the structure of the assets of banks operating in the Kingdom (uses of funds), it is noted that the credit facilities portfolio is still the largest component of the banks' assets at the end of 2016, composing about 48.6% of banks' total assets, compared to 46.8% at the end of 2015 (Figure 4-7).

Figure 4-7. Assets Structure for Banking Sector - Uses of Funds (2009-2016)(%)



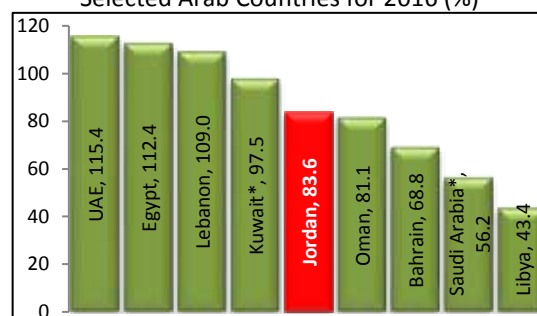
Source: CBJ.

The direct credit facilities grew by 8.9% at the end of 2016 to reach about JD22.9 billion. The same figure for 2015 was 9.6%. It is worth mentioning that the ratio of total credit facilities to GDP approximated 83.6% at the end of 2016 compared to 79.4% at the end of 2015. In this regard, Jordan occupies a middle rank among some countries of the region (Figure 4-8).

It is worth mentioning that household credit facilities (consumption and real estate) reached JD8.7 billion at the end of 2016 compared to JD9.0 billion at the end of 2015, or a decline by 2.6%. This decline in the household debt with banks in 2016 is not an actual decline, but rather due to the decision of some banks to reclassify their data to improve its accuracy, especially after the launching of the Aggregate Electronic

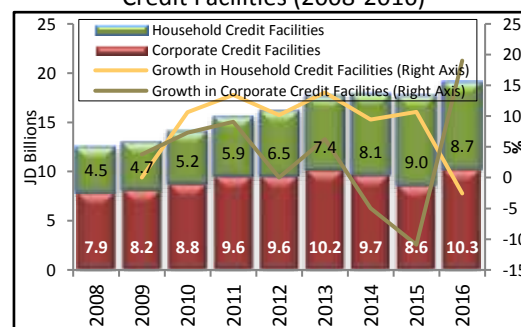
Banking Supervision Database by the CBJ that helped to improve the accuracy and comprehensiveness of banks' data, besides the request of the CBJ from the banks in 2016 to provide more detailed data about household debt. In the event these changes were excluded, then the household debt with the banking system (consumption and residential loans) would have risen by about JD1.0 billion, growing by 13.0% at the end of 2016, indicating that there is a tendency in the banking sector to increase lending to individuals. As for the credit facilities extended to the corporate sector, it grew by 19.0% at the end of 2016 after the decline in the previous two years (2014-2015). (Figure 4-9).

Figure 4-8. Credit Facilities to GDP for Jordan and Selected Arab Countries for 2016 (%)



Source: CBJ.* Data for 2015.

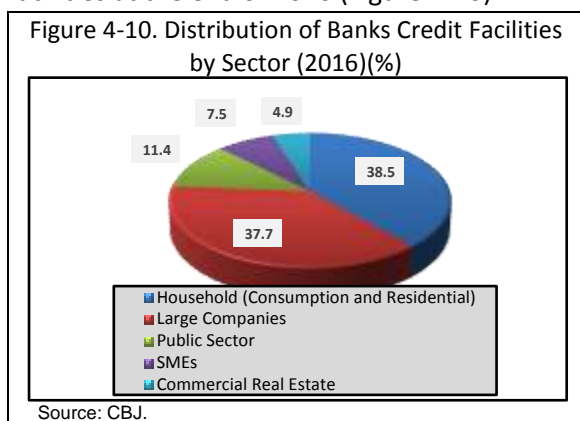
Figure 4-9. Evolution of Household and Corporate Credit Facilities (2008-2016)



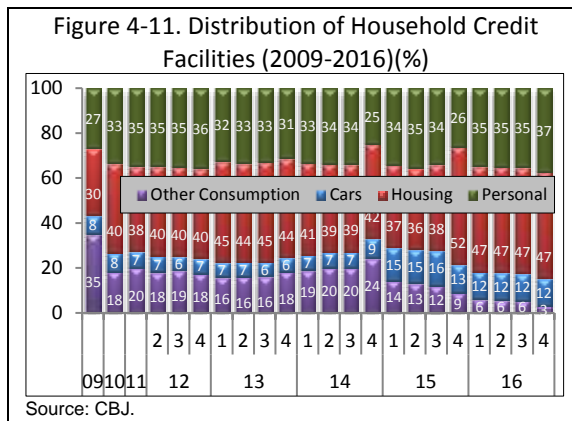
Source: CBJ.

With regard to the distribution of direct credit facilities, the largest share was for the household credit facilities (consumption and residential) that comprised 38.5% of total direct credit facilities compared to 42.4% (individuals and real estate) at the end of 2015. This decline is due to the reclassification of data by some banks and the compilation of more detailed data on household indebtedness in 2016, as mentioned

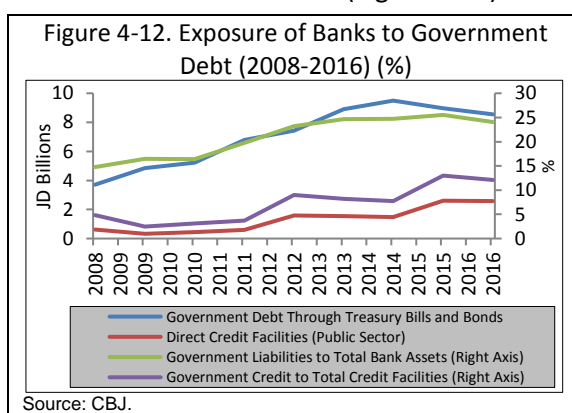
earlier. The credit facilities extended to large companies is next in the rank, comprising 37.7% of total credit facilities at the end of 2016 compared to 38.0% at the end of 2015. Whereas the credit facilities extended to the government and the public sector comprised about 11.4% at the end of 2016 compared to 12.3% at the end of 2015. Concerning the share of credit facilities extended to the SMEs of the total credit facilities, they reached 7.5% at the end of 2016 compared to 7.3% at the end of 2015. The emerging economies' average ranges between 20.0% - 25.0%. Chapter Two detailed the CBJ's measures to enhance the access to finance by the SMEs. The lowest share was for the credit facilities extended for financing commercial real estate. It formed only 4.9% of total credit facilities at the end of 2016 (Figure 4-10).



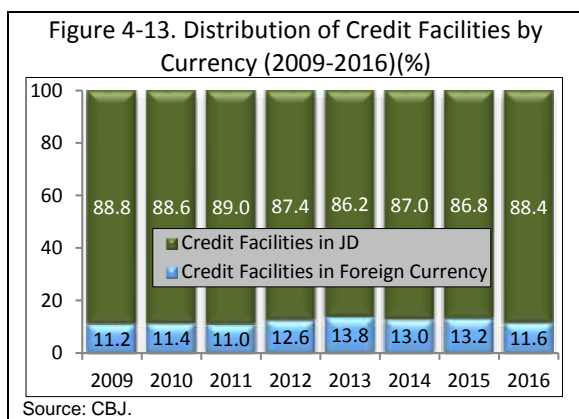
With regard to loans extended to household sector, the largest share of these loans was in the form of household residential loans, which formed about 48.0% of household debt at the end of 2016 compared to 46.5% at the end of 2015. The second largest share was for the personal advances that formed 37.0% of total household debt at the end of 2016, compared to 34.6% at the end of 2015. Auto loans accounted for 12.0% at the end of 2016 compared to 12.1% at the end of 2015 (Figure 4-11). It is worth noting that the variation in the shares of household credit facilities components is due mainly to regulatory changes, as banks reclassified these components to improve the accuracy of data classification especially after the launching of the Aggregate Electronic Banking Supervision Database in 2015.



Concerning the exposure of banks in Jordan to government debt through investing in government bonds or lending some public institutions with government guarantee, the government debt to banks reached about JD11.1 billion at the end of 2016 accounting for 24.0% of the total banks' assets, compared to JD11.6 billion at the end of 2015, representing about 25.5% of the total assets of banks. It is worth mentioning that the amount of government indebtedness to banks is consisted of JD8.5 billion in the form of government bonds and JD2.6 billion in the form of credit facilities. The banks' exposure to government or government guaranteed debt as a percentage of banks' assets rose from 14.8% at the end of 2008 to 24.0% at the end of 2016 (Figure 4-12).



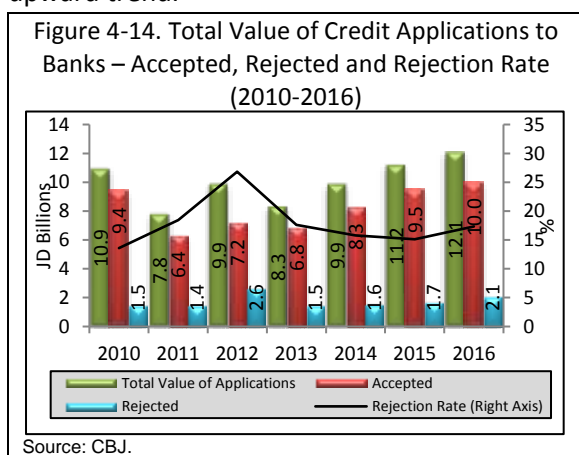
Regarding the classification of the facilities by currency, the facilities denominated in JDs are the major component of the credit facilities. They composed about 88.4% of total credit facilities at the end of 2016 compared to 86.8% at the end of 2015 (Figure 4-13).



4.2.2.1 DEMAND FOR CREDIT AND BANKS' REACTION

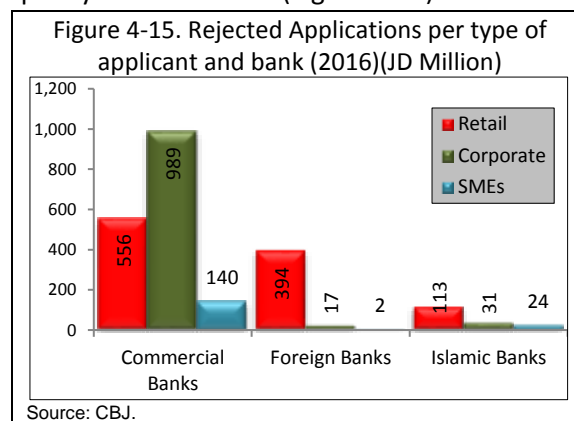
To measure the demand for credit and the banks' reaction to this demand, the CBJ updated and developed the survey that it conducted in 2014 through collecting the questionnaires received from banks and analyzing their data as it is on 31-12-2016. The most important results of the study were:

The number of applications submitted to banks by individuals and companies for new facilities (applications by new customers in addition to the requests for increasing outstanding facilities) during 2016 was about 361 thousand applications totaling JD12.1 billion. Of these, about 13.6% of the submitted applications were rejected. These totaled JD2.1 billion and accounted for 17.3% of the value of all submitted applications compared to 15.1% in 2015. Figure 4-14 reveals that this share has been declining since 2012 until 2016 when it resumed its upward trend.

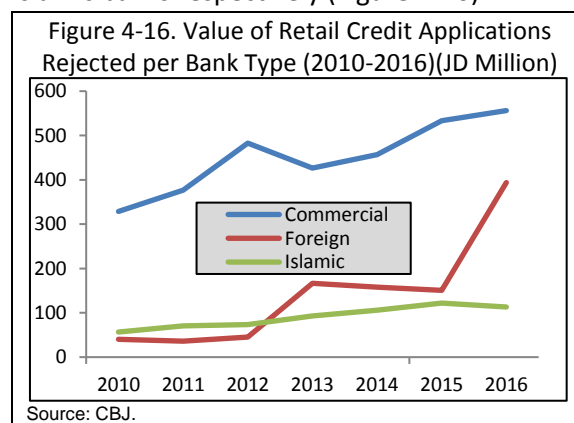


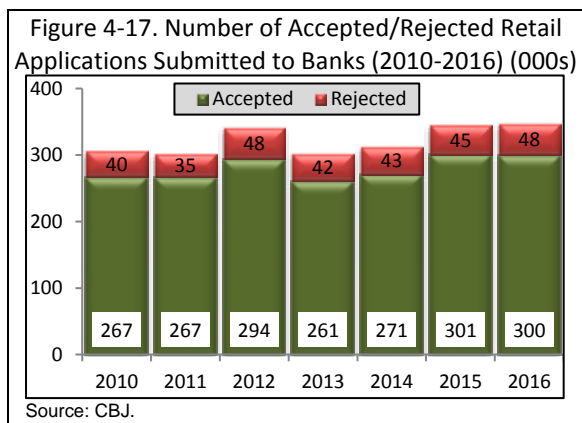
There was some improvement in the response of banks for demand for credit during the period

(2013- 2015) as a result of the improvement in the economic situation relative to the period (2010-2012). However, the year 2016 witnessed a setback in the response of banks even though the year witnessed a satisfactory growth in credit granted by banks. This shows that banks are conservative in deciding the type of credit to extend and continually focus on improving the quality of their assets. (Figure 4-15).

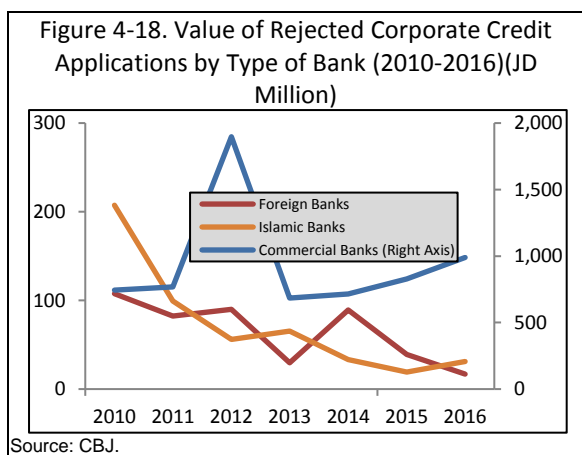


Regarding credit facilities to individuals, the number of applications for obtaining new credit facilities (applications by new customers in addition to the requests for increasing outstanding facilities) during 2016 reached about 348.0 thousand requests with a total value of JD5,601 million. Of them, 13.8% were rejected amounting to JD1,063.0 million composing 19.0% of the total value of applications submitted during the year 2016 compared to 18.4% during 2015. The highest rejection ratio, in value, was for applications submitted to foreign banks that approximated to 25.3%, compared to 19.7%, and 9.2% for the applications submitted to commercial banks and Islamic banks respectively (Figure 4-16).

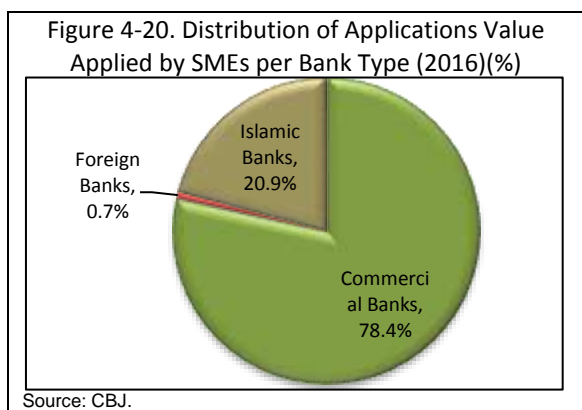
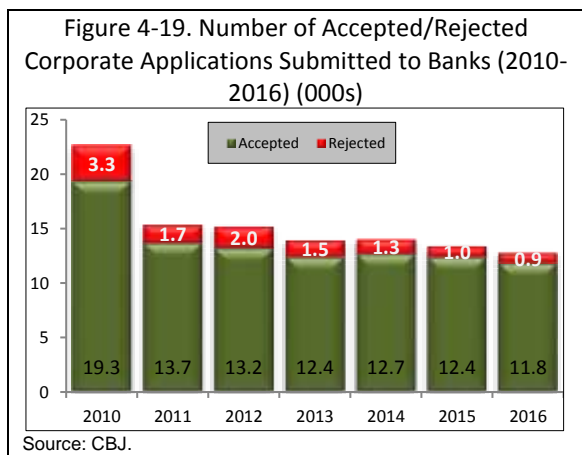




As for credit facilities requested by companies (large, medium and small ones), the number of applications for new credit facilities (applications by new customers in addition to the requests for increasing outstanding facilities) reached during 2016 about 12.7 thousand applications with a total value of JD6,511.8 million. About 7.3% of them were rejected, totaling JD1,036.8 million composing 15.9% of the total value of applications submitted in 2016, compared to 13.0% in 2015. The highest rejection rate, in value, was for applications submitted to foreign banks that approximated 9.3%, compared to 8.9% and 3.6% for applications submitted to commercial banks and Islamic banks respectively.



It is worth noting that the number of credit facilities applications submitted to banks by SMEs formed 69.2% of total number of applications submitted by all companies. The applications for obtaining new credit facilities reached about 8.8 thousand applications, with a total value of JD1,262 million.



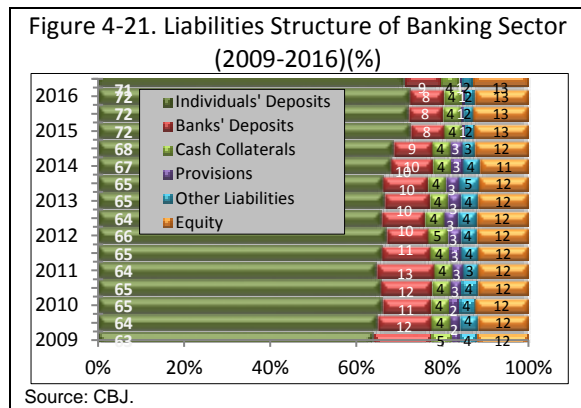
Of the total value of applications submitted by SMEs in 2016, 13.1% were rejected compared to 11.3% in 2015. The highest value of credit applications submitted by the SMEs was to commercial banks, forming about 78.4% of the total value. The credit applications submitted to Islamic banks formed about 20.9% of total value, whereas those submitted to foreign banks were relatively small and composed 0.7% (Figure 4-20). The number of rejected applications submitted by the SMEs formed 76.6% of the total number of rejected applications submitted by companies sector. Moreover, the largest percentage of the value of rejected credit applications submitted by SMEs was at the Islamic banks that rejected 75.4% of the total value of rejected credit applications submitted by all companies.

It is worth mentioning in this regard that the CBJ is working on updating the credit survey by preparing a new survey entitled “credit criteria survey.” The survey aims at pinpointing the

reasons that drive the banks operating in the Kingdom to reject granting credit facilities, besides considering the major barriers that prevent individuals and companies from obtaining credit, as well as reviewing the criteria for granting or rejecting credit through a comprehensive review of the whole credit process.

4.2.3 SOURCES OF FUNDS (LIABILITIES)

Analyzing the sources of funds in the banking system reveals that deposits represent the major source of funding, forming about 71.0% of total sources of funds as at the end of 2016 compared to 72.1% at the end of 2015 (Figure 4-21).

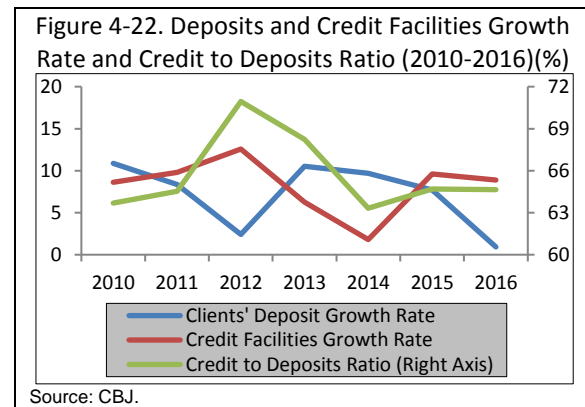


Regarding the second source of funds, shareholders' equity, it increased from JD5.8 billion at the end of 2015 to JD6.0 billion at the end of 2016. The shareholders' equity grew by 3.5%. These results reflect on sustaining the solvency of the banking sector in Jordan.

The third source of funds in terms of importance is banks' deposits, which have taken an upward trend since June 2012 to reach 10.2% of the total sources of funds for banks at the end of 2013. It then declined at the end of 2014 and 2015 to reach 8.9% and 7.8% of banks' total sources of funds respectively. They resumed their upward trend to reach 8.6% of the total sources of funds for banks.

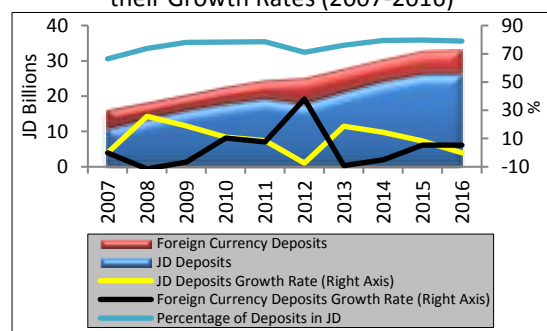
Regarding the evolution of deposits in the banking system, the clients' deposits increased

by a small percentage of 1.0% during 2016 to reach about JD32.9 billion, which is lower than the growth in total credit facilities in 2016 that approximated 8.9%. Consequently, the ratio of credit facilities to deposits at the banking system in the Kingdom increased from 64.7% at the end of 2015 to 69.7% at the end of 2016 (Figure 4-22).



As for the structure of deposits in terms of currency, the JD-denominated deposits occupied the largest share of deposits. Analyzing the changes in the share of JD- denominated deposits to the total deposits reveals that this share witnessed an evident increase from 66.4% at the end of 2007 to touch 78.4% at the end of 2011. However, it returned to the declining trend and reached its record minimum of 71.0% at the end of 2012 due to the tough economic conditions that the Kingdom faced in 2012. However, in 2013, 2014, and 2015, and as a result of the improving economic situation and conditions represented by the improvement of most economic and monetary indicators, the share of JD- denominated deposits returned to the upward trend to reach its peak in the last nine years of 79.7% of total deposits at the end of 2015. By the end of 2016, it decreased slightly to 78.9% of total deposits as a result of the decline in the JD- denominated deposits by 0.2% and the increase in the foreign currency deposits by 5.3% (Figure 4-23).

Figure 4-23. JD and Foreign Currency Deposits and their Growth Rates (2007-2016)



Source: CBJ.

4.2.4 BANKING SYSTEM RISKS IN JORDAN- FINANCIAL SOUNDNESS INDICATORS

In spite of the Arab Spring conditions, instability in the region, and the associated risks and significant challenges, the banking system in Jordan was generally capable of maintaining the resilience and the soundness of its financial and administrative positions. Next is a brief discussion of the main developments in the financial ratios and indicators for banks.

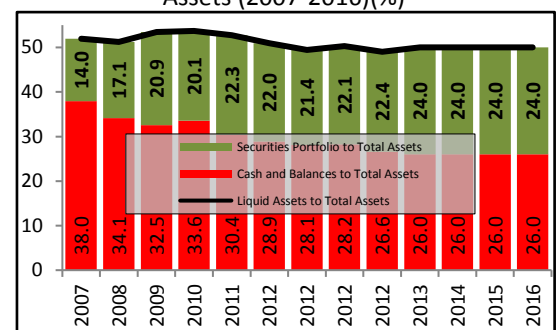
4.2.4.1 LIQUIDITY

Jordanian banking system enjoys a safe liquidity position. The liquidity ratios at the end of 2016 indicated that the liquidity position of the banking system is safe and sound. In this regard, the share of cash and cash balances to total assets reached 26.8% at the end of 2016 compared to 28.7% at the end of 2015, while the share of securities portfolio (highly liquid) to total assets roughed 22.1% at the end of 2016 compared to 23.1% at the end of 2015. Consequently, the total highly liquid assets constituted about 48.9% of total assets at the end of 2016 compared to 51.8% at the end of 2015. The decline in this ratio is attributed to the continuous improvement of credit extended by the banks and which was evident in 2015 and continued so in 2016 (Figure 4-24).

Regarding legal liquidity ratio in total enforced by the CBJ on banks (a minimum of 100.0%), the ratio decreased from 151.3% at the end of 2015

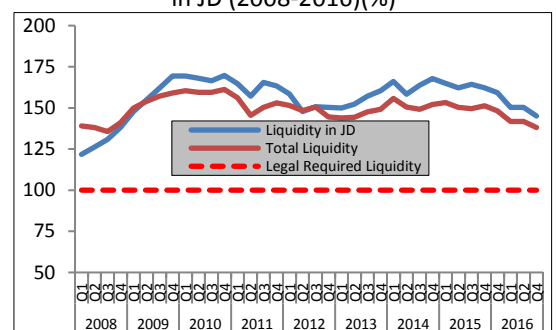
to 137.8% at the end of 2016 (Figure 4-25). The decline is attributed, as previously mentioned, to the improvement in credit levels extended by banks in 2016. Despite this decline, the legal liquidity is still higher than the minimum limit of 100% at a comfortable margin.

Figure 4-24. Components of Liquid Assets to Total Assets (2007-2016)(%)



Source: CBJ.

Figure 4-25. Legal Required Liquidity and Liquidity in JD (2008-2016)(%)



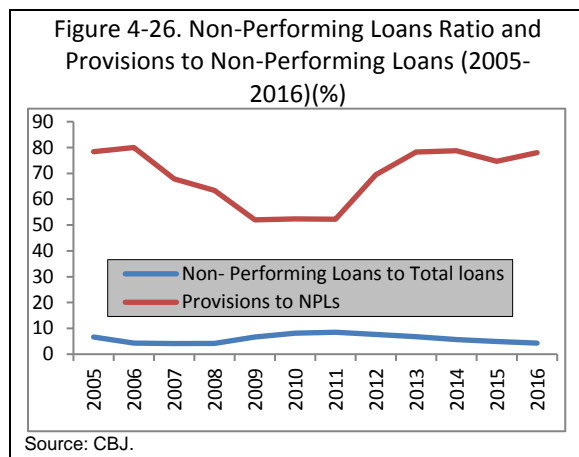
Source: CBJ.

4.2.4.2 ASSET QUALITY

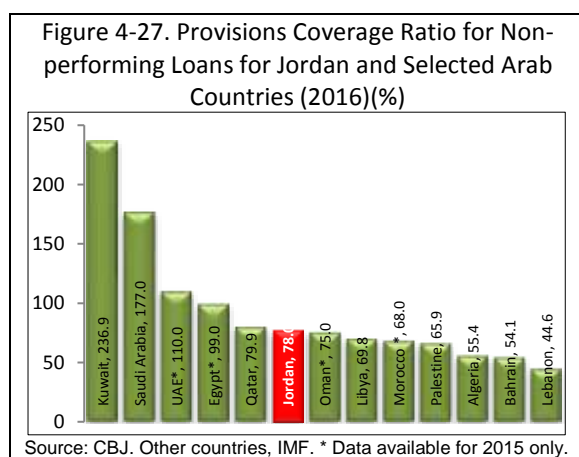
Concerning the ratio of non- performing loans to total loans, it continued its downward trend in 2016 to touch 4.3% compared to 4.9%, 5.6%, 6.8%, and 7.7%, for the years 2015, 2014, 2013, and 2012, respectively. This decline came because of the increase in credit facilities (denominator) and the decline in the size of non-performing loans NPLs (numerator). This decline in NPLs is attributed to the decision of banks to write off part of their NPLs in exchange of the provisions allocated to them, besides the relative improvement in the economic conditions in the Kingdom compared to the years 2011 and 2012 that reflected positively on

the ability of banks' clients to repay their debt. This reflects an improvement in the quality of banks' assets and in turn enhances financial stability in the Kingdom.

Regarding the provisions' coverage ratio for the non-performing loans, it continued its upward trend that started in 2011 to reach 78.0% at the end of 2016 compared to 74.7% at the end of 2015 (Figure 4-26).

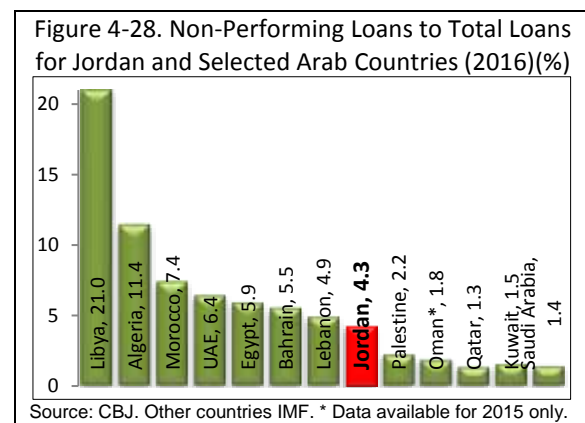


The banking system in Jordan ranked sixth among 13 Arab countries in the NPLs coverage ratio. This reflects an improvement in Jordan's rank regarding this ratio compared to the year 2015, when the banking system in Jordan occupied the middle rank (Figure 4-27).



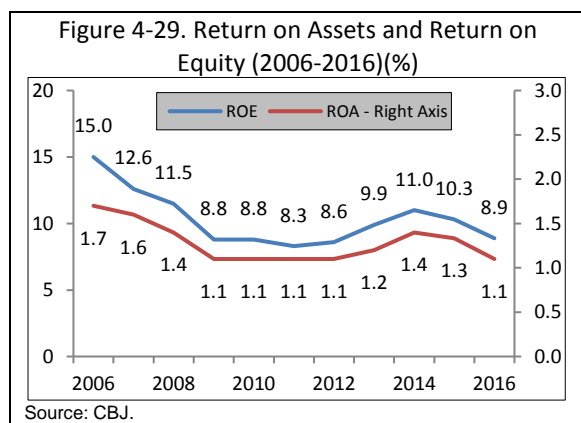
The balance of NPLs at the banking system reached JD1,334.4 million at the end of 2016, registering a slight decline from its counterpart amount at the end of 2015 by JD21.8 million. The balance of NPLs was JD1,356.2 million.

The comparison of the NPLs to total debts ratio in Jordan with some Arab countries reveals that this ratio in Jordan is the sixth lowest ratio amongst 13 Arab countries. The ratio was lower in Jordan than Libya, Algeria, Morocco, UAE, Egypt, Bahrain, and Lebanon; but higher than Palestine, Oman, Qatar, Kuwait, and Saudi Arabia. The ratio was higher than Bahrain and Lebanon in 2015, but became lower in 2016, which is a positive indicator on the continuous improvement of the asset quality in the banking system in Jordan (Figure 4-28).

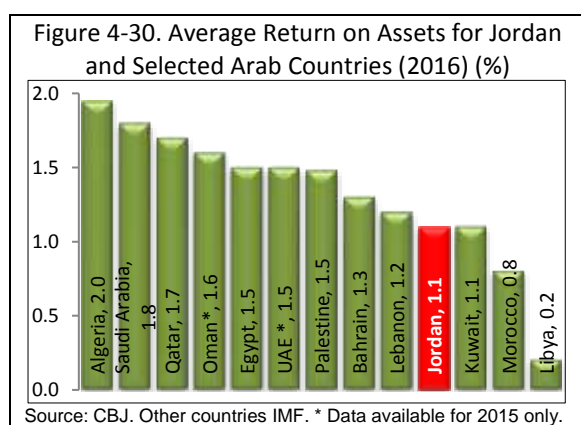


4.2.4.3 PROFITABILITY

The rate of return on assets (ROA) at the banking system in Jordan witnessed a decrease during the years (2006-2010); it reached 1.7% at the end of 2006 and declined to 1.1% at the end of 2009 impacted by the repercussions of the global financial crisis on banks' profits. This rate kept its level until the end of 2012, to resume the increase in 2013 and 2014 to reach 1.2% and 1.4%, respectively, as a result of the sizeable growth in banks' profits. It then declined in 2015 and 2016 to reach 1.3% and 1.1% respectively. This decline is attributed mainly to the increase of income tax rate on banks from 30.0% in 2014 to 35.0% in 2015, besides the deduction of more funds to provisions against NPLs by banks. As previously mentioned, the coverage ratio of NPLs increased from 74.7% in 2015 to 78% in 2016 (Figure 4-29).

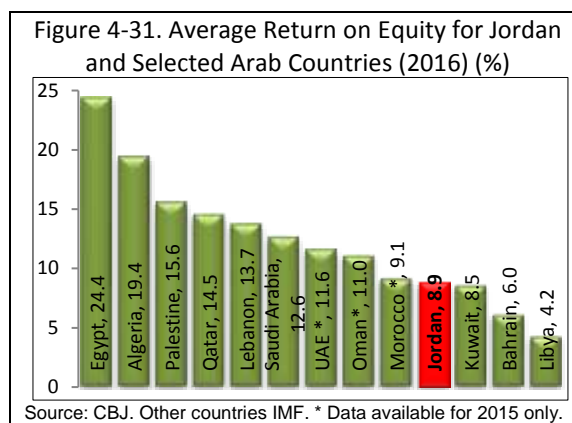


Comparing Jordan with some Arab countries in this ratio reveals that Jordan’s rank has relatively worsened in 2016, as it occupied a low rank among 13 Arab countries whose data are available. Libya was the lowest country- among the selected countries- with a rate of return on assets of 0.2%, whereas Algeria had the highest rate of return on assets of 2.0% (Figure 4-30).



Regarding the return on equity (ROE), it followed a trend that is similar to the trend of the rate of ROA. It declined during the period (2006-2011) from 15.0% at the end of 2006 to 8.3% at the end of 2011, and then resumed the increase in 2012, 2013, and 2014 to reach 8.6%, 9.9%, and 11.0%, respectively. However, it declined to 10.3% in 2015, and continued to decline and reached 8.9% in 2016 (Figure 4-29).

Compared to several Arab countries, the ROE is still low, as Jordan occupied the fourth lowest rank in terms of the ROE. Libya had the lowest return on equity of 4.2%. Egypt had the highest rate of 24.4% (Figure 4-31).



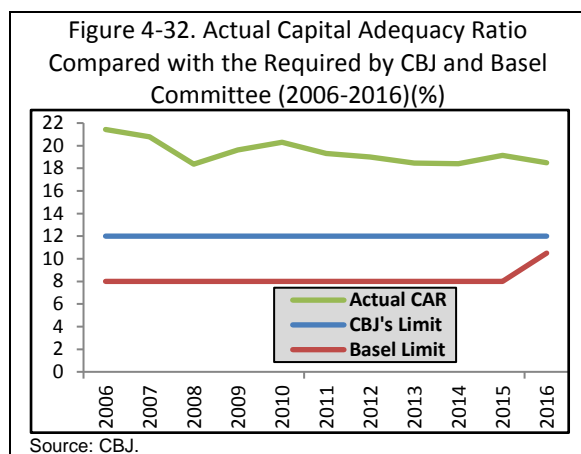
The low rate of ROE in Jordan compared to most of Arab countries is attributed to the characteristics of the banks’ in Jordan in general who are conservative and risk averse, besides their enjoying high levels of capital and paying relatively high rates of income tax.

4.2.4.4 CAPITAL ADEQUACY

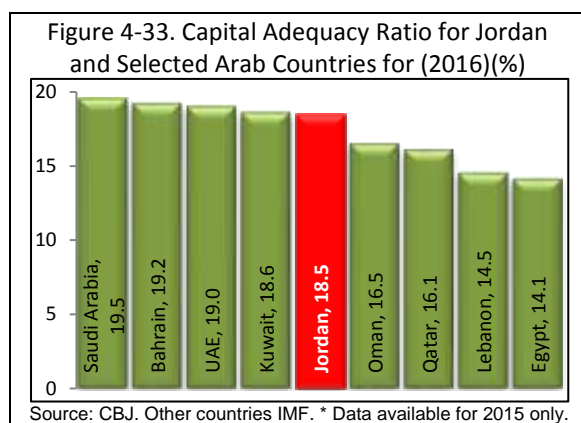
The banking system in Jordan enjoys a high capital adequacy ratio. The Capital adequacy ratio (CAR) in the banking system in Jordan ranged between 18.0% and 21.0% during the years 2007-2016. It is generally higher, by a comfortable margin, than the limit set by the CBJ of 12.0% and the limit specified by Basel Committee- Basel III standard- of 10.5%. The CAR decreased to 18.5% at the end of 2016 from 19.1% at the end of 2015.

This decline came as a result of the continuous improvement in the credit levels granted by banks to the private sector that usually has relatively high risk weights.

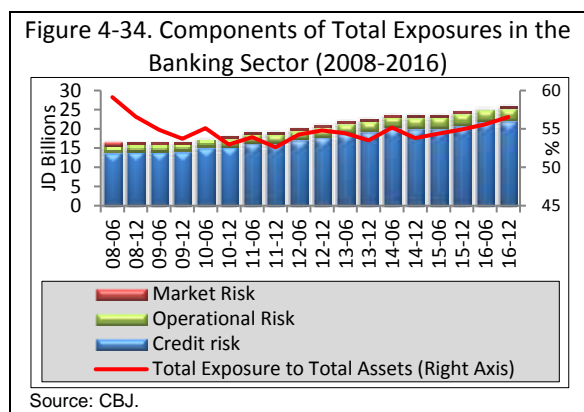
It is worth mentioning that capital adequacy ratio and the share of the tier I core capital are very close. The tier I core capital reached 18.2% at the end of 2016. This means that most of the banks' capital in Jordan is composed of tier one core capital that is the highest quality component of capital and the most capable of absorbing losses (Figure 4-32).



Comparing the CAR in Jordan with some Arab countries whose data are available reveals that Jordan's rank has relatively worsened in 2016, as it occupied the fifth rank compared to the first rank in 2015. However, the CAR ratio in Jordan is still very high when compared to the lower limit set by the CBJ and Basel Committee (Figure 4-33).



As for the main risks faced by banks, the credit risk is in the forefront of these risks and constituted 85.0% of total risks at the end of 2016, followed by operational risk, which constituted 12.3% of total risk, and market risk, which constituted 2.7% of the total risk. These figures are close to their counterparts in 2015 signaling the relative stability of risk structure in banks without any substantial changes (Figure 4-34).



4.2.5 OPERATIONAL EFFICIENCY OF BANKS

Cost- income ratio (CIR) is the most important ratio that measures operational efficiency of the banks. A study conducted by McKinsey & Company showed that the banks whose CIR exceeds 55.0% suffer from operational efficiency weaknesses in terms of their ability to generate income while controlling expenses. Based on this study, a CIR number that is below 55.0% is a positive indicator of the operational efficiency of the banks.

The CIR for the banking system in the Kingdom approached 55.7% at the end of 2016 compared to 50.6% at the end of 2015. This indicates some set back in the level of operational efficiency of banks in Jordan in 2016 in comparison with 2015. Despite this decline, the CIR average was still close to the acceptable upper bound of 55.0%. On the individual bank level, there were variations among banks in operational efficiency, where the CIR exceeded 55.0% for 13 banks, and was less than 55.0% for 12 banks. This means that about half of banks in Jordan need to improve their operational efficiency through controlling and cutting more operational expenses.

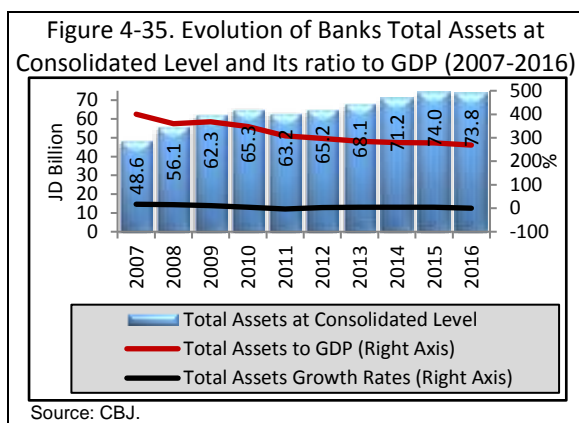
4.3 BANKING SYSTEM'S ASSETS AND LIABILITIES AT CONSOLIDATED LEVEL (BRANCHES IN JORDAN AND ABROAD AND SUBSIDIARY COMPANIES AND BANKS)

4.3.1 ASSETS

The number of Jordanian banks that have affiliations outside Jordan is nine, with the

majority being for Arab Bank, whose assets outside Jordan formed about 72.5% of its total assets on the consolidated level at the end of 2016. The total assets of the Jordanian banking system on the consolidated level approximated JD73.8 billion at the end of 2016 compared to JD74.0 billion at the end of 2015, declining by JD0.2 billion or 0.3%. The banking system's assets for Jordan branches formed about 62.8% of total assets on the consolidated level at the end of 2016 compared to 61.0% at the end of 2015.

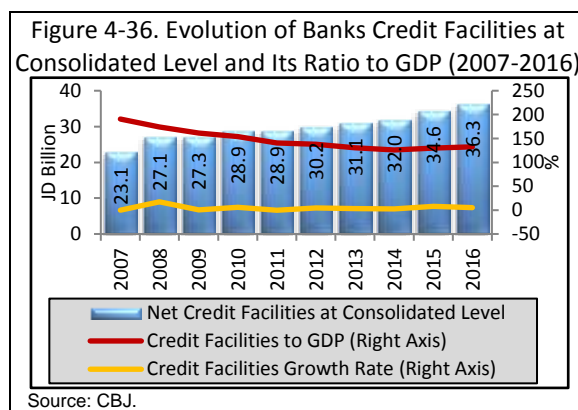
Despite the increase in the banking system's assets on the consolidated level from JD48.6 billion at the end of 2007 to JD73.8 billion at the end of 2016, the growth rate of these assets followed a clear downward trend. It declined from about 17.0% in 2007 to -0.3% (a contraction) in 2016 (Figure 4-35). This result is, inevitably, normal, as it is one of the repercussions of the political instability in the region and the decline in the global economic activity, particularly in the Euro Zone, which both affected the existence of Jordanian banks' branches outside Jordan.



The ratio of the banking system assets on the consolidated level to GDP reached 268.8% at the end of 2016, compared to 278.0% at the end of 2015. However, it was much higher back at the end of 2007 and reached 400.0%.

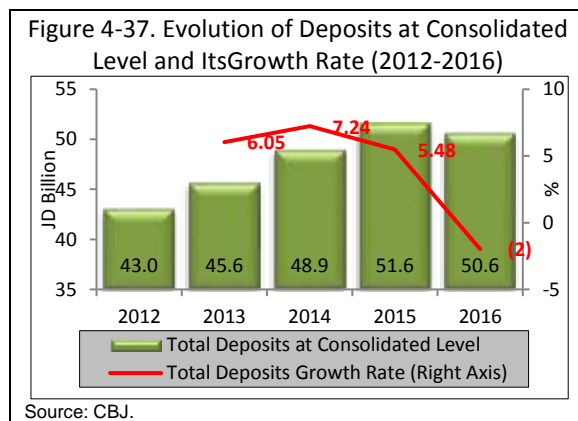
4.3.2 CREDIT FACILITIES

The net balance of credit facilities of the banking system on the consolidated level approximated JD36.3 billion at the end of 2016, recording a growth of 5.0%, compared to JD34.6 billion at the end of 2015, when the growth was 8.0%. Regarding the ratio of credit facilities of the banking system on the consolidated level to GDP, it reached 132.4% at the end of 2016 compared to 129.9% at the end of 2015. The increase in this ratio is attributed to the growth of credit facilities at rates higher than the growth of GDP (Figure 4-36).



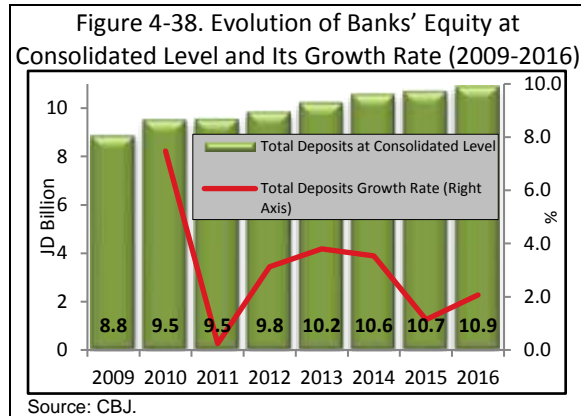
4.3.3 DEPOSITS

Clients' deposits in the banking system at the consolidated level declined to JD50.6 billion, or a contraction of 2.0%, at the end of 2016, from JD51.6 billion at the end of 2015, or growth of 5.5% (Figure 4-37).



4.3.4 SHAREHOLDERS' EQUITY

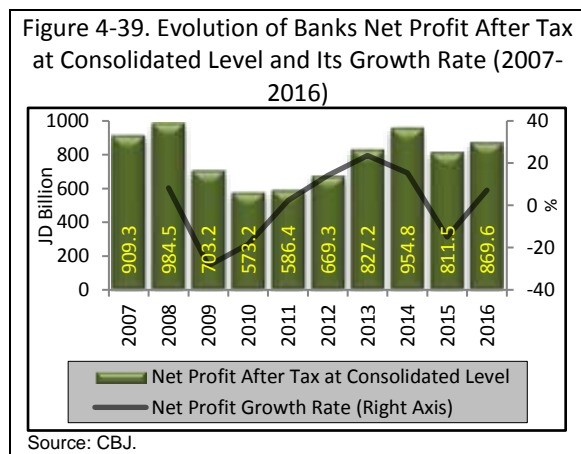
The shareholders' equity balance at the banking system on the consolidated level reached JD10.9 billion at the end of 2016, compared to JD10.7 billion at the end of 2015. It is worth mentioning that the balance of shareholders' equity followed an upward trend since 2009 (Figure 4-38). This enhances banks' solvency and capacity to confront risks and, hence, promotes the stability of the financial system (Figure 4-38).



4.3.5 NET AFTER-TAX PROFIT, RETURN ON ASSETS AND RETURN ON EQUITY

4.3.5.1 NET AFTER-TAX PROFIT

Net after-tax profit for the banking system at the consolidated level increased to JD869.6 million at the end of 2016, compared to JD811.5 million at the end of 2015, or a growth by 7.2% (Figure 4-39).



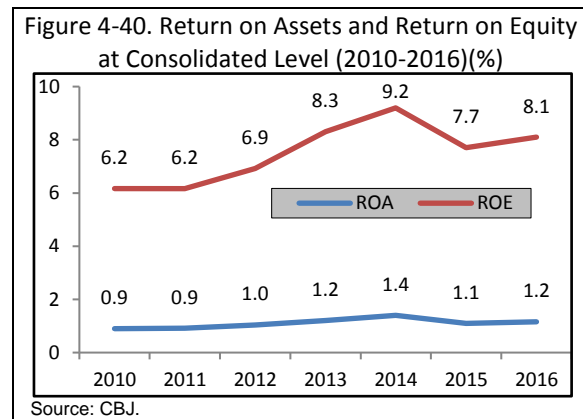
4.3.5.2 RETURN ON ASSETS

The ROA in the banking system at the consolidated level was 1.2% at the end of 2016

compared to 1.1% at the end of 2015 (Figure 4-40).

4.3.5.3 RETURN ON EQUITY

The ROE in the banking system at the consolidated level reached 8.1% at the end of 2016 compared to 7.7% at the end of 2015. It is noticed that bank's profitability and rates of return on the consolidated level increased in 2016 relative to 2015, unlike the profitability level and rates of return in bank branches in Jordan that witnessed a slight setback. It is worth mentioning that the consolidated level provides a broader image of the performance of the banking sector since it includes bank branches outside Jordan and the subsidiaries besides the bank branches located inside Jordan (Figure 4-40)



4.4 DEVELOPMENTS IN NON-BANK FINANCIAL SECTOR (NON-BANK FINANCIAL INSTITUTIONS)

4.5 INSURANCE SECTOR

Insurance sector is one of the primary components of the financial system. It protects individuals and properties from risks, besides accumulating and investing national savings to support economic development. The contribution of insurance premiums to GDP reached 2.14% in 2016.

Due to the importance of this sector, the cabinet made a decision on 24-02-2016 that approved the following:

The CBJ undertakes the responsibility of supervising the insurance sector as one of its duties and in compliance with practices of several international supervisory institutions.

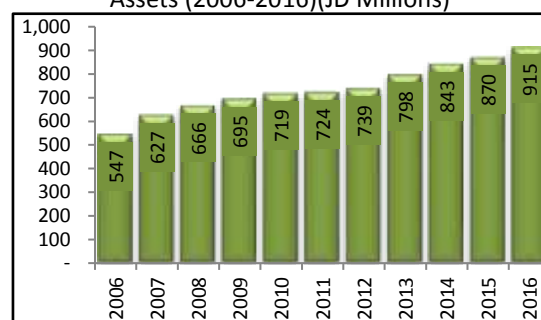
1. Transferring the supervision of the insurance sector to the CBJ within two years at most.
2. Updating the supervisory frameworks of the insurance business- within two years at most- to comply with the market developments with regards to the following:
 - Improving the financial solvency of the insurance companies and setting clear and transparent standards to supervise the financial solvency of these companies.
 - Setting regulatory requirements that ensure separating life insurance business from the other forms of insurance for the companies that offer both categories.
 - Implementing the prudential regulatory requirements for the investment policies of these companies.
 - Determining the supervisory authorities and responsibilities for the insurance companies that are part of a group of financial companies.
 - Enhancing corporate governance requirements for the insurance companies.
3. The formation of a committee headed by the Deputy Governor of the CBJ and the membership of the acting director of the insurance department at the Ministry of Industry, Trade, and Supply; a representative of the Legislation and Opinion Bureau; and a representative of the Ministry of Public Sector Development, for the purposes of implementing and accomplishing the aforementioned recommendations within a period not exceeding one year from the date of the Committee formation. The Committee must coordinate with the Jordan Insurance Federation in this regard.

It is worth mentioning that the Insurance Law is currently under review for possible amendments.

The Insurance Sector in Jordan consists of 24 companies after the merger of First Insurance Company and Yarmouk Insurance Company on 18-11-2015. It includes one company licensed for offering life insurance, one company that is licensed to practice general insurance business only, seven companies that provide general and health insurances, and 15 companies that are licensed to practice general, health, and life insurances. In addition, it includes 933 agents offering supporting insurance services including insurance agents, insurance brokers, loss settlement specialists, inspectors, insurance business management companies, actuaries, insurance consultants, re-insurance brokers, the banks licensed to practice insurance business, subscription delegates, and the re- insurance brokers residing outside Jordan.

Total assets of insurance companies in the Kingdom approximated JD915.0 million at the end of 2016, compared to JD870.0 million at the end of 2015; a growth rate of 5.2% (Figure 4-41).

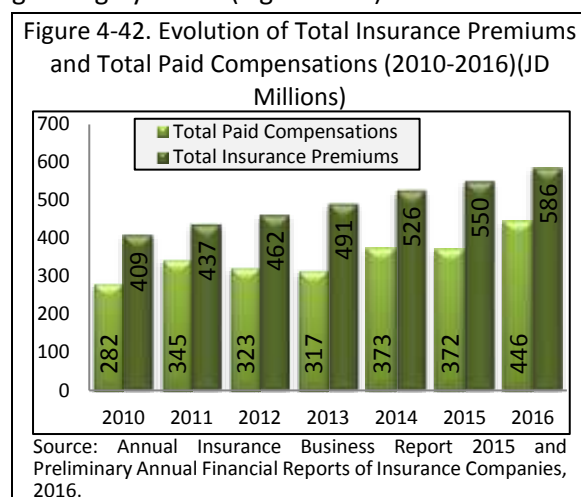
Figure 4-41. Evolution of Insurance Companies Total Assets (2006-2016)(JD Millions)



Source: Annual Insurance Business Report 2015 and Preliminary Annual Financial Reports of Insurance Companies, 2016.

Preliminary annual financial reports of insurance companies for the year 2016 show that the total premium payments inside the Kingdom reached about JD586.0 million at the end of 2016, compared to JD550.0 million at the end of 2015, growing by 6.5%. In return, the total compensation paid increased from JD372.0

million in 2015 to JD446.0 million in 2016; growing by 19.9% (Figure 4-42).



As for the results of the insurance companies business, the 2016 data shows that it attained a net after- tax profit of JD29.0 million compared to JD22.0 million at the end of 2015, or a growth of 31.8%. Moreover, insurance companies achieved an increase in equity rights from JD327.0 million in 2015 to JD344.0 million in 2016 (Table 4-1).

Table 4-1. Insurance Sector Developments (2012-2016) (JD Million)

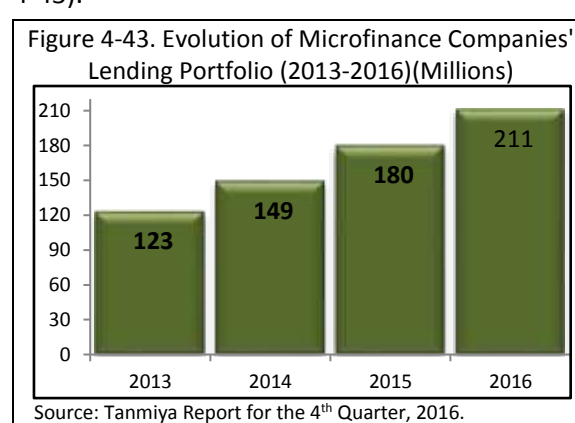
Statement	2012	2013	2014	2015	2016
Total investments	471	500	525	534	547
Total Assets	739	798	843	870	915
Equity	311	316	330	327	344
Total premiums written in Jordan	462	491	526	550	586
Total compensation of premiums written in Jordan	323	317	373	372	446
Paid-In Capital	280	281	268	269	267
Net profit after tax	9	18	33	22	29

Source: Data for the period (2012-2015) is obtained from Jordan Insurance Report for 2015. The 2016 Data is obtained from preliminary financials for the insurance companies.

4.5.1 MICROFINANCE SECTOR⁶

Microfinance sector started its business in Jordan in 1994 and grew rapidly in the last few years. Microfinance loans achieved a constant growth rate during the period (2013-2015) of 21.0%. The growth rate of loans reached 17.0% in 2016. These high growth rates are a clear indication of the size of demand on the products

and services of the microfinance industry (Figure 4-43).



The total loan portfolio of the microfinance companies approximated JD211.0 million at the end of 2016 compared to about JD180.0 million at the end of 2015. The number of borrowers reached 390,417 borrowers at the end of 2016 compared to 357,833 borrowers at the end of 2015 at a growth rate of 9.0%. Moreover, the average value of loans increased from JD487.0 at the end of 2015 to JD519.0 at the end of 2016, at a growth rate of 7.0%.

Microfinance institutions focus their services on women to empower her and increase her contribution to the economy and society. They also focus their services on the borrowers from outside the Capital Amman as a contribution to achieving social and economic developments across the kingdom, and as follows:

4.5.2 THE ACTIVITIES OF MICROFINANCE SECTOR OUTSIDE THE CAPITAL

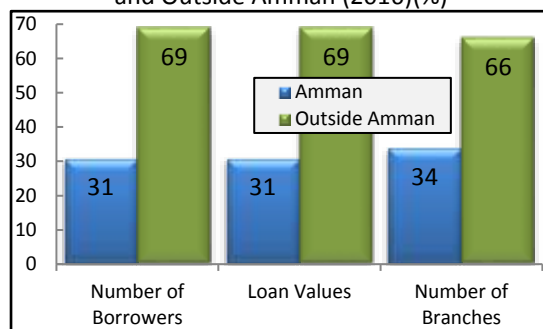
The microfinance sector focuses on governorates outside the capital. In this regard, 69.0% of borrowers, 69.0% of loans value, and 66.0% of microfinance companies' branches are located outside the Capital Amman. (Figure 4-44). The number of borrowers during 2016 inside Amman grew by 10.0%, while the growth

⁶ This part is based on the 2016 fourth quarter Tanmiya [Development] report.

in the governorates ranged between 3.0% and 29.0% for the same period.

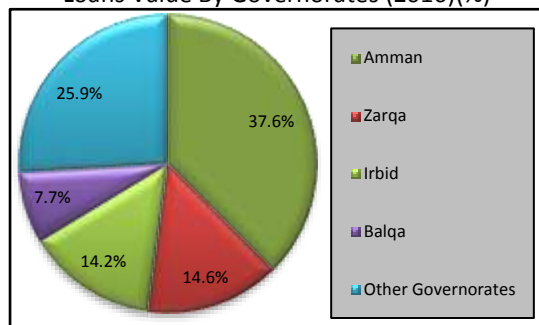
Regarding the distribution of loans value extended by microfinance companies among governorates during 2016 (Figure 4-45), the Capital Amman and Balqa Governorate obtained 29.0% of the total loans for each of them. Each of Irbid and Zarqa obtained 11.0% of the total loans. All other governorates together obtained 20.0% of total loans.

Figure 4-44. Activity of Microfinance Sector Inside and Outside Amman (2016)(%)



Source: Tanmiya Report for the 4th Quarter, 2016.

Figure 4-45. Distribution of Microfinance Companies Loans Value By Governorates (2016)(%)



Source: Tanmiya Report for the 4th Quarter, 2016 and CBJ.

4.5.3 FINANCE LEASING COMPANIES⁷

Total assets of finance leasing companies that are subsidiaries of banks in Jordan approximated JD401.6 million at the end of 2016 compared to JD327.1 million at the end of 2015, at a growth rate of 22.8%.

Shareholders' equity increased from JD205.5 million at the end of 2015 to JD227.8 million at

the end of 2016. Concerning the business results of these companies, the net profit after tax increased from JD15.7 million at the end of 2015 to JD17.3 million at the end of 2016. Despite the increase in profits as an absolute figure, the ROE decreased slightly from 8.1% in 2015 to 8.0% in 2016. The ROA also dropped from 5.3% in 2015 to 4.8% in 2016 due to the growth of shareholders' equity and assets at rates greater than the growth of profits. (Table 4-2).

Table 4-2. Finance Leasing Companies Developments (2013- 2016) (JD Million)*

Statement	2013	2014	2015	2016
Revenues	24.4	26.5	30.0	32.3
Paid-In Capital	100.0	101.0	111.0	121.0
Total Assets	249.1	271.3	327.1	401.6
Shareholders' Equity	174.2	184.8	205.5	227.8
After-Tax Profit	12.7	13.4	15.7	17.3
ROE (%)	7.8	7.5	8.1	8.0
ROA (%)	5.3	5.1	5.3	4.8

* Unless otherwise indicated.

Source: (1) Preliminary annual budgets of finance leasing companies affiliated with banks. (2) CBJ Calculations.

It is worth mentioning that the number of finance leasing companies, according to the website of Ministry of Industry, Trade, and Supply- General Controller of Companies Department, reached 32 companies, including eight subsidiaries of banks that accounted for the bulk of the finance leasing activity in the Kingdom.

4.5.4 CURRENCY EXCHANGE SECTOR

The number of exchange companies licensed in the Kingdom reached 136 companies operating through headquarters, in addition to 128 branches that are distributed across all governorates in Jordan - totaling 264 exchange sites (Table 4-3).

Table 4-3. Foreign Exchange Companies and Their Branches

Governorate	Companies	Branches	Total
Capital	85	82	167
Zarqa	13	11	24
Irbid	12	11	23
Aqaba	7	8	15
Other Governorates	19	16	35
Total	136	128	264

⁷ Data include the eight financial leasing companies that are subsidiaries to the banks that occupy the bulk of financial leasing activity in Jordan. The financial leasing transactions funded by the Islamic banks were not included in the calculation.

In light of the developments that the exchange sector witnessed and the evident growth of the sector in the last two decades that made the sector one of the most important and vital sectors in the Kingdom, and in response to the economic developments and changes, the Currency Exchange Law No. 44 for the year 2015 was issued on 18-10-2015 to replace the old law No. 26 of the year 1992.

The new law represents the legislative framework that regulates the currency exchange activity in the Kingdom through specifying the terms and conditions for licensing, merging, liquidating, and regulating exchange companies. Besides, it addresses the records that must be kept by companies, in addition to activating the role of the chartered accountant in auditing the exchange companies' business in terms of expanding the scope of their (The auditor) functions in compliance with best practices. The law also contributed to the creation of the legal organization of informing the companies of any decisions or instructions issued by the CBJ, and to the expansion of the role of the CBJ through imposing instructions on the ratios and safe limits for the safety of the companies' financial positions and the size of employment of non-Jordanian labor. The law lays down the legal basis for the formation of a committee to deal specifically with complaints received by the CBJ and related to the services offered by these companies.

The CBJ practices its supervision on the currency exchange sector both onsite and offsite. The offsite supervision mainly entails studying and analyzing the periodic statistical data and the audited financial statements of the exchange

companies and proposing appropriate recommendations thereof. Whereas the onsite supervision conducted through the on-site inspection teams verifies the compliance of the companies operating in the exchange sector with all laws and instructions in force, in addition to the role of external auditors of the exchange companies assigned to them as per the provisions of the law (Table 4-4).

Table 4-4. Most Important Indicators for the Currency Exchange Sector in 2016 (JD Million)

Indicator	JD Million
Total Business size*	203.0
Total Capital	82.9
Total Financial guarantees offered	27.2
Total Purchases of foreign currency**	8,446.0
Total Sales of foreign currency**	9,611.0
Return on capital (%)*	5.11
Return on assets (%)*	2.02

* For 2015. ** Preliminary for 2016.

4.5.5 SOCIAL SECURITY CORPORATION⁸

The social security corporation (SSC) has a major contribution in the society as the social security umbrella includes about 73.7% of workers in the Kingdom and 44,169 active firms, 61.2% of which are located inside the Capital Amman. It is worth mentioning that 98.7% of the total active firms subscribed to the SSC are private sector firms – as revealed in the SSC annual report for 2015. Added to its vital role in the society, the SSC has an important role in achieving financial stability through its large investments portfolio that includes investing in financial and non-financial assets and lending the government through treasury bonds. The SSC, by structure, has the following characteristics:

- It has a huge investment capacity and a long-term investment horizon, as it invests its capital to finance the retirement compensations of individuals of various ages, which helps to enable the SSC to

⁸ Even though the SSCs are not considered non-bank financial institutions, the stability reports in most countries do include them within this category for their vital role in enhancing financial stability through their diversified investment portfolio that is allocated between financial and non-financial assets.

undertake investments of different terms and maturities. It also helps to diversify the risk portfolio for various maturities. This policy is especially vital during financial crises when market suffers from liquidity shortages. In this regard, the SSC's investment formed about 29.4% of GDP at the end of 2016.

- The SSC invests using self- financing, as its source of funds is SSC's subscribers' deductions and not borrowings or deposits (like banks). Therefore, SSC is not exposed to high leverage or risks of mismatch in the maturities of sources and uses of funds. These two possible threats are actual factors that led to failures of international banks during the last global financial crisis. Therefore, the SCC cannot be a possible source of systemic risk in the financial system.
- The deductions of employees and employers are retained for a long period and cannot be withdrawn, unlike deposits in banks, which implies that the funds are protected against unexpected withdrawals.

Given the importance of the role of the SSC in stimulating investment and in order to expand its funds optimally, it established, in 2002, the Social Security Investment Fund (SSIF) which began its work at the beginning of 2003 in order to administer the task of investing the SSC's funds to obtain significant and regular returns while maintaining the real value of its assets and securing the necessary liquidity to meet the obligations of the SSC. The SSIF's assets totaled approximately JD8,306.9 million at the end of 2016, compared to about JD7,642.9 million at the end of 2015, registering a growth of 8.7% and by JD664.0 million. The SSIF also achieved a net profit of JD297.0 million at the end of 2016 compared to approximately JD277.2 million at the end of 2015; or an increase of JD19.7 million representing a ratio of 7.1%. The SSIF investment portfolios are composed of seven main portfolios (Table 4-5).

Table 4-5. Distribution of SSIF Portfolios (2015-2016)
(JD Million)

Portfolio	2015	2016
Money Market Instruments	1,724.0	855.0
Securities	2,441.0	3,957.0
Loan	161.0	168.0
Investment in Stocks	2,204.0	2,105.0
Foreign Investments	28.0	27.0
Real Estate	538.0	561.0
Tourism	247.0	250.0
Other	115.0	147.0

Source: the Social Security Investment Fund Official Site.

The SSIF's activities are spread over various economic activities, as the SSIF is the second-banks being the first- largest buyer of treasury bills and bonds, government bonds, and government-guaranteed bonds that are allocated between money- market portfolio (matures in less than a year) and securities portfolio (matures in a year or more). Besides, the SSIF has a loan portfolio including direct loans and multi- bank loan. The real estate portfolio includes lands, commercial complexes, and investment buildings. The tourism investments portfolio is administered by the National Company for Tourism Development (NCTD). The NCTD is a company fully owned by SSC that is responsible for managing hotels and tourist facilities owned by the SSC. Moreover, the SSC has a foreign investment portfolio as a way to diversify its investment portfolios and mitigate risks. Of course, the SSIF abides by preset regulations and constrains for investments. It includes foreign currency investments outside Jordan and investment funds.

It is worth noting that SSC is considered a strategic shareholder of the capital of several banks in Jordan. The total contribution of the SSC in the capitals of banks approximated to JD256.0 million as of the end of March 2017, forming 7.9% of the total capital of banks in Jordan (Table 4-6).

Table 4-6. Distribution of SSC Contribution in Jordanian Banks' Capitals (March 2017)

Bank	Value (JD Million)	Share (%)
Jordan Kuwait Bank	21.04	21.04
Jordan Commercial Bank	22.39	19.84
Arab Bank PLC.	102.53	16.00
Housing Bank for Trade & Finance	38.78	15.39
Jordan Ahli Bank PLC	17.5	10.00
Capital Bank of Jordan	16.83	9.27
Jordan Dubai Islamic Bank	5.97	5.97
Cairo Amman Bank	9.27	7.15
Bank al Etihad	5.83	5.29
Jordan Islamic Bank	7.5	5.00

Arab Jordan Investment Bank	6.12	4.08
Bank – ABC	2.26	2.05
Total	256.021	7.86

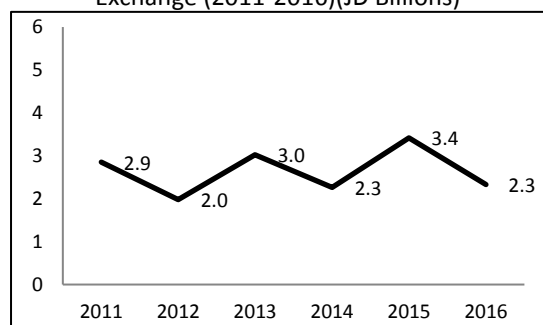
Source: Securities Depository Center.

4.5.6 AMMAN STOCK EXCHANGE (ASE)

ASE indices witnessed varying performance during 2016 compared to the previous year. During 2016, the trading volume decreased by 31.8%, whereas free- float share price index increased by 1.6%. On the other hand, the market value of shares listed on ASE decreased by an amount of JD645.3 million, or 3.6%, to get to JD 17.3 billion which represents 63.2% of GDP. The net investment by non- Jordanians recorded an inflow of JD237.1 million during 2016. Following is a summary review of the most important performance indicators of the ASE during 2016:

- The trading volume in ASE decreased by JD1,087.6 million to reach JD2,329.5 million in 2016. This decline is the outcome of the following factors:
 - 1- Decrease in the trading volume of the financial sector by JD1,138.8 million.
 - 2- Decrease in the trading volume of the services sector by JD306.0 million.
 - 3- Increase in the trading volume of the industry sector by JD357.2 million.

Figure 4-46. Trading Volume in Amman Stock Exchange (2011-2016)(JD Billions)



Source: Amman Stock Exchange.

The number of traded shares decreased by 749.1 million shares to reach 1,836.7 million shares, compared to 2,585.8 million shares traded in 2015. Moreover, the number of executed contracts decreased to 786.2 thousand contracts at the end of 2016 from about 899 thousand contracts at the end of 2015. Regarding, the

distribution of traded shares by sector, the financial sector had the largest share that composed about 51.6% of the trading volume during 2016, followed by the industry sector whose share composed 30.2%, and then came the services sector whose share comprised 18.2% (Table 4-7).

Table 4-7. Relative Importance of Trading Volume by Sector (2012-2016)(%)

Sector	2012	2013	2014	2015	2016
Manufacturing	19.5	13.1	16.7	10.1	30.2
Services	20.4	13.5	16.5	21.2	18.2
Financial	60.1	73.4	66.8	68.7	51.6

With respect to transactions of the non-Jordanian investors in the ASE, it recorded a net inflow of JD237.1 million during 2016, compared to a net inflow of JD10.6 million during 2015. The value of shares bought by the non- Jordanian investors reached about JD666.5 million during 2016, while the value of shares sold by the non-Jordanian investors roughed JD429.4 million (Table 4-8).

Table 4-8. Purchases and Sales of Stocks in ASE by Non-Jordanian Investors (2012-2016) (JD million)

	2012	2013	2014	2015	2016
Total bought	322.9	939.5	362.7	981.7	666.5
Arabs	227.7	818.5	262.1	894.3	520.3
Foreigners	95.2	121.0	100.6	87.4	146.2
Total Sold	285.2	792.6	384.8	971.1	429.4
Arabs	225.8	693.2	247.8	873.5	304.1
Foreigners	59.4	99.4	137	97.6	125.3
Net Investment	37.7	146.9	-22.2	10.6	237.1
Arabs	1.9	125.3	14.3	20.7	216.2
Foreigners	35.8	21.6	-36.5	-10.1	20.9

4.5.6.1 FREE FLOAT SHARE PRICE INDEX (FFSPI)

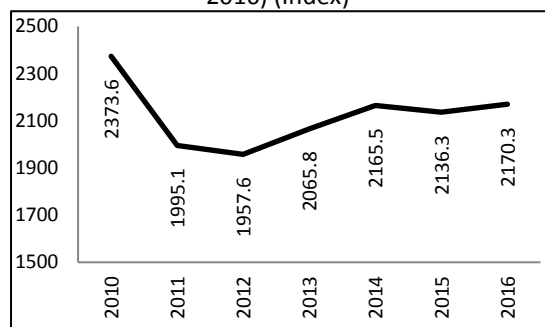
The FFSPI reached 2,170.3 points at the end of 2016, recording an increase of 34.0 points from its level at the end of the previous year. This increase was due to the decline in the FFSPI of the services sector by 122.0 points (7.1%) and the increase in the FFSPI for the financial sector by 27.0 points (0.93%) and industry sector by 244.2 points (13.2%) from their counterparts in 2015.

4.5.6.2 WEIGHTED SHARE PRICE INDEX

The WSPI declined in 2016 by 160.2 points from its level at the end of 2015 to reach 4,069.7 points, compared to a decline by 7.7 points in 2015. This decline is the outcome of the decline

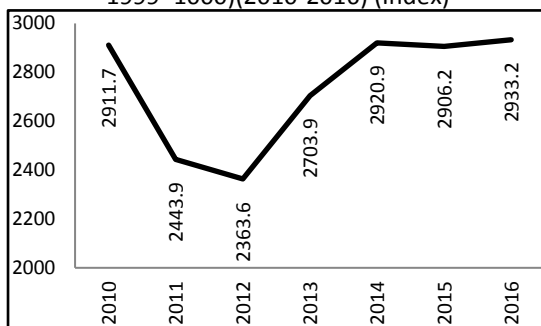
in the SPI of the banking, financial, services, industry, and mining sectors and the increase in the SPI of the insurance sector by 15.8 points.

Figure 4-47. Market Capitalization Weighted FFSPi of Shares (December Closing Price, 1999=1000)(2010-2016) (Index)



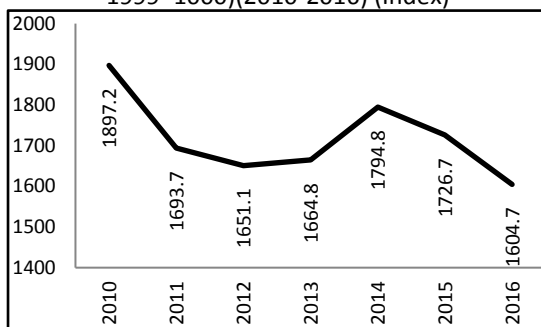
Source: Amman Stock Exchange.

Figure 4-48. Market Capitalization Weighted FFSPi of Financial Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2016) (Index)



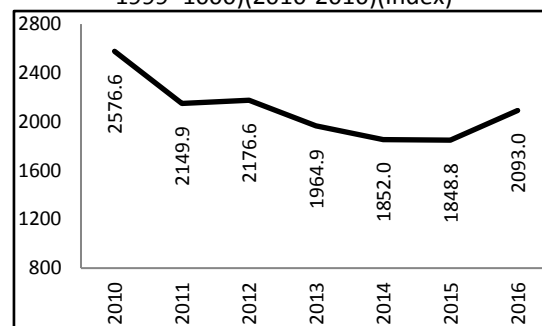
Source: Amman Stock Exchange.

Figure 4-49. Market Capitalization Weighted FFSPi of Service Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2016) (Index)



Source: Amman Stock Exchange.

Figure 4-50. Market Capitalization Weighted FFSPi of Manufacturing Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2016)(Index)



Source: Amman Stock Exchange.

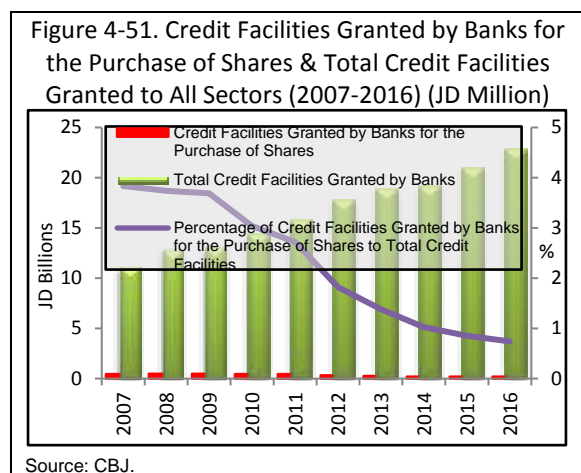
4.5.7 BANKS' EXPOSURE TO STOCK MARKETS RISKS

The importance of capital markets is apparent through their important role in boosting the economy via attracting foreign investments, encouraging national savings, and providing funding for economic projects, which, hence, serve the national economy. The vital importance of capital markets led, especially after the Global Financial Crisis of 2007, to increased focus on their risks through monitoring stock price bubbles and thus assessing risks in these markets and the exposure of banks to them. Regarding the exposure of banks to stock market risks in Jordan, it could evolve from the credit facilities granted by banks to finance the purchase of shares or the investment of banks in shares. The following is an analysis of the size of banks' exposure to these risks.

4.5.7.1 CREDIT FACILITIES GRANTED BY BANKS FOR THE PURCHASE OF SHARES

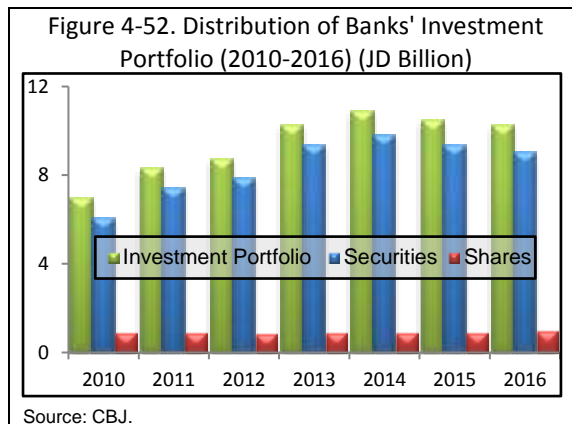
Credit facilities granted for the purchase of shares constituted a very small percentage of the total credit facilities granted by the licensed banks. They approximated JD168.6 million at the end of 2016, representing 0.74% of the total facilities granted by banks, compared to JD178.5 million at the end of 2015 with a decline of 5.5%. The facilities granted for the purchase of shares

took a downward trend during the period 2007-2016 (Figure 4-51).



4.5.7.2 THE SIZE OF BANKS' INVESTMENTS IN SHARES

The size of securities portfolio of banks in Jordan approximated JD10,242 million at the end of 2016 compared to JD10,463 million at the end of 2015, which means a decrease by 2.1%. The banks' investments in shares comprised 9.6% of the total investments in securities at the end of 2016, which is relatively low compared to the banks' investments in bonds which comprise the majority of the banks' investments in securities that are mostly government bonds. The low investment of banks in stocks is due to two main reasons: the set back of the financial market and the restrictions imposed by the Banking Law and CBJ's instructions regarding these investments (Figure 4-52).



CHAPTER FIVE

NON-FINANCIAL SECTOR DEVELOPMENTS AND RISKS

5.1 HOUSEHOLD SECTOR

5.1.1 EXPOSURE OF BANKS AND OTHER FINANCIAL INSTITUTIONS TO HOUSEHOLD SECTOR

Due to the importance of household debt to banks and the systemic risks it could cause, and in the course of the follow-up of the ratio of household debt to income, the ratio of household debt for the year 2016 was calculated using the same methodology that was outlined in the JFSRs for the previous years. The household indebtedness to the banking system was the driving factor used in the calculation, as the banking system is the main component of the financial system in Jordan. In addition, the information on household indebtedness that has been obtained for the microfinance sector, the public shareholding companies that extend loans, and financial leasing companies was also used.

5.1.2 HOUSEHOLD INDEBTEDNESS TO BANKS AND NON-BANK FINANCIAL INSTITUTIONS

Table 5-1 shows the evolution of household debt with banks and non-bank financial institutions during the period (2013 - 2016). As shown in the table, the household debt declined slightly from JD9.7 billion at the end of 2015 to JD9.6 billion at the end of 2016, or by -1.6%, compared to a growth of 10.8% at the end of 2015.

This decline in 2016 is attributed to the decline in the household debt with banks (for both

consumption and residential loans) by about JD230.0 million, or 2.6% contraction rate, compared to about JD901.0 million, or a growth by 11.2% at the end of 2015. As mentioned in Chapter three, this decline in the household debt with banks in 2016 is not an actual decline, but rather due to the decision of some banks to reclassify their data to improve its accuracy, especially after the launching of the Aggregate Electronic Banking Supervision Database by the CBJ that helped to improve the accuracy and comprehensiveness of banks' data, besides the request of the CBJ from the banks in 2016 to provide more detailed data about household debt. In the event these changes were excluded, then the household debt with the banking system (consumption and residential loans) would have risen by about JD1.0 billion, growing by 13.0% at the end of 2016, which indicates that there is a tendency in the banking sector to expand lending to households.

Household Debt		2013	2014	2015	2016
Banking Sector	JD Million	6,958	8,066.3	8,967.2	8,737.2*
	Y-o-Y growth (%)	9.2	15.9	11.2	-2.6
Non-Banking Financial Institutions	JD Million	644.7	730.5	781.1	852.2
	Y-o-Y growth (%)	8.7	13.3	6.9	9.1
Total	JD Million	7,602.7	8,796.8	9,748.3	9,589.4
	Y-o-Y growth (%)	9.1	15.7	10.8	-1.6

Source: CBJ.

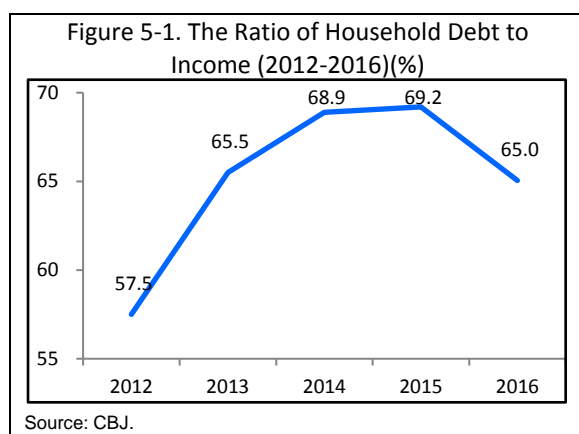
As for the household debt with non-bank financial institutions, it increased from JD781.1 million at the end of 2015 to JD852.2 million at the end of 2016, at a growth rate of 9.1% in 2016 compared to 6.9% in 2015. Table 5-2 shows the details of this debt.

Company	2013	2014	2015	2016
Microfinance Institutions*	122.9	158.0	180.0	211.3
Companies Listed in ASE**	99.8	111.8	117.4	185.7
Finance Leasing Companies (Subsidiaries of Banks)	421.9	460.7	483.7	455.2
Total	644.7	730.5	781.1	852.2

Sources: * Annual Report of the Microfinance Institutions Federation (Tanmiya). ** Amman Stock Exchange.

5.1.3 HOUSEHOLD DEBT-TO- INCOME RATIO

Table 5-3 details the household debt- to- income ratio over the period (2012 - 2016) in Jordan. As it appears in the table, the ratio witnessed a continuous increase during the period (2012 - 2015), as it increased from 57.5% at the end of 2012 to 69.2% at the end of 2015. The driver for this increase was the growth of household debt (obligations) at a higher rate than the growth in household income. This outcome is plausible in light of the tough conditions that the region is passing through and their repercussions on Jordan.



However, in 2016, the ratio declined to 65.0% approximately. The decline is attributed to the data reclassification by some banks, besides the action of the CBJ to collect more detailed data about household debt. In the event these changes were excluded, then the household debt to income ratio becomes 69.3% in 2016, which is almost equivalent to its corresponding figure in 2015. (Figure 5-1).

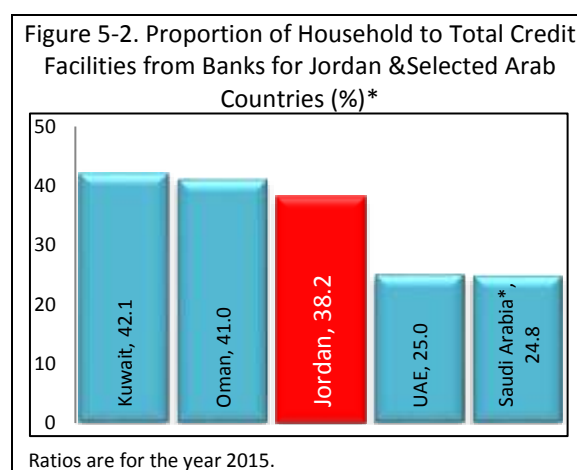
Table 5-3. Household Debt-to-Income Ratio (2012-2016) (JD Millions)*

Year	Household Debt	Household Income	Ratio (%)
2012	6,967.3	12,109.5	57.5
2013	7,602.7	11,603.5	65.5
2014	8,796.8	12,763.9	68.9
2015	9,748.3	14,040.3	69.2
2016	9,589.4	14742.3	65

* Unless otherwise indicated. Source: For 2010 and 2013: Department of Statistics. Other years are simple growth estimates (10% for 2012- 2015/ 5% for 2016).

5.1.4 HOUSEHOLD DEBT FOR SOME ARAB COUNTRIES

As for household debt in some Arab countries, there is limited information in this regard. However, the ratio of credit facilities granted to household to total credit facilities granted by banks is used as a measurement for the household debt. This ratio reached 38.2% in 2016 in Jordan. Compared to some Arab countries, Jordan occupies the middle rank among the selected countries, as it is higher in Jordan than Saudi Arabia and the UAE and lower than Kuwait and Oman. (Figure 5-2).

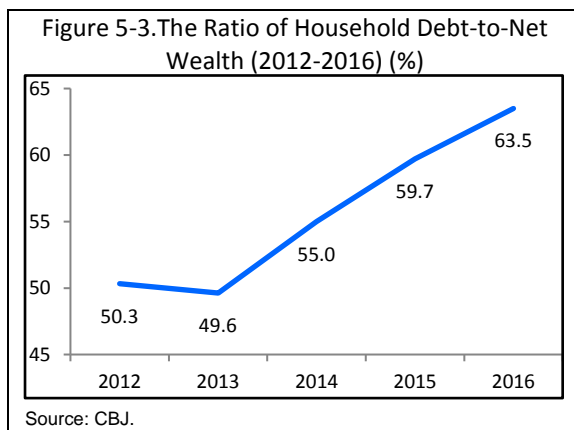


5.1.5 HOUSEHOLD DEBT-TO- WEALTH RATIO

Household budget on the assets side is made up mainly of deposits, real estate and financial assets, automobiles, and jewelry. On the liabilities side, the key component of liabilities is household debt. To build the household budget in Jordan, it has been relied on the data available at the CBJ to obtain the data for household deposits in domestic and foreign currency and on the data published by the Securities Depository Center to get the data on the securities held by households. Regarding the other household assets like real estate assets, automobiles, and jewelry, no information was obtained. Therefore, the information on the deposits of the household sector and their financial assets (shares and bonds) was enough for the assets side of the budget. In this regard,

the CBJ in collaboration with the Department of Statistics is working on preparing a comprehensive survey on assets, liabilities, income, and expenses of household sector, in order to collect comprehensive data on the accuracy and soundness of household budgets and the risks that its debt expose the financial sector to.

As it can be noted from Figure 5-3, the household debt- to- wealth ratio has been increasing since 2012. It increased at the end of 2016 to 63.5% compared to 59.7% at the end of 2015. This increase is attributed mainly to the decline of household assets as a result of the decrease in the size of their deposits with the banking sector (Table 5-4).



As shown in Figure 5-3, household debt-to-wealth followed a general upward trend since 2012. It increased to 63.5% at the end of 2016 from 59.7% at the end of 2015. This increase is attributed to the drop in household assets as a result of the decline in their deposits at the banking sector (Table 5-4).

Table 5-4. Household Budget and Debt- to- Wealth (2012-2016) (JD Million)*

Year	Assets**	Debt	Net Wealth	Debt-to-Wealth (%)
2012	20,810	6,967.3	13,843	50.3
2013	22,923	7,602.7	15,321	49.6
2014	24,057	8,796.8	15,991	55.0
2015	26,041	9,719.2	16,321.8	59.7
2016	24,701	9,589.4	14,151.92	63.5

Source: CBJ.

5.1.6 CONCLUSION

The follow-up of the development of the ratios of household debt relative to income and wealth over the last five years reveals that they have witnessed almost a continuous increase. Except for the year 2016, that realized a decline in the household debt- to- income ratio in case the reclassification of data by some banks and the collection of more detailed information about the household debt by the CBJ were considered. Otherwise, the ratio will be relatively fixed compared to the previous year 2015.

This implicates that the risks of household lending did not rise in 2016 compared to 2015. However, banks must be cautious and aware of the risks of lending the household sector, and consider the development of these risks when studying its expansion, especially because there are 11 banks whose debt- burden ratio (DBR) exceeds the upper limits that are determined in their credit policy by 50.0% of the regular monthly income of the client. Even though, there are six banks whose DBR is below the 50.0% bound.

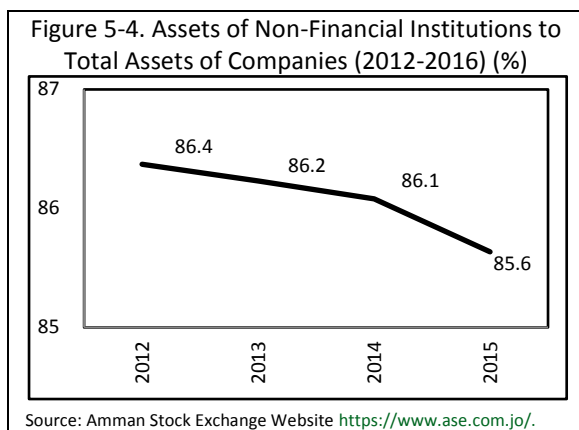
5.2 NON-FINANCIAL COMPANIES SECTOR

5.2.1 INTRODUCTION

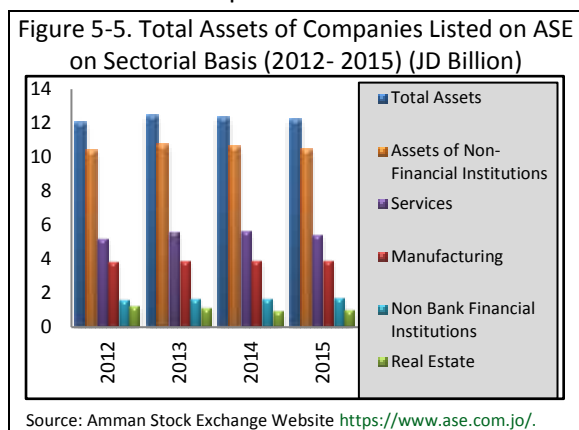
The corporate sector in Jordan consists of non-banking financial companies and non-financial companies.⁹ The non- banking financial companies sector consists of the insurance companies, securities companies, microfinance companies, financial leasing companies, and other companies that offer diversified financial services. The non-financial companies sector is composed of the companies that are listed on Amman Stock Exchange, and consists of

⁹ The analysis is based ONLY on the data about the non-financial companies listed on ASE due to the unavailability of data on the non-financial companies that are NOT listed on ASE. Given that some of the data about the non-financial institutions was changed by the data source.

manufacturing, service and real estate sectors. The Ministry of Industry, Trade, and Supply is responsible for supervising these companies. The size of the assets of the non-financial companies in 2015 amounted to JD10,464.0 million, forming 85.6% of the total assets of the corporate sector, compared to JD10,614.0 million at the end of 2014, representing 86.1% of total corporate assets (Figure 5-4).



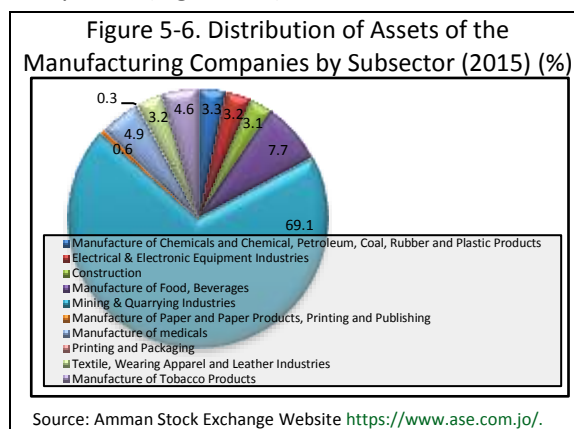
The size of assets of the nonbank public shareholding financial companies amounted to JD1,755.2 million, representing 14.4% of the total corporate sector’s assets at the end of 2015. And the size of assets of the services companies amounted to JD5,459.6 million, representing 52.2% of the total assets of the non- financial companies at the end of 2015. Moreover, the size of assets of the industrial companies amounted to JD3,946.9 million, representing 37.7% of the total assets of the non- financial companies at the end of 2015.



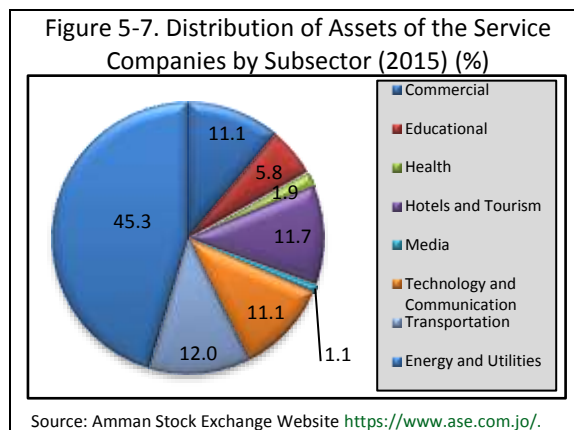
Finally, size of assets of the real estate companies amounted to JD1,057.5 million,

representing 10.1% of the total assets of the non- financial companies at the end of 2015 (Figure 5-5).

As for the sub- sectors of the non- financial companies, the assets of Mining and Extraction industries formed about 69.1% of the total assets of industrial companies (Figure 5-6). As for the service companies subsectors, the assets of the energy and utilities subsectors accounted for 45.3% of the total assets of the service companies (Figure 5-7).



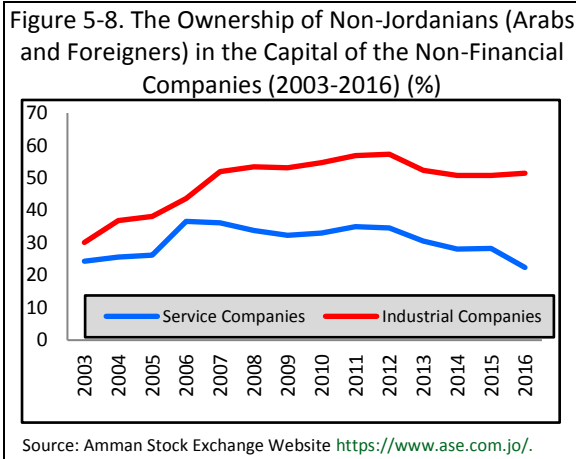
Following is an analysis of the developments in the non- financial corporate sector (industrial, services, and real estate) that consists of 169 enlisted companies as per the website of the ASE and at the end of 2015. As for the financial companies sector, its developments and risks were detailed in Chapter Three.



5.2.2 OWNERSHIP STRUCTURE OF THE NON-FINANCIAL COMPANIES

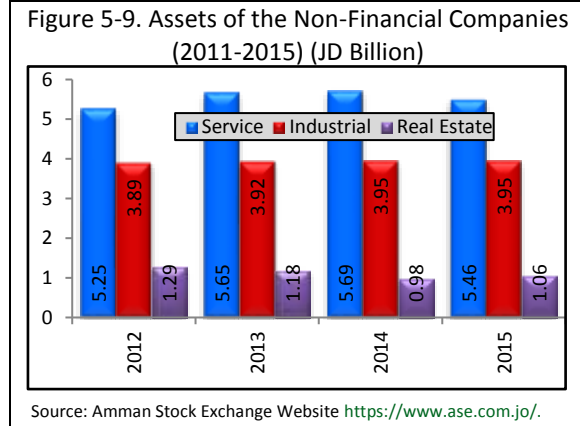
The capital share of non- Jordanians (Arabs and foreigners) in the total capital of the non-

financial industrial and services companies approximated 51.4% and 22.4%, respectively, at the end of 2016, compared to 50.8% and 28.3%, respectively, at the end of 2015. This notable contribution of foreigners in the capital of these companies reflects the confidence of investors in the Jordanian economy in general, given that most of these ownerships are stable contributions (Figure 5-8).

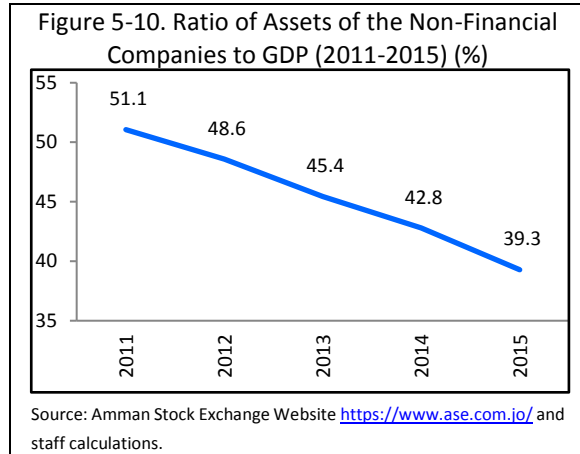


5.2.3 ASSETS OF THE NON-FINANCIAL COMPANIES

The assets of non-financial companies listed on the ASE amounted to approximately JD10,464.0 million at the end of 2015, compared to JD10,614.0 million at the end of 2014, resulting in a contraction rate of 1.4% because of the decline in the assets of the services companies sector. The size of the assets of these companies reached JD5,459.6 million at the end of 2015, compared to JD5,690.9 million at the end of 2014, or a contraction of 4.1%. On the other hand, the assets of the industrial companies sector amounted to JD3,946.9 million at the end of 2015, which is almost the same as the 2014 figures. As for the real estate companies sector, its assets increased from JD975.5 million at the end of 2014 to JD1,057.5 million at the end of 2015, or an increase by 8.4% (Figure 5-9).



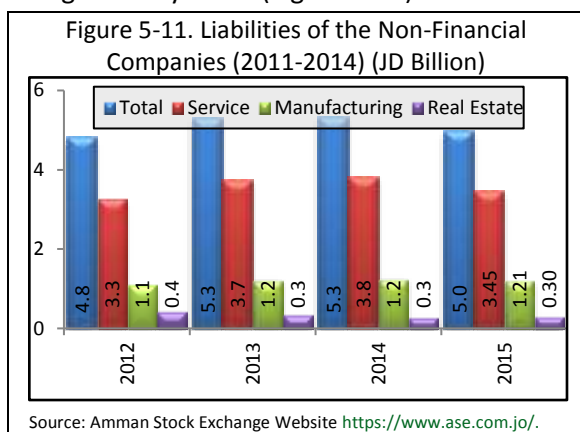
As for the ratio of the non-financial corporate sector’s assets to GDP, it has followed a downward trend during the period (2011-2015). It reached 39.3% at the end of 2015 compared to 42.8% at the end of 2014 and to 51.1% at the end of 2011, as a result of the decline in the assets of the non-financial companies in 2015 and its growth during the period (2011-2014) at a rate lower than the growth rate of GDP (Figure 5-10).



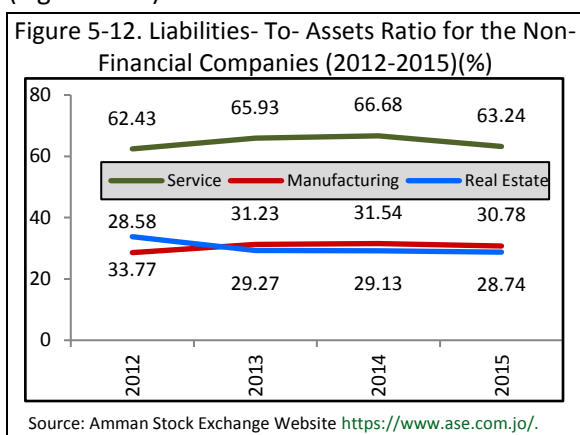
5.2.4 LIABILITIES OF THE NON-FINANCIAL COMPANIES

Regarding the liabilities of the non-financial companies, they reached JD4,971.0 million at the end of 2015, compared to JD5,324.0 million at the end of 2014, with a contraction rate of 6.6%. The liabilities of the services companies reached JD3,452.7 million at the end of 2015 compared to JD3,794.7 million at the end of 2014, with a contraction by 9.0%. While the size of liabilities of the industrial companies reached about JD1,214.8 million at the end of 2015, compared to JD1,244.9 million at the end of

2014, or a negative growth rate of -2.5%. For the real estate companies sector, their liabilities reached JD303.8 million at the end of 2015 compared to JD284.1 million at the end of 2014, or a growth by 6.9%. (Figure 5-11).



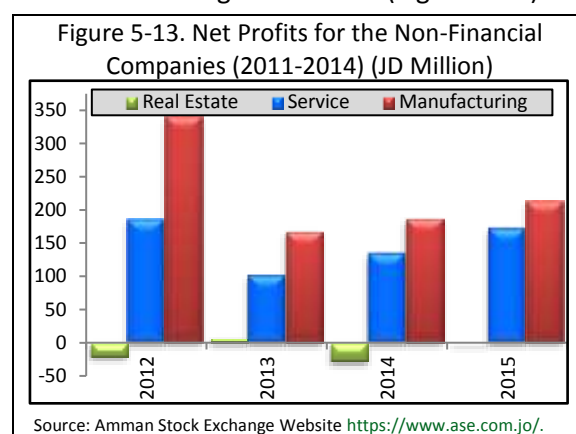
Regarding the liabilities- to- assets ratio, it declined slightly in all sectors from 29.13%, 31.54% and 66.68% for the real estate, industrial and services sectors, respectively, at the end of 2014 to 28.74%, 30.78%, 63.24%, respectively as well, at the end of 2015, which is a good indicator of the decline in the obligations of these companies in relation to their assets (Figure 5-12).



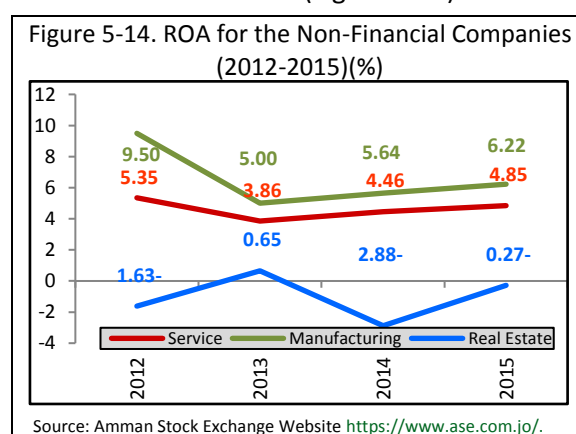
5.2.5 PROFITABILITY OF THE NON- FINANCIAL COMPANIES

Net profits of non- financial companies took an upward trend for the period (2013-2015) in parallel with the improvement of the economic situation in the Kingdom, compared to 2012. The net profit reached JD382.2 million at the end of 2015 compared to JD294.2 million at the end of 2014, growing by 30.0%. The net profit of the

services companies increased from JD134.1 million at the end of 2014 to JD172.0 million at the end of 2015, achieving an increase by 28.3%. The net profits of the industrial companies also rose from JD188.1 million at the end of 2014 to JD213.0 million at the end of 2015, attaining a growth rate of 13.2%. For real estate companies sector, its losses decreased from JD28.0 million at the end of 2014 to JD2.8 million at the end of 2015. This substantial decline in losses is attributed to the improvement in the real estate market in the Kingdom in 2015 (Figure 5-13).

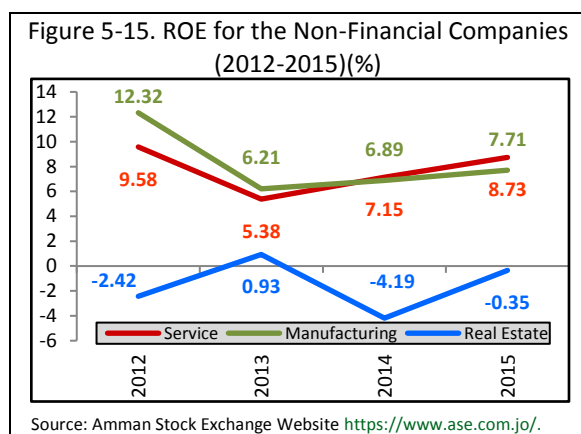


As for the ROA, it continued to rise for the industrial companies, and increased to 6.2% at the end of 2015 from 5.6% at the end of 2014. For the services companies, it increased to about 4.9% at the end of 2015 from 4.5% at the end of 2014. For the real estate companies, the ROA increased by -0.27% at the end of 2015 from -2.9% at the end of 2014 (Figure 5-14).



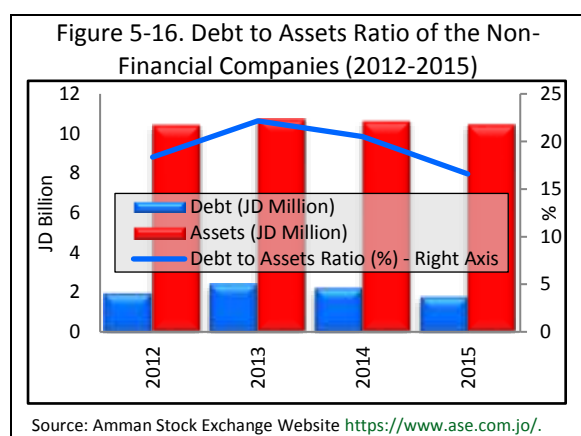
As for the ROE, it also continued an upward trend for the industrial companies and increased

to 7.7% at the end of 2015 from about 6.9% at the end of 2014. For the services companies, it increased to 8.7% at the end of 2015 from 7.2% at the end of 2014. The ROE for the real estate companies realized a negative value of 0.35% at the end of 2015 compared to -4.19% at the end of 2014 (Figure 5-15).



5.2.6 LEVERAGE OF THE NON-FINANCIAL COMPANIES

Most of the non- financial companies enlisted in ASE are still less dependent on borrowing. The ratio of debt to assets of non- financial companies approximated 16.6% at the end of 2015, achieving a decline of 20% of the ratio of 2014 that rested at 20.5%. This is a positive indicator on the decline in the leverage ratio of the non- financial companies and on their increased capacity to repay their debts (Figure 5-16).

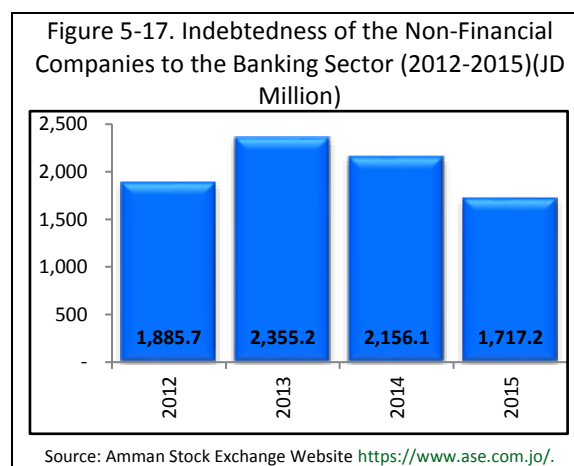


5.2.7 INDEBTEDNESS OF THE NON-FINANCIAL COMPANIES TO THE BANKING SECTOR

The size of credit facilities granted by banks to the non- financial companies sector enlisted on ASE roughed JD1,717.2 million at the end of 2015 compared to JD2,156.1 million at the end of 2014, a decline of 20.4%. This means that banks' exposure to the non- financial companies sector's debt has declined in 2015, which helps to mitigate the risks of this sector on banks.

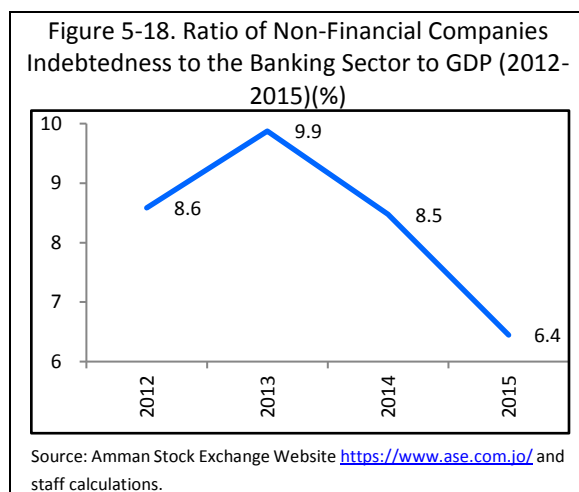
The credit facilities granted to services companies amounted to JD1,463.1 million at the end of 2015 compared to JD1,580.6 million at the end of 2014, or a decline by 7.4%. The credit facilities granted to real estate companies listed on ASE amounted to JD93.3 million at the end of 2015 compared to JD91.2 million at the end of 2014, a growth by 2.31%.

The credit facilities granted to industrial companies sector amounted to JD477.6 million at the end of 2015 compared to JD484.4 million at the end of 2014, a decline by 1.4% (Figure 5-17).



As for the ratio of indebtedness of the non- financial companies enlisted on ASE with the banking sector to the GDP, it continued its downward trend and declined to around 6.4% at

the end of 2015 from 8.5% at the end of 2014 and 9.9% at the end of 2013 (Figure 5-18).



5.2.8 STRESS TESTING OF THE NON-FINANCIAL COMPANIES SECTOR

Some stress tests were conducted on non-financial public shareholding companies to measure the soundness and integrity of the corporate sector and its ability to withstand shocks, and, hence, assess the ability of these companies to repay their debts to banks and the financial sector in general. These tests were conducted recently after completing the construction of a stress-testing model for the corporate sector by the Financial Stability Department at the CBJ.

This model was based on the Interest Coverage Ratio (ICR) of borrowing companies, which is a common ratio and an important measure that is used to assess the ability of companies to meet their debts. The ICR is defined as the ratio of earnings before interest and taxes (EBIT) to banking interests paid on loans. This ratio assesses the ability of borrowing companies to cover the expenses of interests incurred on loans granted to them using the revenues of the current period. This ratio is considered safe if it exceeds 150%. The company's debt is considered unsafe (Debt at Risk) if the ratio ranged between 100% and 150%. In addition,

the company's debt is considered as uncovered (Uncovered debt) if the percentage drops below 100%.

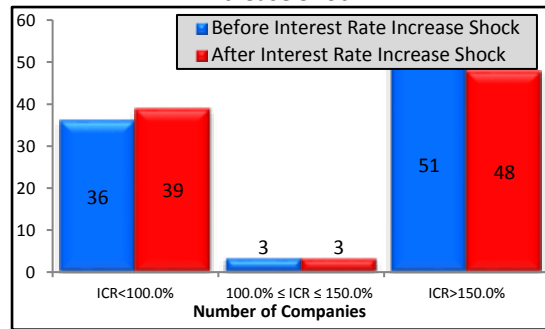
In order to conduct these tests, some shocks that relate either to the increase of interest rates in the market or the decline of companies' profits were assumed. The impact of each shock on the ICR, and, hence, assessing the ability of companies to repay their debts to banks in light of the new ICR value on the assumption of having the shock were measured.

5.2.8.1 THE SHOCK OF AN INCREASE IN MARKET INTEREST RATE

The increase in market interest rates leads to an increase in interest expenses paid by borrowing companies to banks. Assuming that revenues remain unchanged will negatively affect the ability of companies to repay interest expenses to the lending banks. Consequently, the ICR of the borrowing companies will decrease by increasing their interest expenses. Assuming that the market interest rates on loans granted to companies increase by 200 basis points, the ICR of these companies will decline from 427.0% to 316.0%. Apparently, the ICR will remain well above 150%, which is the minimum bound for safe indebtedness. This implies that the impact of this shock on the companies as a whole will be relatively limited and will not significantly affect their ability to serve their debts.

On the individual level, the ICR will decline below the 150.0% limit for three companies, but will be still above the 100.0% bound. Consequently, the number of companies with a safe debt will decrease from 51 companies to 48 companies. In addition, the ratio will go below 100.0% for another three companies (uncovered debt) after it ranged between 100%- 150%. Consequently, the number of companies with an ICR that is below 100.0% will increase from 36 to 39 companies (Figure 5-19).

Figure 5-19. Interest Coverage Ratio for Non-Financial Companies before and after Interest Rate Increase Shock



Source: Staff calculations.

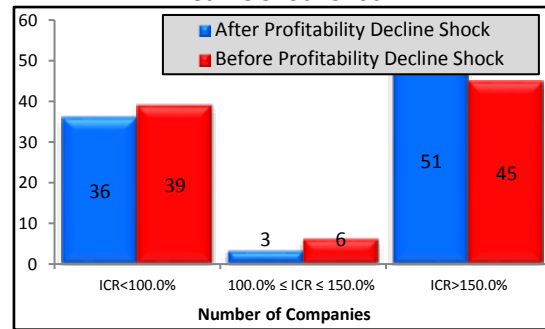
On the sectoral level, the average ICR will decrease from 458.0% to 330.0% for the industrial companies, from 509.0% to 383.0% for the services companies, and from 137.0% to 114.0% for the real estate companies. This means that the real estate companies sector has the lowest rate of coverage before and after the shock.

5.2.8.2 THE SHOCK OF A DECLINE IN CORPORATE PROFITS OF THE BORROWING COMPANIES

Assuming a 25% decline in the corporate profits of the borrowing companies due to weak economic activity in the Kingdom will lead to a decline of the ICR for these companies from 427.0% to 303.0%. The impact of this shock will be higher than the impact of the shock of the increase in market interest rates. However, the ICR will remain with a comfortable margin above the lower limit for considering the company's indebtedness safe, which is set at (150.0%).

On the individual level, the ICR will decline below the 150.0% limit for six companies, but will be still above the 100.0% bound. Consequently, the number of companies with a safe debt will decrease from 51 to 45 companies. In addition, the ratio will go below 100.0% for another three companies after it ranged between 100%- 150%, which will make their debt uncovered. Consequently, the number of companies with an ICR that is below 100.0% will increase from 36 to 39 companies (Figure 5-20).

Figure 5-20. Interest Coverage Ratio for Non-Financial Companies before and after Profitability Decline Shock



Source: Staff calculations.

On the sectoral level, the average ICR will decrease from 458.0% to 330.0% for the industrial companies, from 509.0% to 357.0% for the services companies, and from 137.0% to 78.0% for the real estate companies. This implies that industrial and services companies are capable in general of withstanding such a shock. However, the impact of the shock on the real estate companies sector will be relatively large since its ICR before the shock is relatively low.

5.2.9 CONCLUSION

By analyzing the financial conditions for the non-financial companies sector, it is concluded that despite the tough political and economic circumstances in the region and their consequences on Jordan, both services and industrial companies sectors maintained the stability of their financial positions during the period (2012-2015) through maintaining high profits. However, the real estate companies sector witnessed an apparent decline in its business size and profitability during the period (2012-2014). However, it started to improve in 2015. The analysis of the results of the stress testing of the non-financial companies showed that about 90.0% of the companies were capable of withstanding the two shocks of market interest rate increase and corporate profits decline. However, the real estate companies sector was impacted more significantly than the other two sectors. This requires banks to consider these risks when expanding the credit extended to the real estate sector.

CHAPTER SIX

EXPOSURE OF BANKS IN JORDAN TO REAL ESTATE MARKET RISKS & THE REAL ESTATE PRICE INDEX

6.1 INTRODUCTION

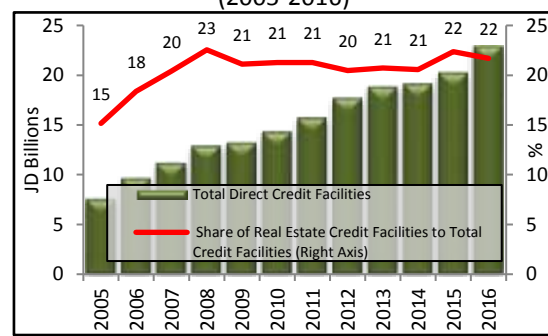
The focus on the risks of the real estate sector as well as of the financing extended to this sector increased after the global financial crisis that began by the real estate market bubble in the USA in 2007, and the subsequent repercussions that adversely affected most world economies, including Jordan.

The real estate market in Jordan observed successive jumps during the last two decades fueled mainly by the economic and political developments in the region and the subsequent abnormal growth of population in Jordan caused by the influx of large numbers of Arab Brethren, especially from Iraq and Syria.

Therefore, this chapter sheds the light on the real estate sector in Jordan and the exposure of banks operating in Jordan to the risks of this sector. The chapter also analyzes the evolution of real estate prices in the Kingdom through exploring real estate price index that has been developed recently in cooperation between the CBJ and the Department of Land and Survey.

Total credit facilities granted to the real estate sector for commercial and residential purposes reached JD4.96 billion at the end of 2016, accounting for 21.8% of the total facilities granted by banks, compared to JD4.53 billion at the end of 2015, at a growth rate of 9.57% in 2016 compared to 15.0% in 2015.¹⁰ It is worth mentioning in this context that the average annual growth rate during the years 2007-2016 amounted to 11.3% (Figure 6-1).

Figure 6-1. Credit Facilities and the Share of Real Estate Credit Facilities to Total Credit Facilities (2005-2016)

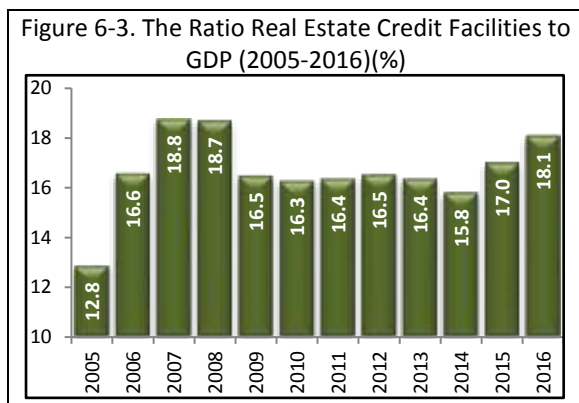
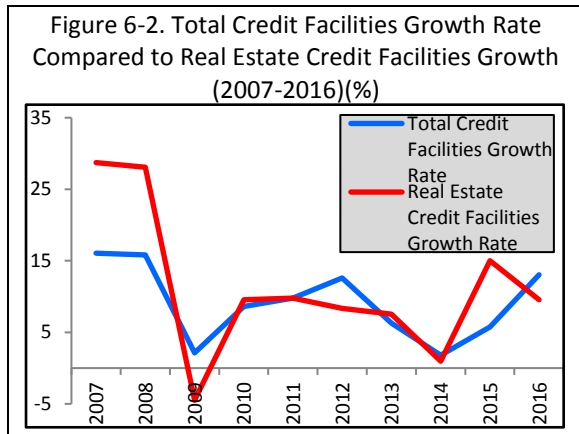


The comparison of the average annual growth rates of real estate credit facilities and total credit facilities during the years 2007-2016 shows that the average annual growth rate of real estate credit facilities was higher than the average annual growth rates of total credit facilities, as the relevant rates were 11.3% and 9.13%, respectively (Figure 6-2).

Regarding the ratio of credit facilities extended to the real estate sector to the GDP, Figure 6-3 depicts the evolution of this ratio during the period (2005-2016). As it can be noted from the figure, the ratio of credit facilities granted to the real estate sector to GDP witnessed a remarkable increase during the period (2005-

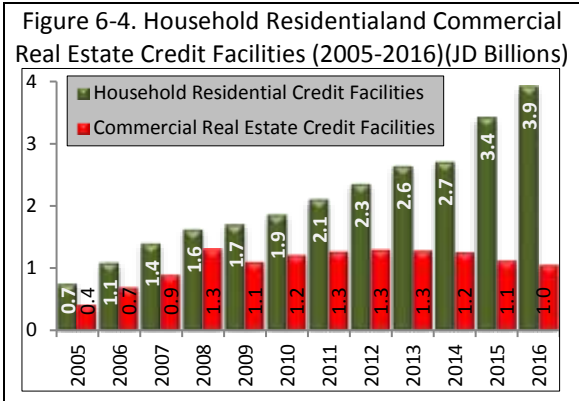
¹⁰ The main reason for the increase in the volume of real estate credit facilities at the end of 2015 is the reclassification of lease- to- own real estate contracts as real estate loans by one of the Islamic banks after the implementation of aggregate data system. This means that the large increase in the real estate credit facilities in 2015 is, in part, an unreal increase resulting from reclassification of data. The value of lease- to- own contracts with this bank amounted to JD403 million. By excluding this amount, the total credit facilities extended to real estate sector for residential and commercial purposes in 2015 amounted to JD4.1 billion representing a growth rate of 4.7% only.

2008). It reached 18.7% at the end of 2008. After that, it dropped to 15.8% at the end of 2014 impacted by the impacts of the global financial crisis and the situation in the region. However, it resumed its upward trend to increase in 2015 and 2016 to 17.0% and 18.1%, respectively.



6.2 COMPONENTS OF CREDIT FACILITIES EXTENDED TO REAL ESTATE

As far as the components of credit facilities extended to the real estate sector are considered, household housing credit formed 79.0% of total credit facilities extended to real estate sector at the end of 2016, whereas commercial real estate credit formed 21.0% of total credit extended to real estate sector (Figure 6-4).



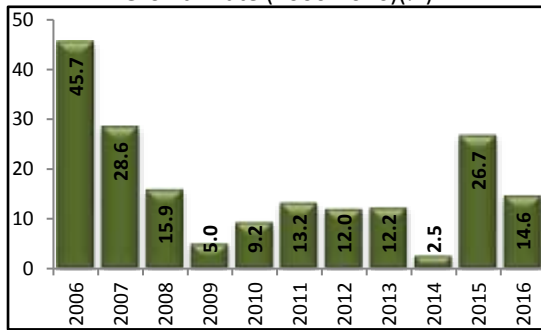
6.3 HOUSEHOLD RESIDENTIAL LOANS

The total housing loans granted to individuals by banks reached JD3,920.0 million at the end of 2016, compared to JD3,420.0 million at the end of 2015; at a growth rate of 14.6%. The bulk of the growth of the household residential real estate credit was during the period (2006-2008) (the period preceding the global financial crisis) which realized a substantial demand for real estate, especially by non- Jordanians. The average growth in housing loans during this period was approximately 30.0%. Then, during the period (2009-2010), the growth pace slowed significantly due to the repercussions of the global financial crisis and the accompanying uncertainty situation and the reluctance of banks in granting real estate loans. The housing loans resumed their growth during the period (2011-2016) after the fading of the impacts of the global financial crisis and the improved market conditions that led to a rise in the demand for real estate because of the influx of Arab refugees, particularly Syrians. However, this growth did not touch the levels that prevailed before the last global financial crisis (Figure 6-5 and Figure 6-6).

Figure 6-5. Household Residential Credit Facilities and Their Share of Total Real Estate Credit Facilities (2005-2016)



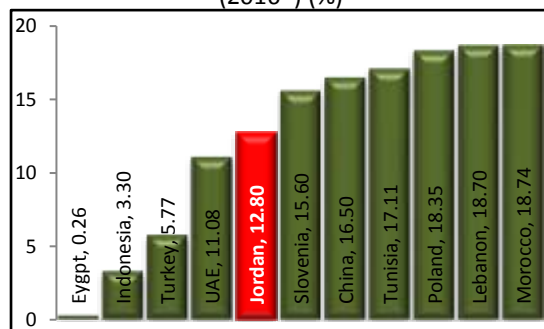
Figure 6-6. Household Residential Credit Facilities Growth Rate (2006-2016)(%)



*The rate for 2015 drops to 11.9% if the reclassification of Ijarah ending into ownership for real estate as real estate loans by one of the Islamic banks is removed.

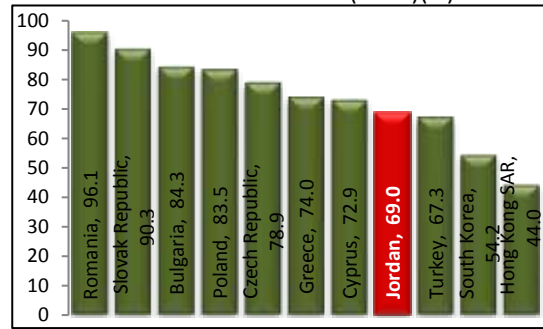
As for the ratio of household housing loans to GDP, it approximated 14.2% at the end of 2016 compared to 12.8% at the end of 2015. Compared to some world countries, Jordan was the fifth lowest country amongst them (Figure 6-7). The main reason behind this low ratio is that about 69.0% of Jordanians own their living places. Besides, there are alternative sources of credit that the Jordanians utilize. Of these are employee housing loans and loans from institutions; cooperative funds and societies, such as Housing and Urban Development Corporation (Figure 6-8).

Figure 6-7. Ratio of Residential Real Estate Credit Facilities to GDP for Jordan and Selected Countries (2016*) (%)



* Data for the comparison countries are for the year 2015.

Figure 6-8. Home Ownership Rate in Jordan and Selected Countries for (2014)(%)



Source for Jordan's data is the website for the Ministry of Public Works & Housing: www.mpw.gov.jo/.

6.3.1 COMMERCIAL REAL ESTATE LOANS

The total commercial real estate loans granted by banks at the end of 2016 reached JD1,043.0 million, forming about 21.0% of the total credit facilities extended to real estate sector, which is 6% lower than the level attained at the end of 2015 that approximated to JD1,111.0 million. The period preceding the global financial crisis (2005-2008) witnessed a significant growth in commercial real estate loans, as they rose during this period from about JD400.0 million to JD1,300.0 million, at an average annual growth rate of 49.0%. These loans declined significantly during 2009 to reach about JD1,089.0 million as a result of the significant adverse impact of the global financial crisis on the commercial real estate market. The trend of loans returned to the positive path by attaining positive, but slight, movements during the period (2010-2012). However, they declined again in (2013-2016) (Figure 6-9 and Figure 6-10). The global financial crisis and its repercussions, besides the subsequent economic and political conditions in Jordan and the region, had a clear and a substantial impact on the commercial real estate sector compared with the residential real estate sector. This result is normal as the demand on residential real estate is less receptive to the impacts of severe conditions than commercial real estate as a result of the population growth, especially in light of the abnormal population growth, as with the case in Jordan.

Figure 6-9. Commercial Real Estate Credit Facilities Growth Rate (2006-2016)(%)

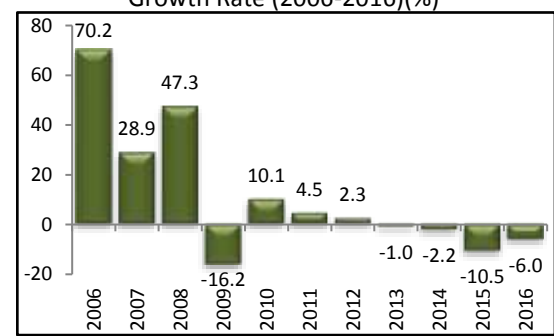
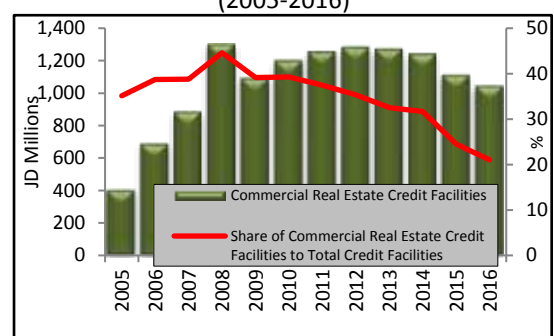


Figure 6-10. Commercial Real Estate Credit Facilities and It's Share of Total Real Estate Credit Facilities (2005-2016)



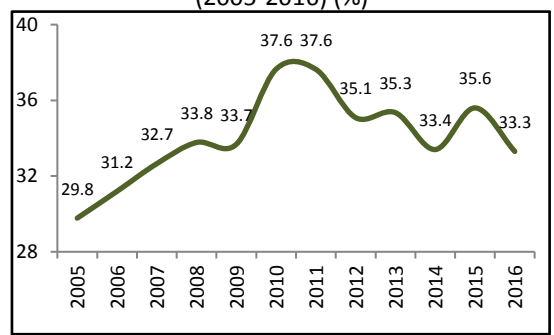
6.4 SIZE OF DIRECT CREDIT FACILITIES GRANTED AGAINST REAL ESTATE COLLATERALS

Besides their direct exposure to the real estate market risks through the credit facilities granted to finance the purchase or construction of residential or commercial properties, which (the credit facilities) are usually guaranteed by these properties, there is another real estate market risk that the banks face through the use of real estate as collaterals to guarantee the credit facilities granted by banks for purposes other than real estate. The decrease in real estate prices negatively affects the value of the collateral and, hence, reduces the ability of banks to recover their money in case of borrowers' default and failure to repay their debt. In this regard, total direct credit facilities granted by banks for other purposes against real estate collaterals reached JD2,571.0 million at

the end of 2016, compared to JD2,679.0 million at the end of 2015.

Adding direct credit facilities granted against real estate collaterals for other purposes to the credit facilities granted for residential and commercial real estate purposes, the total direct credit facilities granted against real estate collaterals reached JD7,535.0 million at the end of 2016, composing about 33.3% of total credit facilities compared to 35.6% at the end of 2015. This slight decline is attributed to the drop in credit facilities granted by banks for other-than-real-estate purposes against real estate collaterals and the increase in total credit facilities relative to 2015 (Figure 6-11).

Figure 6-11. Direct Credit Facilities Guaranteed by Real Estate Collaterals to Total Credit Facilities (2005-2016) (%)



6.5 LOAN-TO-VALUE RATIO LIMITS FOR INDIVIDUAL HOUSING AND COMMERCIAL LOANS IN JORDAN

The ratio of loan to the value of the mortgaged real estate (LTV) is one of the most important ratios and indicators that must be monitored to evaluate the degree of exposure of banks to the real estate market risks. The relatively high ratio might make the banks exposed to high risks in case the prices of real estate deflated. This will deter the banks' ability to get their loan money repaid in case of clients' default in the event the value of the real estate guaranteeing the loan drops.

Some countries tend to impose certain limits on LTV ratio in case some indicators signal the

possible occurrence of a price bubble in the real estate market in order to mitigate the bubble, reduce the probability of bankruptcy when home prices drop significantly, and cut down losses through increasing the value of the required collaterals. These all in turn enhance the banks' ability to confront the associated risk exposure.

To explore and monitor the LTV ratio in Jordan, the CBJ collected data from banks about the maximum and actual average values of LTV ratios.

Figure 6-12 shows the upper limit for the LTV ratio for housing loans granted to individuals. As it appears from the figure, the LTV for 10 banks (composing 43.0% of banks that grant loans to individuals) did not exceed 80.0%, whereas it ranged from 81.0% to 89.0% for two banks, and roughly 90.0% for four banks and 100.0% for seven banks.

As it appears from Figure 6-12, the number of banks whose LTV was 100.0% increased from three banks in 2015 to seven banks in 2016. This is an evidence of the tendency of some banks to finance higher values of residential real estate. Regarding the maximum LTV ratio for the commercial real estate loans, it is lower than its counterpart for the individual residential loans in the majority of banks, as 75.0% of banks that extend commercial real estate loans have an LTV ratio that does not exceed 80.0% (Figure 6-13).

Figure 6-12. Distribution of Banks by Maximum LTV Ratio for Housing Loans Granted to Individuals (2005-2016)(Count)

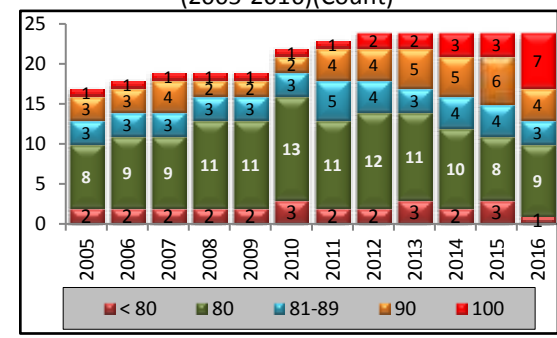
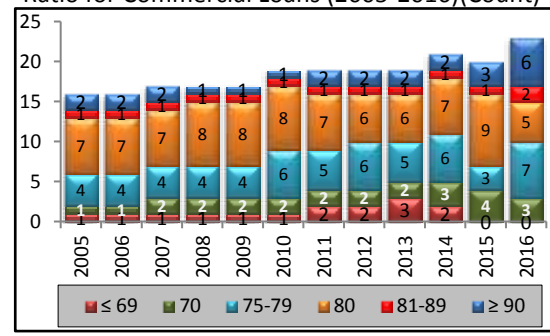
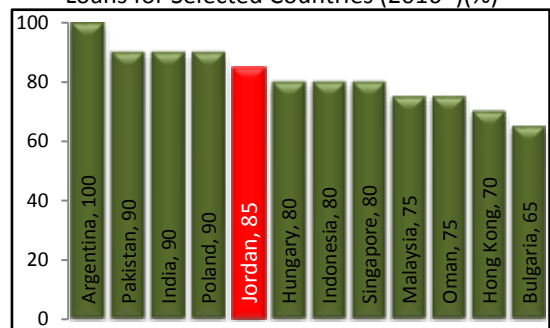


Figure 6-13. Distribution of Banks by Maximum LTV Ratio for Commercial Loans (2005-2016)(Count)



The average of LTV ratio limit varied amongst some countries and ranged between 65.0% and 100.0%. In the banks in Jordan, this limit averaged 85.5% as most of the Jordanian banks' LTV ratio ranged between 80.0% and 90.0% (Figure 6-14).

Figure 6-14. Maximum LTV Ratio for Real Estate Loans for Selected Countries (2016*)(%)



* Data for the comparison countries are for the year 2015.

6.6 ACTUAL LTV RATIO'S AVERAGE FOR INDIVIDUAL HOUSING AND COMMERCIAL REAL ESTATE LOANS

Despite the high LTV ratio limit for individual housing loans in some banks, the actual average LTV ratio is lower than the maximum limit that can be financed (The ratio set in banks' credit policies). The actual weighted average of LTV ratio was 73.2% at the end of 2014 and declined to 66.3% at the end of 2015. It resumed the upward trend to reach 72.0% at the end of 2016 (Figure 6-15).

Figure 6-15. Housing Loans and Actual Weighted Average of LTV Ratio for Housing Loans Granted to Individuals (2005-2016)

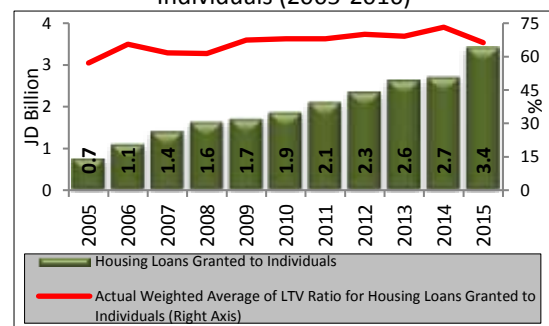
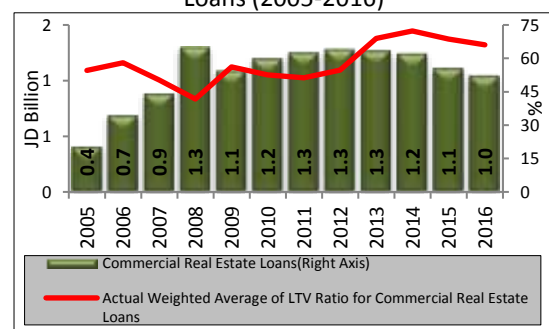


Figure 6-16. Total Volume and Actual Weighted Average of LTV Ratio for Commercial Real Estate Loans (2005-2016)



As for the actual average of the LTV ratio for the commercial real estate loans, it declined to 66.0% in 2016 compared to 68.6% in 2015 (Figure 6-16).

6.7 CBJ MEASURES TO MITIGATE BANKING SECTOR'S EXPOSURE TO REAL ESTATE MARKET RISKS AND ENHANCE THEIR CAPACITY TO CONFRONT THEM

As mentioned in the previous JFSRs, the CBJ set some limitations aiming at mitigating the exposure of banks to real estate market risks and sustaining the banks' ability to deal with these risks. These measures include the following:

- 1- Setting a cap on real estate loans. **Credit Concentration Instructions No. 9/2001 dated 01-08-2011** set a cap on the total direct operating credit extended for

constructing or buying real estate. The credit must not exceed 20.0% of total clients' deposits in JD.

- 2- The valid Capital Adequacy Instructions issued by the CBJ specified the risk weighting for housing loans with LTV ratios not exceeding 80.0% to be 35.0%. The risk weighting increases to 100.0% in case LTV ratio exceeded 80.0%. In other words, for any loan, if the LTV ratio exceeds 80.0%, then these loans entail higher capital levels. This consequently enhances the banks' ability to confront these risks and, hence, sustains financial stability in the Kingdom.

6.7.1 REAL ESTATE ASSETS PRICE INDEX IN JORDAN

The value of real estate assets is a core driver of the investment activities in any economy due to their significant inter-linkages with other investment sectors and the implications of the real estate asset price developments on inflation and, hence, monetary and financial stability. The importance of calculating the price index of real estate assets (real estate price index REPI), and as mentioned in previous financial stability reports, made the CBJ and the Department of Land and Survey form a joint team to calculate this index for Jordan at the beginning of 2014 using the best internationally applied methodologies in calculating this indicator and taking into consideration the available data at the Department of Land and Survey. This index has significant and important implications in various aspects; such as monitoring real estate assets price bubbles; thus evaluating real estate market risks, forecasting economic growth, estimating the value of houses as a form of wealth, and using it as a tool for conducting international comparisons.

Figure 6-17 through Figure 6-22 illustrate different aspects related to real estate price index in Jordan and the change in the index during the period (2005-2016). As it appears from these figures, the REPI in Jordan increased from 119.0 points in 2015 to 121.2 points in 2016, growing by 1.8% compared to 3.4% in 2015 and 9.1% in 2014. This implies that the increase in prices of real estate in Jordan is substantially slowing down since 2015. This slowdown is attributed mainly to the price deflation in the Kingdom and the decrease in the trading volume in the real estate market. The increase in the prices in 2016 was more significant in lands as the lands REPI increased by 2.2% compared to 1.4% and 0.3% for the residential and commercial real estate respectively.

Figure 6-17. Real Estate (Residential, Commercial and Land) Price Index in Jordan (2005-2016)

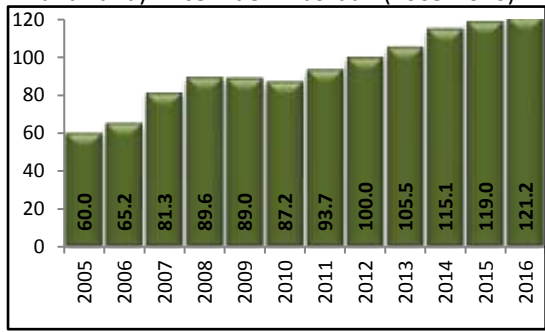
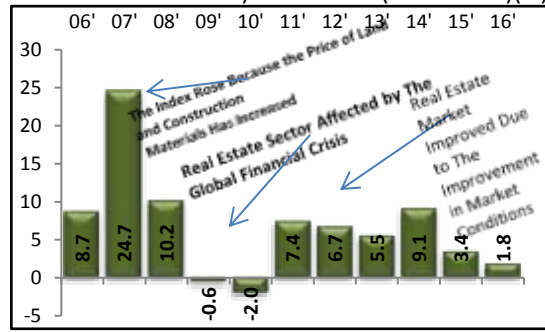


Figure 6-18. Changes in Real Estate (Residential, Commercial and Land) Price Index (2006-2016)(%)



In this regard, the index passed different phases that can be summarized in three phases as mentioned in the previous JFSRs:

Figure 6-19. Real Estate Price Index (Residential, Commercial & Land) & Real Estate Credit Facilities in Jordan (2005-2016)

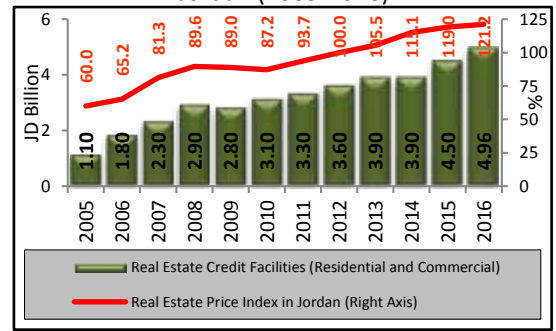


Figure 6-20. Residential Real Estate Price Index and Its Percentage Change (2006-2016)

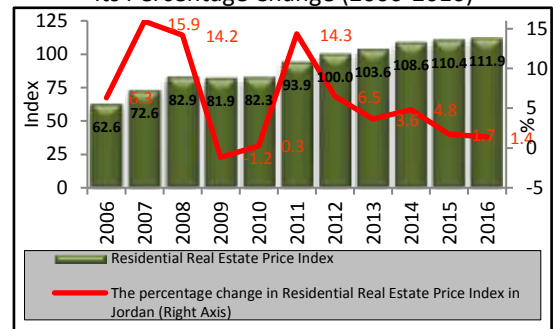


Figure 6-21. Non-residential Real Estate Price Index and Its Percentage Change (2006-2016)

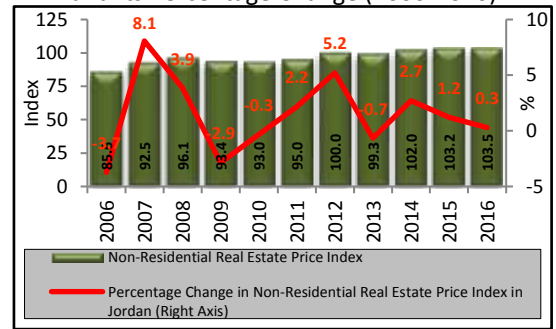


Figure 6-22. Lands Price Index and Its Percentage Change (2006-2016)



Phase I: Pre-global financial crisis phase (2005-2008). This phase witnessed a significant demand for real estate, especially from non-Jordanians, in addition to the large hikes in the

prices of residential and non-residential real estate assets.

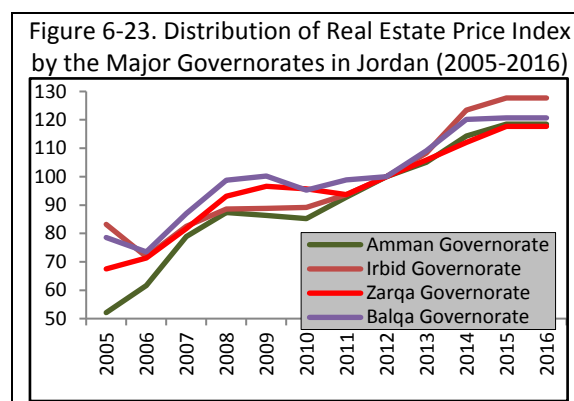
Phase II: The repercussions of the global financial crisis phase (2009-2010). In this phase, caution and uncertainty dominated and made banks cut down credit. Consequently, the demand for real estate assets declined, and, thus, their prices went down. To deal with the contraction and activate the real estate market, the government in the middle of 2009, expanded tax exemptions to include the purchase of apartments and land.

Phase III: The recovery phase (2011-2016). In this phase, real estate investments resumed their upward trend, though at a pace slower than the levels that prevailed in pre-global financial crisis phase. It is worth mentioning here that the government announcement of its plans to remove the tax exemptions by the end of 2011 raised the index due to the increase in demand for real estate to benefit from these exemptions before the deadline.

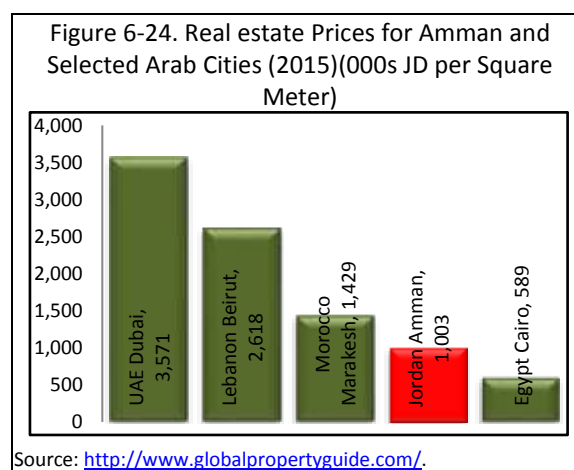
Regarding the REPI for the Capital and for other governorates, the index for the Capital witnessed an apparent growth during the years 2005-2016, where REPI was 52.1 points in 2005 and reached 120.5 points in 2016 at a growth rate of 131.3%. Regarding the other governorates, the index witnessed a positive trend as well, but at a slower pace than the Capital. For Zarqa, the REPI increased from 67.5 points in 2005 to 123.1 points in 2016 at a growth rate of 82.3%. For Irbid, the REPI for the period (2005-2016) increased from 83.2 points to 131.0 points at a growth rate of 57.5%. Finally, for Balqa, the REPI increased as well from 78.6 points in 2005 to 123.7 points in 2016 at a growth rate of 57.3%. (Figure 6-23).

Concerning average price per residential square meter in Amman as per the available information on Western Amman region (the most investment-attracting area), the average residential real estate price per square meter was JD1,003.0 in 2015. It is worth mentioning that the price per square meter in several Arab

cities like Marrakesh, Beirut, and Dubai is higher than its counterpart in Amman. In this regard, Amman ranked 83rd in the residential real estate price per square meter. (Figure 6-24 and Figure 6-25).

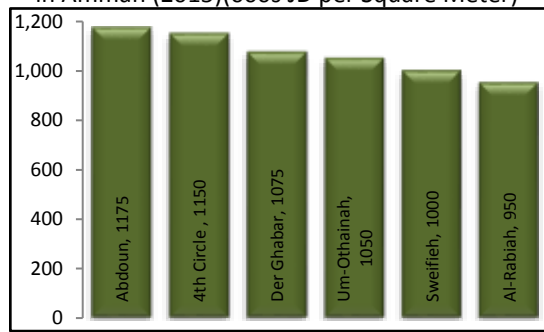


In general, the real estate assets price index in Jordan increased slightly during 2016 by 1.8% compared to 2015, as previously mentioned. It also increased in the post-global financial crisis recovery phase (2011-2016) by an average annual growth rate of 5.7% during the period. The growth rate of REPI in Jordan during the recovery period was slightly higher than general inflation rate for the same period that amounted to 2.4%. However, this increase witnessed a notable slowdown in 2015 and 2016 in line with the deflation. This indicates that the rise in the prices of real estates in Jordan, especially during the post-crisis recovery phase, is normal and poses no threat to financial stability.



Source: <http://www.globalpropertyguide.com/>.

Figure 6-25. Real estate Prices for Selected Locations in Amman (2015)(000s JD per Square Meter)



Source: <http://www.globalpropertyguide.com/>.

6.7.2 TRADING VOLUME IN THE REAL ESTATE MARKET IN JORDAN

The report published by the Department of Land and Survey for 2016 stated that the trading volume in the real estate market declined by 7.2% in 2016 compared to 2015 to reach JD7,057.0 million during 2016 compared to JD7,607.0 million in 2015. Figure 6-26 illustrates the development in the real estate trading volume and REPI during the period (2005-2016).

Figure 6-26: Real Estate Trading Volume and Real Estate Price Index (2005-2016)(JD Billions)



Regarding the real estate sales to non-Jordanians, they reached JD375.1 million at the end of 2016, composing only 5.3% of total real estate trading volume. Iraqis accounted for the highest share of this part of the market, in which their investments reached JD168.4 million and composed 45.0% of the total estimated value of sales to non- Jordanians during 2016 (Table 6-1).

Table 6-1. Real Estate Sales to Non-Jordanians (2012-2016) (JD million)

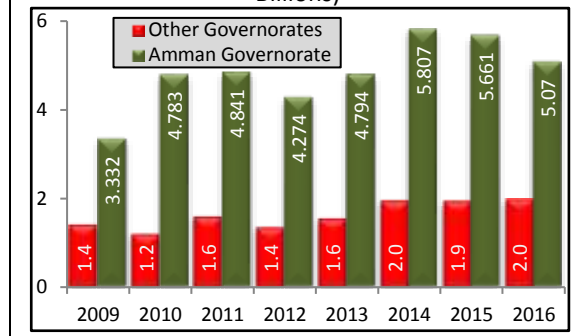
Nationality	2012	2013	2014	2015	2016*
Iraqi	224.7	205.0	266.3	215.1	168.4
Saudi	51.6	58.6	64.1	66.4	50.2
Syrian	17.0	23.7	28.6	17.5	19.4
American	13.8	22.0	NA	NA	21.5
Emirati	NA	NA	17.4	NA	NA
Kuwaiti	NA	NA	NA	22.9	NA
Yemeni	NA	NA	NA	17.3	18.0
Other	121.9	97.0	115.6	93.0	97.6
Total	429.0	406.5	492.0	432.2	375.1

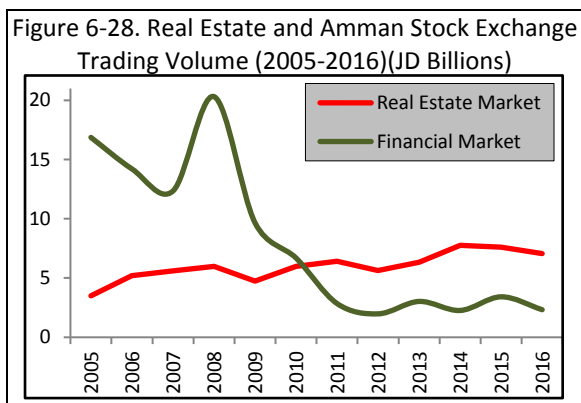
*Source: Department of Land and Survey.

By comparing the trading volumes in 2016 for selected governorates, it is evident that the Capital Governorate had the highest trading volume of JD5,070.0 million, composing 71.8% of total trading volume in the real estate market, while it was JD1,987.0 million in the other governorates, composing 28.2% of the total trading volume (Figure 6-27).

As for comparing the trading volume in real estate market with that in the ASE, it is noted that it was much larger in the financial market than the real estate market during the period (2005-2009) due to the boom that prevailed in the financial market during this period and the associated large inflow of liquidity in the market by Arabs, especially the Iraqis, that led to the increase in the prices in the financial market dramatically, which consequently helped to attract more investors, especially citizens. However, after the deepening of the repercussions of the global financial crisis and the fall in stock prices in the financial market, the trading volumes declined sharply in the financial market and became much lower than their counterparts in the real estate market, as real estate assets are considered safe investments compared to financial investments (Figure 6-28).

Figure 6-27. Real Estate Trading Volume In Amman and Other Governorates (2009-2016)(JD Billions)





The cabinet decided on 30-11-2016 to extend the exemption of apartments and individual houses from the registration fees until 30-11-2017.

The decision states that all finished and registered residential units (apartments and houses) with areas not exceeding 150 square meters (sq.m) net of service shall be exempted from registration fees and other related fees regardless of the seller. If the area of the apartment or house exceeded 150.0 sq.m and up to 180.0 sq.m, only the excess of the 150.0 sq.m area is subject to the registration fees. If the area of the apartment or the house exceeded 180.0 sq.m, it will totally be subject to the registration fees without exemption. The decision exempts also the non- Jordanians and legal persons from the fines provided for in Article 13 of the Leasing and Selling of Immovable Assets to Non-

Jordanians and Juristic Persons Law No. 47 of 2006.

It is to be highlighted that the cabinet approved at the end of July 2015 a package of decisions to stimulate the real estate sector and resolve the obstacles and difficulties that face this vital sector that has suffered for several years from the repercussions of the global financial crisis and the instability in the region. In addition to what has been mentioned above, the cabinet also allowed troubled companies and non-Jordanians to sell before the deadline indicated in the Lease and Selling of Immovable Properties to non- Jordanians and Legal Persons in order to help them complete their other projects.

6.8 CONCLUSION

The development of the Real Estate Price Index in Jordan shows that the evolution of this index is not much higher than the general inflation rate. The increase in real estate prices in Jordan in 2015 and 2016 was small and goes in line with the CPI deflation. This indicates that the increase in real estate prices in Jordan, especially during the period that followed the global financial crisis, is within normal trends and does not pose any threat to financial stability.

CHAPTER SEVEN

STRESS TESTING

7.1 INTRODUCTION

Stress testing is an important tool used by the supervisory authorities and banks to measure the ability of banks to withstand the shocks and high risks that they might encounter. Stress tests aim at assessing the financial position of the bank within severe yet possible scenarios. The results are used to determine the capital and liquidity levels that the banks are required to maintain to be able to withstand shocks and high risks.

Stress tests are forward looking in risk assessment using procedures that exceed statistical methods which are based on historical information. They help senior management to understand the circumstances of the bank in times of crises. Stress tests are an essential part of risk management and planning for capital and liquidity levels. However, they cannot alone cover all the weaknesses in the bank. They instead work within an integrated risk management policy to enhance the safety and soundness of banks and strengthen the financial system as a whole. In this regard, the CBJ released a new **Bottom-up Stress Testing Instructions** in December 2016 that are updated with the most important developments in stress testing tools in compliance with the international best practices.

7.2 STRESS TESTING OF THE BANKING SECTOR

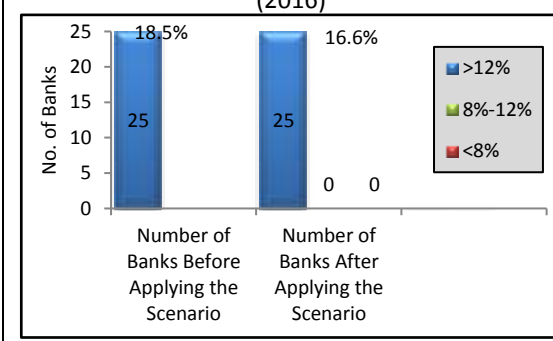
7.2.1 SENSITIVITY ANALYSIS

Sensitivity analysis tests are used in general to measure the impact of movements in risk factors - individually - on the financial position of the

bank. Examples are high non-performing loans ratio, changes in interest rates, changes in exchange rates, and changes in stock prices. Usually, the source of the shock (i.e., the source that leads to this kind of risk) is not determined in these tests. Following are some of the sensitivity tests that have been conducted on a number of risk factors by the banks operating in Jordan.

7.2.1.1 SENSITIVITY ANALYSIS OF CREDIT RISK

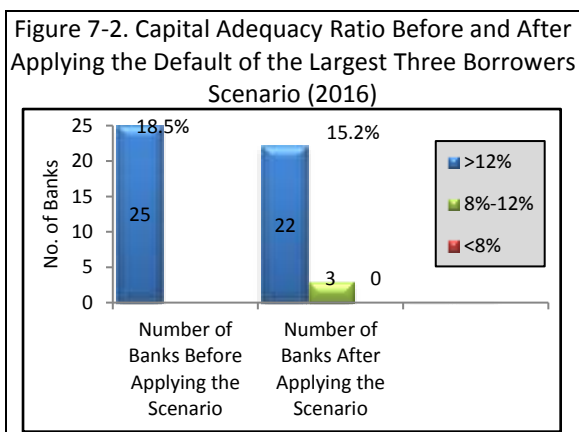
Figure 7-1. Capital Adequacy Ratio Before and After Applying the Doubling of Default Rates Scenario (2016)



This scenario assumed an increase in non-performing loans (default rate at banks) by 100.0% due to the worsening of political conditions in the region and their consequent impact on economic conditions and banks in Jordan. In this case, the CAR in the banking system will drop from 18.5% to 16.6%. This implies that the banking sector is in general able to withstand a shock of such a type as the CAR after the shock remains well above the minimum required CAR in Jordan of 12.0%. The reason behind this limited impact of such a shock is the high capital adequacy ratios at banks in Jordan, besides their high level of profits which enable them to enhance their capacity to increase provisions and absorb the additional losses that might take effect in case the shock materialized without impacting banks' capital level, which, in turn, protects banks' capital. On the individual bank level, CAR was above 12.0% for all banks. This implies that most banks in Jordan, individually and collectively, are able to withstand this shock (Figure 7-1).

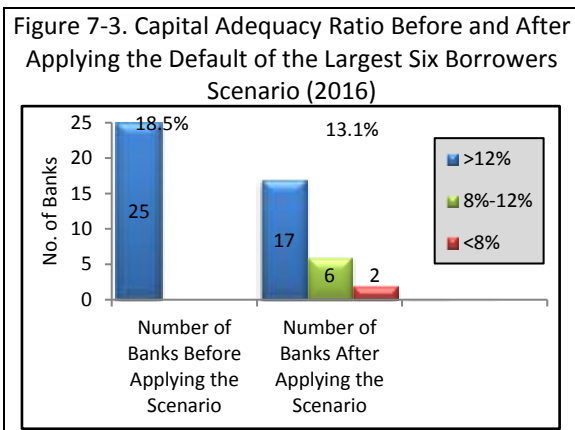
7.2.1.2 SENSITIVITY ANALYSIS OF CREDIT CONCENTRATION RISKS

Regarding the credit concentration risks; and assuming the default of the largest three borrowers (excluding credit facilities extended to the Jordanian government or the facilities guaranteed by the government) at individual bank level, the CAR in the banking system will be above the minimum limit applied in Jordan, of 12.0%, for 22 banks. It will drop below 12.0% in three banks only, whose CAR will still remain higher than 8.0%. On the aggregate banking sector level, the CAR will decline from 18.5% to 15.2% under this stress (Figure 7-2).



In the case of the default of the largest six borrowers (excluding credit facilities extended to the Jordanian government or the facilities guaranteed by the government) at individual bank level, the CAR will still be above 12.0% on the aggregate banking sector level. It will decline from 18.5% to 13.1%. At individual bank level, the CAR will be above the minimum limit applied in Jordan, of 12%, for 17 out of 25 banks. It will drop below 12.0% in eight banks, where it will be above the minimum international number of 8.0% for six of these eight banks. This implies that some banks need to mitigate their

concentration risks. In this regard, the CBJ closely monitors the developments in the concentration risks through Credit Concentration Instructions (Figure 7-3).



7.2.1.3 SENSITIVITY ANALYSIS OF MARKET RISKS

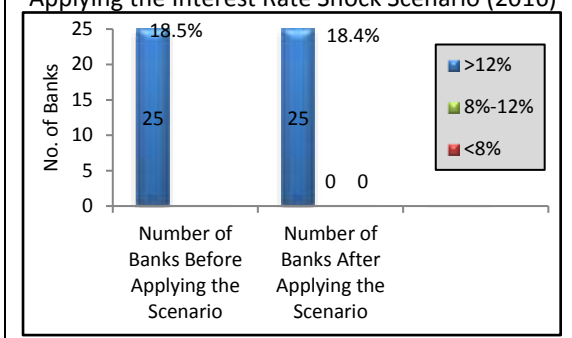
A set of tests were conducted to assess banks' sensitivity to market risks and their impact on CAR. The analysis was excluded to three types of shocks; namely, interest rates, exchange rates, and equity price. These three variables are the most commonly used ones in this regard.

7.2.1.3.1 Interest rate shock

Assuming that interest rates increase by 200 basis points, the CAR at the banking sector in Jordan will drop slightly from 18.5% to 18.4%.¹¹ This implies that there is no material effect for such a shock on the banking sector as a whole as CAR will remain still above the minimum limit applied in Jordan of 12.0% by a comfortable margin. At the individual bank level, CAR will be above 12.0% for all banks. This implies that all banks in Jordan are capable of withstanding interest rate shock (Figure 7-4).

¹¹ The effect of interest rate was confined to banks' profits only. The indirect effect on credit risks was not taken into consideration as credit risk is included in the scenario analysis.

Figure 7-4. Capital Adequacy Ratio Before and After Applying the Interest Rate Shock Scenario (2016)



7.2.1.3.2 Foreign Exchange Rate shock

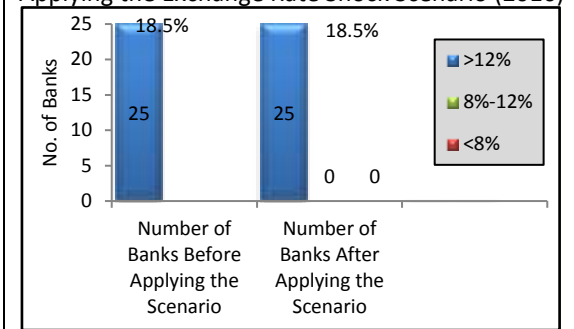
Under the scenario where the exchange rate of the JD against foreign currencies depreciates by 25.0%.¹² The CAR at the banking sector in Jordan will not be affected and will maintain its value of 18.5%. This implies that the banking sector is largely capable of withstanding this shock because the foreign assets cover (match), by a comfortable margin, the foreign liabilities implying the existence of long foreign currency positions at most banks. At the individual bank level, CAR will remain above 12.0% for all banks (Figure 7-5).

7.2.1.3.3 Equity price shock

Under this scenario, the equity prices are assumed to drop by 30.0%. In this case, the CAR at the banking sector in Jordan will drop from 18.5% to 18.4%.¹³ This implies that there is no material effect of this shock on the banking sector as a whole as CAR is still above the minimum limit applied in Jordan of 12.0% by a comfortable margin. At the individual bank level, CAR will be above 12.0% in all banks. This implies that banks in Jordan are capable of withstanding

the equity price shock due to the relatively low exposure of banks to the financial market in Jordan.

Figure 7-5. Capital Adequacy Ratio Before and After Applying the Exchange Rate Shock Scenario (2016)



7.2.2 MACRO-STRESS TESTING

The credit risk is one of the most important risks that the banks face and that have very big impact on their solvency. In order to estimate the ratio of non-performing loans for the period (2017-2019), the so-called Satellite Model has been utilized.

In this regard, a number of scenarios were assumed. The macro scenarios of medium and severe stress represent hypothetical cases designed to assess the ability of banks to withstand shocks. The main assumption is the exacerbation of geopolitical situation in the region surrounding the Kingdom, and the continuous decline in oil prices that will clearly affect the financial situation of the Gulf states, and will, in turn, affect Jordan via three main channels: a decline in the remittances of Jordanians working in the Gulf, a decline in grants and aid extended to Jordan from the Gulf countries, and a decline of capital inflow from

¹² This is a hypothetical scenario that aims at studying the extent to which banks are mainly exposed to exchange rates. The foreign stock reserves of the Central Bank of Jordan at the end of April 2017 amounted to USD 11.4 billion and they cover the imports for (6.5) months, which is a very comfortable level and enhances the stability of the Jordanian Dinar exchange rate).

¹³ The impact of interest rates increase was calculated on banks' profits only. The indirect impact on credit risks was not taken into consideration as it is considered within scenario analysis. The analysis is based ONLY on the data about the non-financial companies listed on ASE due to unavailability of data the on non-financial companies that are NOT listed on ASE.

tourism and direct investment. In turn, this will lead to a notable slowdown in the economic growth rates of Jordan in comparison to the expected ones, an increase in unemployment rates, and the contraction of the financial market. The assumption further entails that the interest rate on the US dollar increases faster than expected in line with the economic boom in the USA, as well as the consequent decision by the CBJ to raise the interest rate on the Jordanian Dinar to maintain the attractiveness of the JD as a saving currency, which may negatively affect the economic growth in Jordan.

To measure the impact of these hypothetical scenarios on banks, the GDP growth rate (economic growth rate) is one of the main economic variables that affect the non-performing loans, and, hence, the capital adequacy ratios for the regulatory and Tier one capital at banks.¹⁴ Economic literature indicates that the decline in the economic growth rate leads to an increase in the non-performing loans as a result of the slowdown in economic activity, which further decreases the borrowers' ability to pay back their loans. In addition, equity prices, interest rates, and unemployment rates were used to forecast the NPLs. To forecast the NPLs, the methodology of conducting stress testing using Satellite Model assumes three scenarios to expect the value of the dependent variable (NPLs) and consequently its impact on the CAR of banks for the succeeding year. In terms of severity, these scenarios are:

- 1- Baseline Macro Stress Scenario
- 2- Medium Macro Stress Scenario

3- Severe Macro Stress Scenario

The following multiple regression model was used to forecast the NPLs ratio:¹⁵

$$\text{NPL}_t = C + B_1 \text{NPL}_{(t-1)} + B_2 \Delta \text{GDP} + B_3 \Delta \text{SPI}_t + B_4 \text{RIR}_t$$

Where:

NPL_t: Expected non-performing loans ratio for 2017.

C: Constant

NPL_{t-1}: Previous year's non-performing loans ratio.

ΔGDP_t: Growth rate of gross domestic product.

ΔSPI_t: Variation in Share price index.

RIR_t: Actual Interest rate.

Based on the econometric analysis of the multiple-regression model, there was a significant negative impact of GDP and SPI on NPL and significant positive impact of IR on NPL at banks as shown in the following estimated model:

$$\text{NPL}_t = -1.31 + 0.7 \text{NPL}_{(t-1)} - 0.43 \Delta \text{GDP}_t - 0.02 \Delta \text{SPI}_t + 0.40 \text{RIR}_t$$

Table 7-1 shows the results of the econometric analysis of the above model:

Variable	Coefficient	t-statistics
C	-1.31	-0.80
NPL(-1)	*0.70	9.34
RGDP	*-0.43	-2.13
SPI	*-0.02	-2.70
RIR	0.40	4.55
R ²	93.16%	
Adjusted R ²	90.23%	
*: Statistically significant at 95% confidence.		

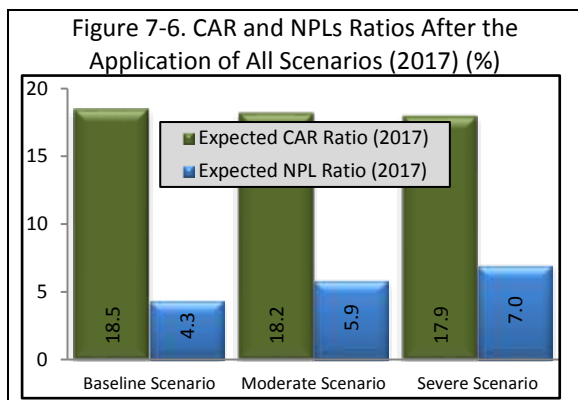
7.2.2.1 MODEL ASSUMPTIONS USED

After developing multiple-period stress tests in the last year, it is possible to forecast the NPLs and their impact on CAR of banks for several future years instead of a single year. The NPLs for

¹⁴ As defined in Basel III.

¹⁵ This model was estimated using the Fully Modified Ordinary Least Squares (FMOLS) method that provides optimal estimation for cointegrated regressions through modifying the Ordinary Least Squares Method to take into account the effect of autocorrelation and homoscedasticity in the dependent variable that result from the existence of an autocorrelated relation between the dependent variable and the independent variables.

the period (2017-2019) were forecasted based on the assumed changes in the economic growth rate (GDP), interest rates, and equity prices. The scenarios shown in Table 7-2 were assumed.



Year	Scenario	GDP	SPI	RIR
2017	Baseline Scenario	2.3	4069	8.63
	Medium Macro Stress Scenario	0.1	3255	10.13
	Severe Macro Stress Scenario	-2.1	2848	10.63
2018	Baseline Scenario	2.5	2848	10.63
	Medium Macro Stress Scenario	0.3	2279	12.13
	Severe Macro Stress Scenario	-1.9	1994	12.63
2019	Baseline Scenario	2.7	1994	12.63
	Medium Macro Stress Scenario	0.5	1595	14.13
	Severe Macro Stress Scenario	-1.7	1395	14.63

The shock scenarios were assumed based on the following methodology:

- Medium Macro Stress Scenario: The GDP growth rate for the expected baseline scenario minus the median of the deviations from its average for the study period.
- Severe Macro Stress Scenario: The GDP growth rate for the expected baseline scenario minus the biggest deviation from its average for the study period.

For equity prices and interest rates, the equity were assumed to decline by 20.0% and 30.0% and the interest rates were assumed to increase by 150 and 200 basis points for the medium and severe scenarios respectively. The current expected scenario for the coming year is the severe scenario of last year. These values were set based on the assumptions included in the CBJ's Stress Testing Instructions and Basel Committee Guidelines.

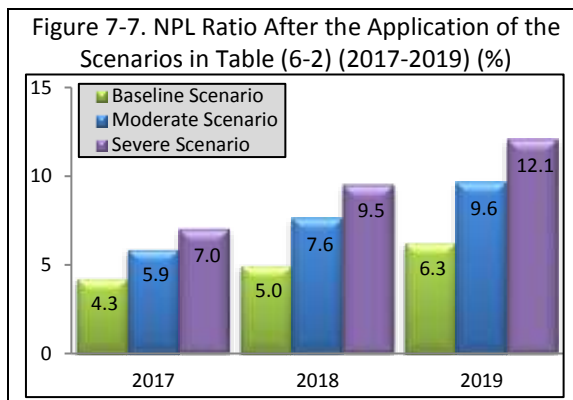
7.2.2.2 EMPIRICAL RESULTS

Table 7-3 and Figure 7-6 show the estimated change in the NPL ratio and CAR for the year 2017 assuming the occurrence of the mentioned scenarios. In this regard, the NPL ratio is expected to increase from 4.3% in baseline scenario to 7.0% under the severe macro stress scenario, consequently, CAR will drop from 18.5% to 17.9% in 2017.

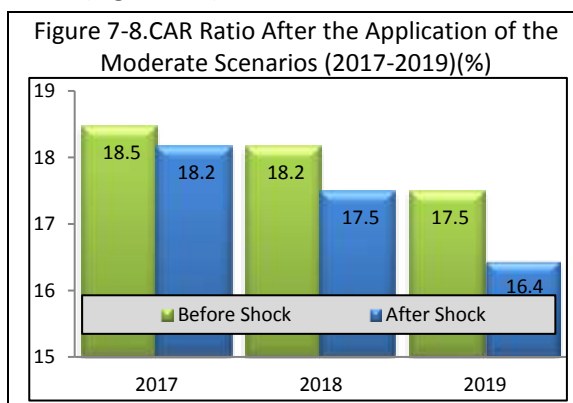
Scenarios	CAR (2017)*	NPLs (2017)*
Baseline Scenario	18.5%	4.3%
Medium Macro Stress Scenario	18.2%	5.9%
Severe Macro Stress Scenario	17.9%	7.0%

* The values of NPL and CAR at the end of 2016 are 4.3% and 18.5% respectively.

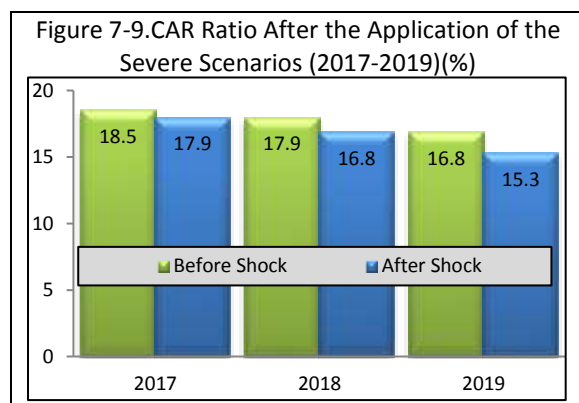
Assuming that the scenarios shown in Table 7-2 will materialize, the expected NPLs for years 2017, 2018 and 2019 under the three scenarios will be as shown in Figure 7-7.



Therefore, the CAR based on the medium scenario will decrease to 16.4% in 2019, and will be above 12.0% for the three years (2017-2019) by a comfortable margin. This means that the banking sector is capable of withstanding this shock (Figure 7-8).



For the severe scenario, CAR will decrease to 15.3% in 2019, and will be above 12.0% for the three years (2017-2019). This implies that the banking sector has satisfactory CARs and is capable of withstanding this shock (Figure 7-9).



7.3 CONCLUSION

Based on the results of various stress tests conducted in this chapter for the years (2017-2019), the banking sector is generally capable of withstanding shocks and high risks represented by the increase in the non-performing loans due to the unfavorable changes in the economic conditions, and the continued exacerbation of these conditions until the year 2019. The capital adequacy ratios for the years 2017, 2018, and 2019 are expected to be 17.9%, 16.8%, and

15.3% respectively, assuming the occurrence of the severe case scenario. These favorable results are due to the high capital and profit levels at banks in Jordan that help them to enhance their capacity to increase provisions and absorb the additional losses that might take effect in case the shock materialized without impacting banks' capital level which in turn protects banks' capital. The sensitivity testing results indicated that credit concentration risks have bigger effect on banks compared to other risks, which entails that some banks need to decrease their credit concentration risks. In this regard, the CBJ will keep on improving these stress tests and conducting more of them taking into consideration the evolution of risks on domestic, regional, and international levels to ensure the soundness and resilience of the banking sector in Jordan.

CHAPTER EIGHT

SYSTEMICALLY IMPORTANT BANKS AND FINANCIAL STABILITY

The Systemically Important Banks (SIBs) are the large banks that have high market share and are highly interconnected with other banks and financial institutions, and whose weakness or failure will have significantly adverse effects on the financial system and economy as a whole.

8.1 INTRODUCTION

The last global financial crisis that started in 2007 and the financial turbulences that followed the bankruptcy of Lehman Brothers Bank in September 2008 revealed that the weakness or failure of large banks and financial institutions has had severe negative effects on the stability of both the financial system and the real economy in the country and, sometimes, across the world. This is due to their huge size, significant interconnectedness with other banks and financial institutions, the complexities of their operations, the lack of ability for bridging the gap that could result from their failure on the financial services, and their cross-border spread. The government support for the systemically important financial institutions to protect them from failure leads to several problems. They include inequality (distortion in competition), an increased risk appetite assuming the intervention of the government in giving hand and saving them from failure, and the huge cost burden on government and public resources.

To deal with these risks, the efforts have been intensified on the international level to set a framework for dealing with the negative externalities that result from the systemically important financial institutions to protect financial stability. This framework is to include not only the banks and the financial institutions that are globally systemically important (G-SIBs), but also the banks and financial institutions that are systemically important at the domestic level (D-SIBs).

8.2 GLOBALLY SYSTEMICALLY IMPORTANT BANKS (G-SIBS)

In the last quarter of 2010, the Financial Stability Board requested Basel Committee on Banking Supervision to set a framework for dealing with the risks and the external factors related to the globally systemically important banks (G-SIBs). As a starting step, strong (intensive) supervisory measures must be mandated on banks, as well as enhancing the banks' capacity to absorb losses in line with the level of systemic risks that these banks impose on the financial system.

8.2.1 METHODOLOGY FOR DETERMINING THE G-SIBS

The Basel Committee for Banking Supervision released in November 2011 a methodology for determining the G-SIBs (an updated version was published in July 2013¹⁶ and the additional capital requirements (surcharge). The methodology included quantitative and qualitative indicators for assessing the systemic importance based on the following dimensions:

- 1- **Size:** A bank's exposure to substantial problems is more likely to damage the global economy or financial markets if its activities constitute a large share of global

¹⁶ Basel Committee on Banking Supervision. 2013. Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement. <https://www.bis.org/publ/bcbs255.pdf>. Accessed on November 1, 2017.

banking activity. Such an exposure of a large bank is also more likely to negatively impact confidence in the financial system as a whole. Size is, therefore, a key measure of systemic importance.

- 2- **Interconnectedness:** The larger interconnectedness a bank has with other banks and financial institutions especially through the size of reciprocal deposits, the more negative impacts the failure of this bank will have on the financial system as a whole.
- 3- **Substitutability:** the greater the role a bank has as a service provider, the more difficult it is to bridge the gap following its failure.
- 4- **Complexity:** the more complex a bank's operations are, the greater are the costs and time needed to resolve the bank problems.
- 5- **Cross- border Activity:** The greater the global reach of a bank is, the more difficult it is to coordinate its decisions and the more widespread the spillover effects from its failure will be.

The five dimensions were given equal weights.

8.2.2 ADDITIONAL CAPITAL SURCHARGE REQUIREMENTS FOR G-SIBS

Capital is an important tool for enhancing the ability of banks to withstand shocks and high risks. In order to strengthen the ability of the globally systemically important banks to absorb losses, they were mandated to allocate additional surcharge capital that is composed of common equity tier one capital that ranges from 1.0% to 3.5% of the risk weighted assets. Table 8-1 shows the additional capital surcharge mandated on the globally systemically important banks divided by five groups.

Table 8-1. Additional Capital Surcharge Mandated On the Globally Systemically Important Banks Divided into Five Groups

Group	Additional Capital Surcharge Mandated On the Globally Systemically Important Banks
5	3.5%
4	2.5%
3	2.0%
2	1.5%
1	1.0%

The fifth group was left empty to encourage banks decrease their systemic importance. In case a sixth group was added, the additional capital surcharge will be 4.5% of the risk-weighted assets. An additional 1.0% of risk-weighted assets will be added for every extra group.

Table 8-2 includes the list of the Globally Systemically Important Banks for 2016 based on the 2015 financial data that was announced by the Financial Stability Board in November 2016, in consultation with the Basel Committee on Banking Supervision and the relevant local regulatory authorities. The list, however, is the same as the list announced for the year 2015.¹⁷

Table 8-2. Additional Capital Surcharge Mandated on the Globally Systemically Important Banks (2016)

G-SIB	Additional Capital Surcharge (% of Risk- Weighted Assets)
(Empty)	%3.5
-Citigroup--JP Morgan Chase	%2.5
-Bank of America -BNP Paribas -Deutsche Bank -HSBC	%2
-Barclays -Credit Suisse -Goldman Sachs -"Industrial and Commercial - Bank of China Limited" -Mitsubishi UFJ FG -Wells Fargo	%1.5
-Agricultural Bank of China -Bank of China -Bank of New York Mellon -China Construction Bank -Groupe BPCE -Groupe Crédit Agricole -ING Bank -Mizuho FG -Morgan Stanley -Nordea -Royal Bank of Scotland -Santander -Société Générale -Standard Chartered -State Street -Sumitomo Mitsui FG -UBS -Unicredit Group	%1

¹⁷ Financial Stability Board. 2016. 2016 list of global systemically important banks (G-SIBs). <http://www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-important-banks-G-SIBs.pdf>. Accessed on November 1, 2017.

8.3 DOMESTICALLY-SYSTEMICALLY IMPORTANT BANKS (D-SIBs)

Many banks who are not systemically important on the global level might have a significant impact on their domestic economies and financial systems. Consequently, the G20 summit that was held in November 2011 asked Basel Committee and Financial Stability Board to expand the framework of globally systemically important banks to include banks that are systemically important at the domestic level.

Consequently, the BCBS released in October 2012 a document about setting a framework for dealing with domestic systemically important banks.¹⁸ The framework focuses on the consequences that will result from the banks' facing of serious problems on the domestic financial and economic systems. Unlike the framework for dealing with globally systemically important banks, the domestic systemically important banks framework depends on the assessment that the domestic supervisory authorities conduct as they are the best to assess the possible effects resulting from the occurrence of serious problems to the "large" banks on the domestic financial and economic systems. Therefore, it has the authority for determining the domestic systemically important banks and additional capital surcharge required from these banks.

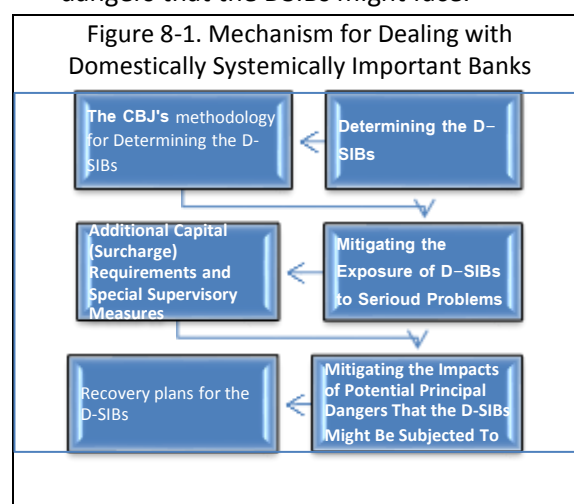
Based on this document, the BCBS determined a set of principles that together form a framework for dealing with the domestic systemically important banks. These principles can be broadly categorized into two groups: the first group focuses mainly on the assessment methodology for D-SIBs while the second group focuses on enhancing the ability of D-SIBs of absorbing losses (Higher Loss Absorbency).

8.4 DOMESTICALLY-SYSTEMICALLY IMPORTANT BANKS (D-SIBs) IN JORDAN

To ensure the stability of the financial system as well as the stability of the economy in the Kingdom, and within the frame of implementing the provisions of BCBS, the CBJ released on 12-06-2017 the instructions on **Dealing with Domestic Systemically Important Banks**. These instructions aim at enhancing the ability of the Domestic Systemically Important Banks (D-SIBs) to maintain the safety and the soundness of their financial positions and mitigate the negative impacts that might result on the stability of the financial system and the economy in general in case they face substantial problems.

The instructions include the following main pillars:

- 1- The assessment methodology of D-SIBs.
- 2- The additional capital (surcharge) imposed on the D-SIBs.
- 3- The qualitative requirements for the D-SIBs and supervisory measures assigned for the D-SIBs.
- 4- The mitigation of the impacts of potential dangers that the DSIBs might face.



¹⁸ Basel Committee on Banking Supervision. 2012. A framework for dealing with domestic systemically important banks. <https://www.bis.org/publ/bcbs233.pdf>. Accessed on November 1, 2017.

8.4.1 THE METHODOLOGY OF ASSESSING D-SIBs

To calculate the systemic importance of DSIBs, the bank-specific factors that were determined by BCBS were taken into consideration. They include size, interconnectedness, substitutability, and complexity. Equal weights were given to the four factors. The domestic systemic importance is calculated based on the annual financial statements of the banks for the year 2016, taking into consideration that the process of calculating the systemic importance of banks must be updated by the CBJ and the banks on an annual basis. Regarding the specifics of measuring the above factors, the following sub-factors were determined (Table 8-3).

The following equation is used to determine the domestic systematically important licensed banks. The variable $SCORE_{ij}$ measures the systemic importance of bank i . The systemic importance of the bank starts when the value of $SCORE_{ij}$ reaches 0.15. The maximum value of $SCORE_{ij}$ is 4 (in case there was one systemically important bank only):

$$SCORE_{ij} = \left(0.8 \frac{A_{ij}}{\sum_{i=1}^n A_{ij}} + 0.2 \frac{B_{ij}}{\sum_{i=1}^n B_{ij}} \right) + \left(0.5 \frac{C_{ij}}{\sum_{i=1}^n C_{ij}} + 0.5 \frac{D_{ij}}{\sum_{i=1}^n D_{ij}} \right) + \left(0.25 \frac{E_{ij}}{\sum_{i=1}^n E_{ij}} + 0.25 \frac{F_{ij}}{\sum_{i=1}^n F_{ij}} \right) + \left(0.25 \frac{G_{ij}}{\sum_{i=1}^n G_{ij}} + 0.25 \frac{H_{ij}}{\sum_{i=1}^n H_{ij}} \right) + \left(0.4 \frac{K_{ij}}{\sum_{i=1}^n K_{ij}} + 0.1 \frac{X_{ij}}{\sum_{i=1}^n X_{ij}} \right) + 0.5 \frac{Y_{ij}}{\sum_{i=1}^n Y_{ij}}$$

Where the numerator represents the total of the item at the bank level while denominator represents the total of the item across the banking system, the letter n symbolizes the number of banks during the period j . Regarding the symbols A, B, C, D, E, F, G, H, K, X and Y, they were all defined in Table 8-3.

Factor	Identifier	Measurement Tool (Sub-Factors) ¹⁹	Multiplication Factor
Size	A	assets of bank branches in Jordan	0.8
	B	Off- balance sheet obligations for bank branches in Jordan (outgoing and incoming confirmed letters of credit, collaterals, acceptances, underutilized credit lines...etc.)	0.2
Interconnectedness	C	balances and deposits of the bank at banks and banking institutions*	0.5
	D	deposits of banks and banking institutions at the bank*	0.5
Substitutability	E	credit facilities granted to individuals in addition to total real-estate credit facilities*	0.25
	F	Total credit facilities granted to corporate sector*	0.25
	G	credit facilities granted to government and public sector*	0.25
	H	of transactions in the National Payment System in Jordan (RTGS)	0.25
Complexity	K	assets of the bank outside Jordan (assets of the bank branches and subsidiaries outside Jordan)	0.4
	X	Off- balance sheet obligations for bank outside Jordan (outgoing and incoming confirmed letters of credit, collaterals, acceptances, underutilized credit lines...etc.)	0.1
	Y	Financial assets at fair value as in the comprehensive income statement + total financial assets at fair value as in the other comprehensive income statement	0.5

* On the consolidated financial statements level (Jordan branches, branches outside Jordan and the subsidiaries inside and outside Jordan)

8.4.2 ADDITIONAL CAPITAL (SURCHARGE) REQUIRED FROM DSIBs

In order to enhance the ability of D-SIBs to absorb losses, these banks were requested to maintain an additional capital (surcharge) that

¹⁹ Values are entered as gross values, i.e. before excluding provisions, unpaid interests, or any other exclusions.

includes Common Equity Tier 1 Capital (CET1). The surcharge shall be applied gradually and meeting the additional requirement shall begin as of the end of 2017, as detailed in Table 8-4.

Score (the result of executing the score equation)*	Common Equity Tier1 Capital (CET1) to Risk-Weighted Assets (%)			
	First Year	Second Year	Third Year	Fourth Year
$0.15 \leq \text{Score} \leq 0.50$	0.125	0.25	0.375	0.5
$0.50 < \text{Score} \leq 1.00$	0.250	0.50	0.750	1.0
$1.00 < \text{Score} \leq 1.50$	0.375	0.75	1.125	1.5
$1.50 < \text{Score} \leq 2.00$	0.5000	1.00	1.500	2.0
$2.00 < \text{Score} \leq 2.50$	0.625	1.25	1.875	2.5

* If the score for any bank (the domestic systemic importance of the bank) exceeds 2.5%, the CET1 will then be set.

8.4.3 QUALITATIVE REQUIREMENTS FOR THE D-SIBS AND SUPERVISORY MEASURES ASSIGNED FOR THE D-SIBS

Besides the surcharge additional capital that is requested from the D-SIBs and what is requested from banks as per the instructions in force, the D-SIBs must comply with additional qualitative requirements related to corporate governance and risk management, the most important of which are:

- a. The boards of directors of the D-SIBs must play a dominant and vital role in:
 1. Committing to high-level standards regarding risk culture, risk management, governance, internal control, and compliance. Besides, the members of the senior executive management must be selected in consistency with the nature of bank's activity and business pattern.
 2. Adopting a methodology to subject the risk management framework at the bank to a periodic internal and external review (by specialized consultative entities). The bank's board of directors and the senior executive management both must take

into account the remarks and recommendations of the review and evaluation process and update the risk management framework in line with the strategic direction of the bank and its business pattern.

3. Pursuing advanced methodologies and methods for identifying and measuring the major risks that the bank faces. These methodologies shall commensurate with the size of the bank, the nature of its business, and the degree of complexity.
4. Creating separate units for managing operational risks so that the operational risk management framework complements the general risk management framework in the bank, giving the business continuity planning and the cyber electronic risks an appropriate attention, besides keeping up with the best standards and latest developments in this regard.
5. Developing an internal credit classification system in the bank that is then linked with the process of pricing the credit products offered by the bank and the terms and conditions of extending the credit.
- b. The bank that has been classified as domestically important must clarify the preventive measures for dealing with suspicious or fraudulent activities, especially in the main business lines. In this regard, the bank must have an independent compliance committee stemming from the board of directors and consists of at least three members, the majority of whom must be independent members. The bank must continuously develop the capacities of the committee

members so as to allow them to perform their tasks effectively.

- c. In the context of enhancing their capacities in risk management, in general, and collecting the data related to risk and preparing reports, in particular, the D-SIBs must provide the Central Bank of Jordan, no later than one year from the date of classifying the bank as one of the D-SIBs, with an evaluation of its compliance with the Risk Principle (Effective Risk Data Aggregation and Risk Reporting) issued by BCBS in January 2013.²⁰ They must also take the necessary measures and arrangements for achieving the full compliance with these principles in no later than three years from the date of classifying the bank as one of the D-SIBs.

There are also supervisory measures assigned for the D-SIBs as a part of enhancing the communication of the CBJ with the D-SIBs and enhancing their supervision. The CBJ will:

1. Verify the effectiveness of the corporate governance framework of the D-SIBs, especially regarding the focus of their boards of directors on the high-level strategic issues and major risks they face.
2. Hold periodic meetings with the independent members in the D-SIBs' boards of directors as well as with audit, risk, and compliance committees separately.
3. Continuously communicate with the senior managements in the D-SIBs, especially the heads of the organizational units of audit, risk, and compliance.
4. Ask conducting stress tests that are specific to any bank that is classified as a D-SIB, if needed.

8.4.4 MITIGATING THE IMPACTS OF POTENTIAL PRINCIPAL DANGERS THAT THE D-SIBS MIGHT BE SUBJECTED TO

In order to mitigate the impacts of potential principal dangers that the D-SIBs might be subjected to, the D-SIB must have recovery plans that are approved by the board of directors to deal with the critical and highly risky developments that might threaten its existence and continuity in business. In this context, the D-SIB must set and document the list of measures that might be adopted in such a case.

8.5 INSTRUCTIONS ON DEALING WITH D-SIBS: IMPLEMENTATION RESULTS

The D-SIBs are required in no more than one and a half years to meet the qualitative requirements. Regarding the additional capital surcharge requirements, the D-SIBs were given a grace period of four years to meet these requirements gradually. The application of the additional surcharge capital requirements shall start on 31-12-2017 and continue until 31-12-2020 as detailed in Table 8-5.

Date of Mandating Additional Capital Surcharge	Financial Data to Base on	Additional Capital (Surcharge) required from D-SIBs
31-12-2017	The 2016 financial data	25% of additional capital surcharge
31-12-2018	The 2017 financial data	50% of additional capital surcharge
31-12-2019	The 2018 financial data	75% of additional capital surcharge
31-12-2020	The 2019 financial data	100% of additional capital surcharge

8.6 CONCLUSIONS

The primary results of the implementation of the Instructions on Dealing with D-SIBs in Jordan showed that six banks were classified as

D-SIBs. Consequently, additional capital surcharge requirements were mandated on these D-SIBs ranging from 0.5% to 2.0% of the risk-weighted assets in excess of the capital adequacy ratio (CAR) that is mandated on the other banks to enhance their ability to withstand risks.

It is worth mentioning that most banks that were classified as D-SIBs are capable to meet the additional capital surcharge requirements

with their current capital adequacy ratios (Jordan branches and at the consolidated level) as of 31-12-2016 without any need to increase capital. This is attributed to the sufficiently high CARs that are nearly the highest in the MENA region, besides the possession of high-quality Tier1 capital, which is considered a highest-quality component of the capital, and this, in turn, reflects positively on enhancing financial stability in Jordan.