# Financial Stability Report 2018

Financial Stability Department

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# PREFACE

The 2018 Financial Stability Report (JFSR2018) 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 Jordanian economy continued to face many challenges and risks in the year 2018 posed by the unsettled political situation in the neighboring countries that has resulted in realizing a modest growth rate of real GDP of 1.9% only in 2018. Regarding the future outlook, the preliminary estimates signal to the possibility of achieving a slight improvement in the economic growth rate to reach 2.2% and 2.4% in 2019 and 2020, respectively.

Regarding the stability of the financial sector, the year 2018 witnessed a relatively stable trend in financial stability in the Kingdom 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 the Kingdom.

The JFSR2018 is published online on the CBJ's website http://www.cbj.gov.jo.

**The CBJ Governor**

**Dr. Ziad Fariz**

# EXECUTIVE SUMMARY

## GLOBAL FINANCIAL STABILITY

The world economic growth realized a slight decline in 2018 compared to 2017 as the world real GDP growth rate reached 3.6% in 2018 compared to 3.8% in 2017. The IMF forecasts that this rate will decline also in 2019 to reach 3.3% before returning to stabilize until 2024 around its level in 2018. This means that the IMF expects some short-term decline that fades in the long term.

While global economic growth is heading towards relative stability in the foreseeable future, it in fact reflects the significant upsurge in the growth prospects of some countries and economic groups excluding the advanced economies whose growth expectations do not exceed 2.0% in most optimistic projections. There are three main factors driving the low growth expectations in the advanced economies: the growing monopoly power of firms in the advanced economies, the trade tensions among the major world traders, and the downward trending prices of capital goods.

## JORDAN ECONOMY

The Jordanian economy faced, and is still facing, different challenges and risks, the most important of which are the political turbulences in the neighboring countries that led to realizing a modest increase in the real GDP of 1.9% in 2018. The preliminary projections indicate that it is expected to achieve some improvement in the years 2019 and 2020 to reach 2.2% and 2.4%, respectively, and to continue its upward trend hereafter until the year 2024. Despite these challenges and risks, the procedures and policies that were adopted by the government and the Central Bank of Jordan helped mitigate the repercussions of these challenges and risks and maintain economic, monetary, and financial stability in Jordan.

## THE BANKING SECTOR IN JORDAN

The banking sector in Jordan continued to maintain sound financial indicators and, hence, a high capability of withstanding shocks and high risks. Following are some indicators that confirm this conclusion:

### CAPITAL ADEQUACY

The banking system in Jordan enjoys a high capital adequacy ratio that ranged between 18.0% and 21.0% during the period (2007- 2016), with a comfortable margin that is well above the CBJ lower bound of 12.0% and the Basel Committee rate of 10.5%. However, the capital adequacy ratio declined during the years 2017 and 2018 to 17.8% and 16.9%, respectively. This noticeable decline of 2018 was a result of the introduction and implementation of International Financial Reporting Standard (IFRS) Number 9 (IFRS9) to the 2018 financial statements. This application of the IFSR 9 standard has resulted in the transfer of additional amounts to the credit loss provision. These amounts have been deducted from equity and specifically from retained earnings. However, the application of IFRS 9 should enhance the soundness and resilience of banks over the medium and long terms through improving transparency and timely recognition of credit losses compared to the International Accounting Standard (IAS) 39.

It is worth mentioning that there is a substantial convergence between the regulatory capital adequacy ratio and the tier-one capital ratio. The tier-one capital ratio reached 15.4% at the end of

2018. This implies that most of the capital of banks in Jordan consists of the Tier 1 capital (core capital), which is considered to be the part of capital that is of highest quality and ability to absorb losses.

**ASSET QUALITY**

The ratio of non- performing loans to total loans continued to decline during the period (2012-2017) to reach 4.2% at the end of 2017, compared to 7.7% at the end of 2012. However, it slightly increased at the end of 2018 to reach 4.9% of total loans. According to this ratio, Jordan ranked in the middle of 13 Arab countries for which data are available. Regarding the coverage ratio of non-performing loans, it continued its continuous upward trend that it started in 2011 to reach 79.3% at the end of 2018 compared to 75.4% at the end of 2017. This is indeed a positive signal that means that nearly 80% of non-performing loans of banks are covered by provisions. In this regard, the banking system in Jordan ranked fifth among 13 Arab countries in terms of (high) coverage of provisions for non-performing loans.

**LIQUIDITY**

The Jordanian banking system enjoys safe liquidity as the total highly-liquidity assets accounted for 44.9% of total assets at the end of 2018 compared to 45.8% at the end of 2017. This slight decline in the liquidity ratio is mainly attributed to the growth of credit facilities at higher rates than deposits.

**PROFITABILITY**

The return on equity increased to 9.6% in 2018 against 9.1% in 2017. This rise is attributed to the increase in the profits of the banks operating in the Kingdom from about JD 554.0 million in 2017 to around JD 590 million in 2018. Despite this increase, the rates of return in Jordan are considered low when compared to several 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 continued to follow a downward trend, while the competitiveness levels kept their upward trend in the banking sector in Jordan in the year 2018. The assets of the top five banks out of the 24 banks accounted for 53.6% of the total assets of licensed banks at the end of 2018 compared to 60.0% ten 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 AND THE CREDIT-TO-GDP GAP**

The year 2018 witnessed a decline in the growth rate of the credit granted by banks compared to the year 2017. Direct credit facilities grew in 2018 by 5.3% to reach JD 25.7 billion, compared to 8% in 2017. This low growth in credit in 2018 is considered normal in light of the decline in economic activity in the Kingdom due to the surrounding regional situation. It is worth mentioning that the total credit facilities constituted 85.6% of GDP at the end of 2018 compared to 86.1% at the end of 2017.

The results of the credit gap analysis in Jordan showed that the ratio of the credit granted by banks to the private sector to GDP in Jordan does not indicate the possibility of the accumulation of risks at the financial sector level (systemic risks) in the present time. As this ratio as at the end of 2018 surpasses its historical trend by a small percent of 0.6% that does not require imposing additional capital requirements buffers on banks. This is, however, expected in light of the normal growth rates of credit granted to the private sector that are associated with low economic growth rates compared to the pre global financial crisis levels.

**STRESS TESTING**

The stress testing results that are used to measure the ability of banks to withstand shocks showed that the Jordanian Banking System is generally capable of withstanding high shocks and risks. A hypothetical scenario was assumed. This scenario was built based on the assumptions of further exacerbation of regional geopolitical situation surrounding the Kingdom, a decline in grants and aid extended to Jordan, a decline of capital inflow from tourism and direct investment, a decline in national exports, and a rise in the inflation rate, that all in turn lead to a notable decrease in economic growth rates relative to expectations, in addition to an increase in unemployment rates and a contraction of the financial market. It was also assumed that interest rates on the US dollar will continue to increase (although they are expected to fall) and that the Central Bank of Jordan will raise the interest rates on the JD to maintain the attractiveness of the dinar as a savings currency. The testing results showed that the capital adequacy ratio of the Banking Sector in Jordan for the years 2019, 2020, and 2021 are expected to be 16.5%, 15.7%, and 14.8%, 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%.

**FINANCIAL STABILITY INDEX IN JORDAN**

The Financial Stability Index maintained in 2018 its level of the previous year 2017 of 0.46. 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 is to one, the greater the stability of the financial system is. This index was developed in 2016 after reviewing the experiences of several countries in building their financial stability indices. The value of the Financial Stability Index in Jordan shows that the degree of the financial system stability in Jordan is considered relatively satisfactory taking into account the political and economic developments in the region and their potential impact on financial stability in the Kingdom. The comparison of the banking-sector stability index in particular with other countries that developed a similar one reveals that Jordan enjoys a sound, resilient, and stable banking sector to a high degree as Jordan ranked sixth among 20 countries that built their indices using the same methodology used in Jordan.

**OPERATIONAL EFFICIENCY OF BANKS**

The operational efficiency level of the banking sector in Jordan realized a slight improvement as the average ratio of total expenses to total income of the banks operating in the Kingdom declined from 56.2% at the end of 2017 to 55.5% at the end of 2018. Consequently, the average of this ratio converged to the internationally acceptable upper bound of 55.0%. However, banks operating in Jordan whose ratio exceeds this bound should improve their control and consider cutting down their operational expenses further.

**HOUSEHOLD SECTOR**

The risks associated with household debt decreased in 2018 compared to previous years as realized by the decline in the high growth rates that this debt witnessed during the previous period, especially during the years 2014 and 2015, which exceeded 11%. The growth rate of household indebtedness reached about 3.7% in 2018, which is lower than the growth rate of the total credit facilities that amounted to 5.3% in 2018. In addition to the decrease in the total debt to borrowers' income and the relative stability of monthly average debt burden of household debt to income as shown next.

It is worth mentioning that the number of borrowers from the banks operating in Jordan as at the end of 2018 approximated 1.1 million borrowers, representing 16.6% of the total adult population. Along with Lebanon, Jordan ranked third among Arab countries in this regard. It was lower than that of the United Arab Emirates and Bahrain of 18.9% and 16.8% respectively, equal to that of Lebanon (16.6%), and higher than that of the other Arab countries. In comparison with developed countries, the percentage of borrowers to total adult population in Jordan was lower than the average in developed countries of about 19.1%.

As for the average monthly burden of household debt relative to his income in Jordan that is measured by the value of monthly installments and interest paid by the borrower, it amounted to about 40% of the total monthly income of the borrowers in 2018 - close to its counterpart in 2017. This percentage is acceptable according to international standards. The ratio of total household borrowers' debt to their income reached about 66.6% in 2018, declining down from 67.4% in 2017 and 69.3% in 2016, noting that this ratio represents the total balance of the debt of the borrowing individuals to their annual disposable income. Therefore, it does not include all Jordanians, but it is only specific to the borrowers' group who do not exceed 16.6% of the total adult population in Jordan. Moreover, the ratio of total household debt to their income does not represent the monthly debt burden of the household relative to their income that approximated 40% of the total monthly income of the borrowers, as mentioned previously. Despite the relatively low risk of household debt, banks should continue to pay attention to the risks of lending to the household sector and consider expanding debt in a way that takes into account the evolution of these risks.

### CORPORATE SECTOR

The corporate sector in Jordan maintained its resilience to financial and economic shocks. The results of the stress testing of companies showed that about 92.0% 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 outcome is however expected in light of the slowdown that the real estate sector is observing in the present time.

### REAL ESTATE SECTOR

The real estate sector in Jordan has been impacted by the slowdown in economic activity in the Kingdom and the political and economic developments in the region since 2017 more clearly than the preceding years. The real estate trading volume decreased by 14.1% in 2017, whereas the real estate price index decreased by 0.9% in the same year. Even though the real estate price index increased very slightly by 0.2% in 2018, this slight increase was an outcome of the increase in the land price index by 1.3% and the decrease in the residential real estate price index and the commercial real estate price index by 1.5% and 0.6%, respectively. Real estate trading volume decreased by 13.1% in 2018, and continued to decline further in the first half of 2019 and reached 23.0%. This noticeable slowdown in the real estate sector requires some banks to reconsider the maximum of the ratio of loan-to-value of the mortgaged real estate, especially for banks whose ratio exceeds 80.0%, to avoid any potential risks that may result from the possible decrease in real estate prices.

It is worth mentioning that the credit facilities granted to the real estate sector for residential and commercial purposes amounted to JD billion 5.46 at the end of 2018, forming 21.6% of the total facilities granted by banks, compared to JD billion 5.29 at the end of 2017, achieving a growth rate of 3.2% approximately. Which is the lowest growth rate of the total facilities in general that amounted to 5.3% in 2018.

### FINANCIAL INCLUSION

In order to enhance the access of various groups in the society to the financial services that are provided by the formal financial sector in a fair, transparent, and responsible way; the Central Bank of Jordan launched on 04-12-2017 the National Strategy for Financial Inclusion (2018-2020) under the patronage of his Majesty King Abdullah the II In the presence of the Prime Minister. The strategy included five pillars: financial education, financial consumer protection, Small and Medium-sized 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. Consequently, the CBJ coordinated and collaborated with key partners from all relevant sectors to set forth action plans for all the pillars of the strategy. These plans were finalized in 2018 and published on the CBJ's website. This JFSR2018 reviewed the main accomplishments and procedures taken for each of the strategy pillars. The National Financial Inclusion Strategy aims at achieving two main goals. The first goal is to raise the level of financial inclusion, measured by the number of adults with accounts in financial institutions, from 33.1% in 2017 to 41.5% by 2020. The second goal is to reduce the gender gap the access to finance from 53.0% to 35.0%.

## LEGISLATIVE FRAMEWORK

The CBJ continued in 2018 the comprehensive review of the legislative framework governing the practices of the banking and financial institutions that are under its supervision umbrella. Chapter Two of this JFSR2018 report detailed the major supervisory amendments conducted by the CBJ during the years 2016, 2017, and 2018, especially the Amended Central Bank Law No (24) of 2016, the Amended Banks Law No (7) of 2019, the draft Law for Organizing Insurance Business, 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.

Of the most important amendments in the Banks Law No (7) of 2019 was the one about enhancing the corporate governance in Jordanian banks. New articles have been set to support the separation of the executive managements from their boards of directors. The mechanism of selecting the members of the boards of directors of banks has been altered so that the focus is on their competencies, but not on their financial capabilities. The number of members in the banks' board of directors was decided to be at least seven members, of which the number of independent members should not exceed half of the members of the board of directors.

## FINTECH

Jordan has witnessed a significant development in the field of financial technology and innovation due to Jordan's motivating investment environment that supports innovation and the strong demand for FinTech in the Jordanian market. In this line, the CBJ announced its support for initiatives and innovations that use the most recent global technology, especially the ones that enhance the access to digital financial services easily, efficiently, and securely, taking into account the need to enhance the cybersecurity of financial services in general. It is worth mentioning that the CBJ launched the FinTech Regulatory Sandbox in early 2018 in order to create an incubator for entrepreneurs to support and encourage innovation and development in the FinTech field to enhance competitiveness in the provision of digital financial services scope; enhance efficiency, effectiveness, and security in the movement of funds; and enhance access to formal financial services while maintaining the integrity and stability of the financial sector and protecting the rights and data of the financial consumer. On 06-02-2018, the CBJ issued instructions for Adaptation to Cyber risks. These instructions aim at enhancing the capability of banks and financial institutions to react to cyberattacks in a highly professional and technical way, enabling them to continue to provide their services and carry out their operations securely, and motivating them to invest in the cybersecurity for its importance and role in achieving a technical boom that serves the national economy. These instructions mandate the relevant parties to develop and organize the appropriate procedures and measures in line with the best international practices for managing cyber risks and penetrations tests; enhancing the controls for protecting systems, software, networks, and networking devices; and detecting, responding to, and recovering from cybersecurity emergencies in order to achieve an effective and efficient approach to cyber governance.

After that, in 2019, the CBJ, in coordination with the banks operating in Jordan, initiated the formation of the "Cybersecurity Incident Response Team for the Financial and Banking Sector" to enhance the efforts and the optimal utilization of capacities to develop a cybersecurity system on the sector level. The team's activities include mainly developing strategies and policies, activating mechanisms and tools, providing the required support and commitment to confront cyber risks, and enabling the sector to detect and respond to the growing cyber security threats.

## CENTRAL BANKS AND DIGITAL CURRENCIES

The last few years witnessed a technological revolution in financial transactions represented by the so-called digital currencies. Dealing with these currencies has achieved great popularity in the financial sector in a very short time period through their use in various payment systems, especially e-commerce. These currencies have caused fundamental changes in financial institutions and markets in various countries and in the global economy as a whole. Despite the advantages of cryptocurrencies that make them more attractive to users and investors in terms of ease of use and low costs of trading and the fast spread, their trading may result in many risks. This is especially because most of these cryptocurrencies, in the present time, are not issued by a central monetary authority and, hence, are not supported and supervised legally by any international or official body. For example, the cryptocurrency that Facebook is issuing (Libra) will, upon issuance, lead to the dominance of social media platforms on the world of cryptocurrencies due to the unprecedented global reach of these platforms. Therefore, these platforms might become global markets for the trading and exchange of goods and currencies and the execution of financial transfers; consequently, rivaling the formal channels of financial services. Moreover, they pose significant risks on global security and financial stability in general, the most important of which are laundering money and financing terrorism, fraud, and breach of personal data.

Chapter Seven of this JFSR2018 reviewed the concept and technology of digital currencies of various types and characteristics, besides their advantages, potential risks, and impact on monetary policy and financial stability. The experiences of Arab and foreign countries were also discussed in this regard. In addition, the organizational framework and the policy of the CBJ towards the issue were detailed. Chapter Seven of this report concluded that the central banks and the relevant parties must continue to follow up and monitor the digital innovations and review their businesses and impacts. This shall include innovations related to non- centralized digital currencies that are issued by the private sector and do not belong to any supervisory authority. In the present time, the high fluctuations in the values of cryptocurrencies; the absence of protection of the dealers; the risks of financial crimes, money laundering, terrorism financing, and tax evasion all make these currencies unsecure and unreliable to depend on as a medium of exchange, store of value, or unit of account. Regarding the centralized cryptocurrencies that are issued by the central banks, there are not enough justifications for issuing such currencies in the present time. However, the central banks and supervisory authorities should continue to track developments in this field and conduct further research and studies to help understanding these FinTechs and their impact on monetary, financial, and economic stability.

## BANKING SECTOR CONCENTRATION AND FINANCIAL STABILITY

The global financial crisis revitalized the interest of academics and policy makers in investigating the relationship between the concentration in the banking sector and financial stability due to the important role that concentration might play in building a financial crisis, especially when it trends up, creating fears about the stability of the financial system. Examining the relationship between the concentration in the banking sector and financial stability helps setting effective policies to deal with any vulnerabilities in the financial system (threats to financial stability). Chapter Eight of this JFSR2018 included an investigation of the effect of concentration in the banking sector on the financial stability in Jordan. The chapter included an explanation of this relationship that might follow two opposite hypotheses as many studies have shown. There exists no irrefutable evidence that advocates the superiority of one hypothesis to the other. The first hypothesis states that concentration increases financial stability, while the second hypothesis claims that concentration reduces financial stability. A third hypothesis suggests that there is no relation between concentration and financial stability.

The results of the investigation of the effect of banking sector concentration on financial stability in Jordan revealed that the decrease in concentration and the increase of competitiveness in the Jordanian banking sector enhance the financial stability in the Kingdom. This implies that the banking sector in Jordan follows the second hypothesis that claims the existence of adverse relationship between concentration and financial stability. Since the concentration ratios in Jordan are following a downward moving trend, this decline, in addition to the increase in competition, is expected to have a favorable effect on financial stability. However, a prudent supervisory policy should be adopted so as not to allow for the increase in competition to affect the desire of the banking sector to bear more risks. The CBJ will continue to conduct further research and studies about the relationship between concentration (competition) and financial stability.

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# CHAPTER ONE

# DOMESTIC AND GLOBAL ECONOMIC AND FINANCIAL DEVELOPMENTS AND OUTLOOK

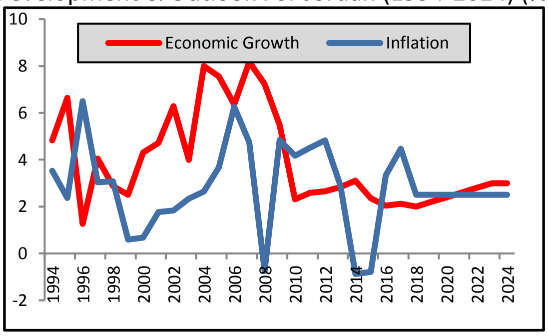
## 1.1 INTRODUCTION

The world economic growth realized a slight decline in 2018 compared to 2017 as the world real GDP growth rate reached 3.6% in 2018 compared to 3.8% in 2017. The IMF forecasts that this rate will decline also in 2019 to reach 3.3% before returning to stabilize until 2024 around its level in 2018. This means that the IMF expects some short-term decline that fades in the long term.

While global economic growth is heading towards relative stability in the near future, it in fact reflects the significant upsurge in the growth prospects of some countries and economic groups excluding the advanced economies whose growth expectations do not exceed 2.0% in most optimistic projections. There are three main factors driving the low growth expectations in the advanced economies: the growing monopoly power of firms in the advanced economies, the trade tensions among the major world traders, and the downward trending prices of capital goods.

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. This has reflected on achieving a modest growth rate in real GDP of 1.9% in 2018. The IMF projections signal to some improvements in the real GDP growth rate in 2019 and 2020 to reach 2.2% and 2.4%, respectively, and to its upward trend until the year 2024, as well as to the stability of inflation rate at around 2.5% (Figure 1-1).

Figure 1-1. Economic Growth Rate and Inflation Rate Development & Outlook For Jordan (1994-2024) (%)




Source: IMF World Economic Outlook Database, April 2019.

The economic challenges remain to be the most prominent issue in Jordan since the global financial crisis, as the repercussions of the security, political, and economic tensions in the neighboring countries affect economic growth rates that are still in a phase of relative slowdown.

As the situation in the region and the neighboring countries returns to a state of relative peace and stability but that is unstable amid uncertainty, the Jordanian economy is still charged with the repercussions of these crises. Therefore, the growth gap between the Jordanian economy, emerging markets, and developing economies is expected to increase due to the challenges Jordan faces increasingly.

Regarding the financial stability on the domestic level, it has improved as a result of the prudent economic policies, especially monetary, macro prudential and micro prudential policies that continued to sustain the Jordanian Dinar and maintain its attractiveness. As well, it has improved as a result of maintaining a sound and solid financial sector and of improving investment climate in the Kingdom despite the significant challenges that Jordan is facing.

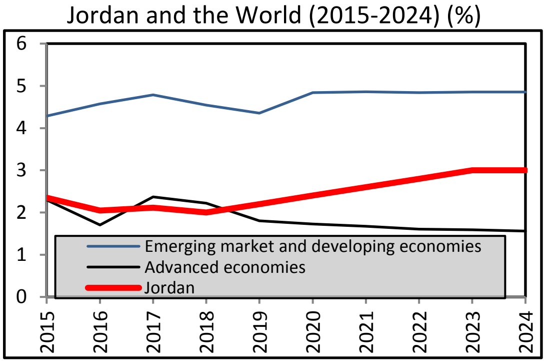
These trends are evident from the satisfactory indicators in enhancing transparency, combating corruption, improving governance, and developing the human resource to reflect positively on investors and create a favorable investment environment despite the significant challenges that Jordan is facing.

## 1.2 GLOBAL ECONOMIC DEVELOPMENTS

### 1.2.1 ECONOMIC GROWTH DEVELOPMENTS AND OUTLOOK

The growth of global economy witnessed a slight decline in 2018 compared to 2017. The world growth rate of real GDP reached 3.6% in 2018 compared to 3.8% in 2017. In its World Economic Outlook report for April 2019, the IMF projected this rate to decrease to 3.3% in 2019 before returning to its figure of 2018 until 2024. This means that the IMF expects some short-term decline that fades away in the long term.

Figure 1-2. Real GDP Growth Trend and Outlook for Jordan and the World (2015-2024) (%)

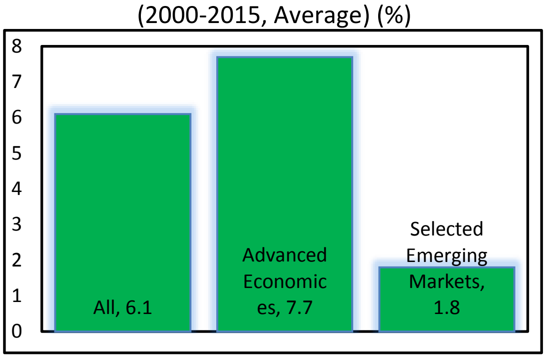



Source: IMF World Economic Outlook Database, April 2019.

In terms of economic growth and outlook in various economies, the IMF noted that this rate in the advanced economies declined slightly in 2018 to 2.2% compared to 2.4% in 2017. This decline is expected to continue to be below 2.0% in the coming years. These rates of growth are a record with a half percentage point below the historical average in 30 years. The report attributed these trends to three factors: the growing monopoly power of firms in the advanced economies at a large scale compared to the other economic groups (Figure 1-3), the downward trending prices of capital goods as an investment driver, and the exacerbation of bilateral trade tensions. Regarding the emerging markets and developing economies, their economic growth rate declined from 4.8% in 2017 to 4.5% in 2018. It is expected to continue to move downward in 2019 before recovery in the latter years (Figure 1-2).

Returning to the economic growth trends, Figure 1-4 shows the growth trend and outlook for RGDP for seven major economic groups in addition to Jordan for the period (2015-2024). In this regard, developing countries in Asia surpassed the other economic groups by achieving historical high growth rates of 6.4% that are expected to continue in the future, followed by the emerging markets and developing economies whose growth rates averaged 4.7% during the period (2015-2024).

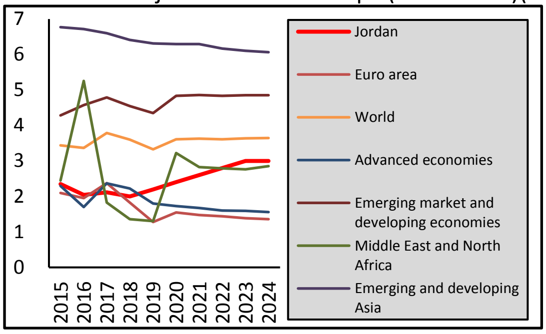
Figure 1-3. Profit Margin for Advanced Economies and Emerging Market and Developing Economies (2000-2015, Average) (%)




Source: IMF World Economic Outlook Database, April 2019.

As appears from the Figure 1-4, Jordan is expected to come in the middle of the main economic groups concerning the outlook of real GDP growth rates in the future. It is apparent that the projected trends for Jordan economy are the most optimistic compared to the averages of the main economic groups in the world as shown by the steeper slope of the growth line.

Figure 1-4. Real GDP Growth Trend & Outlook for Jordan and Major Economic Groups (2015-2024)(%)




Source: IMF World Economic Outlook Database, April 2019.

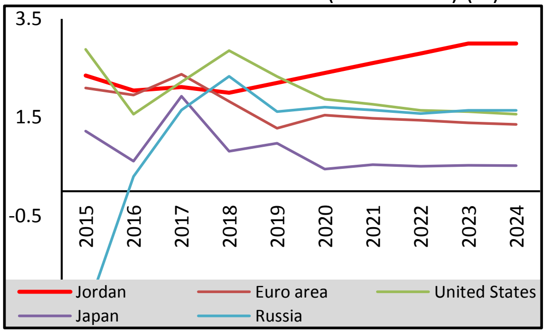
It is intuitive that the movements of global economic growth are linked to the major economies that are mostly affected and influenced by the trends the global economy trends. For example, the World Economic Outlook report for April 2019 stated that global energy prices have fallen by 17.0% in the last period as oil prices have fallen from $81.0 per barrel in October 2018 to $61.0 in February 2019. This is attributed to supply movements, especially the temporary waiver of US sanctions on Iranian oil exports to some countries, and the production of US crude oil. Oil prices rebounded slightly in early 2018 due to the production cuts by oil exporting countries. Despite the increase in domestic demand in the United States and Britain in the past two years by 2.0%, and in line with reduced pressure on the low prices and overall wages, growth in economic activity is slowing amid the increased trade tensions, tightening financial conditions, and policy uncertainty in many economies, as previously stated. As it can be seen from Figure 1-5, the Russian economy is expected to outperform the United States, Japan, and the euro area after the shock that hit the Russian economy in 2015.

## 1.2.2 Developments and Outlook of Public Finance

### 1.2.2.1 Public Debt

With the slowdown in global growth and the increased uncertainty, the fiscal policies focused on preparing for the possible recession scenarios in order to achieve balance between the stability and sustainability and exerting more efforts in enhancing reforms in order to sustain long-term comprehensive growth in light of the risks that the world economy is facing.

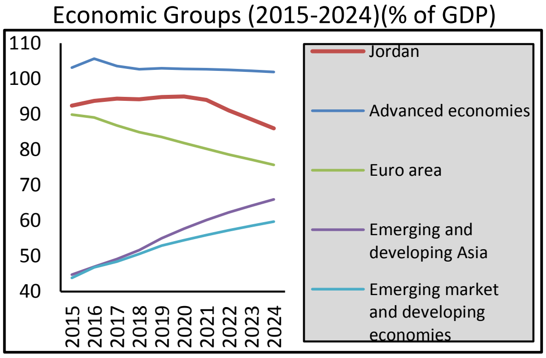
Figure 1-5. Trends & Outlook of Real GDP Growth for the Countries Most Impacted by Exchange Rates and Oil Price Movements (2015-2024) (%)




Source: IMF World Economic Outlook Database, April 2019.

The April 2019 Fiscal Monitor published by the International Monetary Fund stated that the ratio of public debt to GDP in advanced economies declined from 107.0% in 2016 to 103.5% in 2018. As for the emerging markets and developing economies, the ratio of public debt to GDP increased from 48.5% in 2017 to 50.6% in 2018. However, it is expected to rise in the coming years (Figure 1-6).

Figure 1-6. Public Debt for Jordan and Major Economic Groups (2015-2024)(% of GDP)

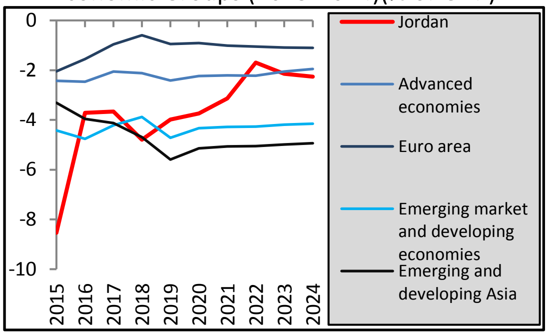



Source: IMF Fiscal Monitor Database, April 2019.

### 1.2.2.2 Fiscal Deficit

The April 2019 Fiscal Monitor published by the International Monetary Fund discussed the variations in the trends of fiscal deficit to GDP among the major economies and economic groups in the world. For the advanced economies, the ratio of fiscal deficit to GDP maintained its 2017 figure of 2.1%. As for the emerging markets and developing economies, however, it declined from 4.2% in 2017 to 3.9% in 2018 as a result of fiscal reform in the oil exporting countries. The IMF Fiscal Monitor for April 2019 stressed on the importance of providing financial assistance to low income developing countries like Jordan so as to help them continue their efforts in achieving the objectives of sustainable development (Figure 1-7).

Figure 1-7. Fiscal Deficit for Jordan and Major Economic Groups (2015-2024)(% of GDP)




Source: IMF Fiscal Monitor Database, April 2019.

## 1.3 GLOBAL FINANCIAL SYSTEM STABILITY

### 1.3.1 GLOBAL FINANCIAL STABILITY

The global financial stability positions reversed in the present time, albeit they are still relatively expansionary, as shown in April 2019 Global Financial Stability Report published by the International Monetary Fund (IMF).

After sharp declines at the end of 2018, financial markets rebounded strongly in early 2019 as major central banks adopted a more patient and flexible approach to monetary policy normalization while keeping an eye on the US-China trade negotiations.

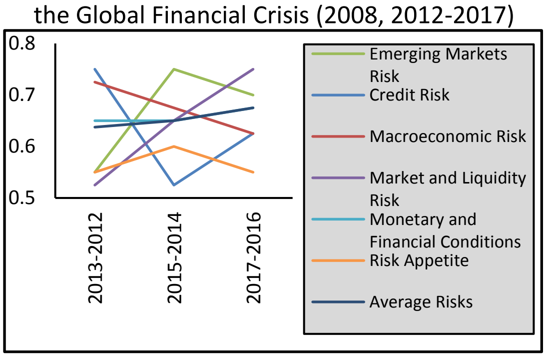
The April 2019 Global Financial Stability Report warned against the continued accumulation of vulnerabilities that might threaten the global financial stability over the medium term. Of the most important vulnerabilities according to the report is the corporate sector, the nonbanking financial sector and the sovereign sector in a number of systemically important countries. The vulnerabilities in these sectors stem from the high levels of indebtedness and low levels of liquidity resulting from the mismatch of the maturity of assets and liabilities (maturity mismatch) represented by the high levels of long-term assets associated with high levels of short-term liabilities. Of course, this decline in financing available in the market has adversely influenced the economic conditions and increased the risks to financial stability. Developments in risks, as well as financial and monetary conditions varied between the advanced economies and the emerging markets and developing economies as debt-servicing capacity in the corporate sector in the advanced economies has improved. However, if monetary and fiscal conditions remain expansionary, the debt burden is likely to increase, which might increase the risks in the future.

The April 2019 Global Financial Stability Report determined in this regard some drivers under which a sudden contraction in investment levels might take place, leading to adopting tight financial policies, and hence negatively impact world economic conditions. Of these drivers is the global growth slowdown in a faster-than-expected pace. The political risks and the risks of economic policies, such as the exacerbation of trade tensions or the exit of UK from the European Union without signing an agreement, could lead to a sharp surge in the level of risk avoidance.

Amid rising downside risks to global growth, policymakers should aim to avoid a sharper economic slowdown, while keeping financial vulnerabilities under control through the reassessment of the monetary policy stance that reflects changes in the economic outlook or the risks surrounding the outlook. They should also follow a proactive methodology in the use of the macro prudential policy instruments, and in benefiting from the potentials for activating or tightening the broad-based macro prudential measures.

Figure 1-8 depicts the trends in the major components of the financial stability map published by the IMF in its global financial stability reports for the years 2012 until 2017 that includes four types of risks. These risks are, namely; credit risks, emerging markets and developing economies risks, market and liquidity risks, and macroeconomic risks. In addition, they include the degree of risk appetite and monetary and financial conditions.

Figure 1-8. Trends in Global Financial Stability since the Global Financial Crisis (2008, 2012-2017)

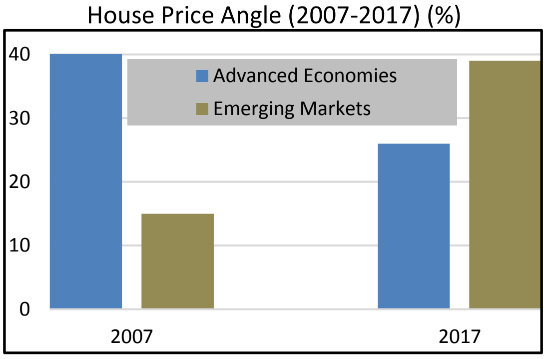



Source: IMF, Global Financial Stability Report, different issues.

Credit risks took a downward trend after the global financial crisis with an average of 0.63 during the three periods (2012-2013), (2014-2015), (2016-2017) compared to 0.90 during the crisis. Emerging market and developing economies risk took an upward trend during the three periods (0.55, 0.75 and 0.70, respectively) with an average of 0.67, but decreased compared to their levels during the crisis (1.00). Market and liquidity risks increased by an average of 0.64, compared to 0.30 during the crisis, while macroeconomic risks declined to 0.68 during the same periods compared to 0.90 during the crisis. Moreover, risk appetite remained stable during the post-crisis period with an average of 0.57 compared to 0.9 during the crisis. Finally, monetary and financial conditions improved after the crisis by an average of 0.66 compared to 0.10 during the crisis. **Generally, the figures indicate that the four risk types increased from an average of 0.64 to 0.65 and 0.68 for the three periods respectively (Figure 1-8).**

The April 2019 Global Financial Stability Report discussed the risks associated with the fall in house prices and its relationship with the policies adopted such as monetary policy and macro prudential policy. The measures taken to activate the macro prudential policy tools targeting the mitigation of the risks associated with the decline in house prices were more effective than the monetary policy, especially in the advanced economies and in the short term. Such procedures included the limits to the maximum loan-to-value or debt service-to-income ratios, besides cutting down the monetary policy interest rate. The results revealed that there exists a correlation between these measures and the decline in the risks of house prices during the period (2007-2017) in most advanced economies, whereas the risks increased in most emerging markets during the same period (Figure 1-9).

Figure 1-9. Percentage of High Risk Economies from House Price Angle (2007-2017) (%)




Source IMF Global Financial Stability Report Database, April 2019.

## 1.3.2 DOMESTIC FINANCIAL STABILITY

As discussed in the analysis of the financial sector in Jordan later in this JFSR2018, the financial sector in general and the banking sector in specific are stable. Jordan enjoys a sound and solid banking system that is capable of withstanding high shocks and risks to a large extent due to its high 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 ECONOMIC GROWTH

Real GDP growth rate declined slightly and reached 1.9% in 2018 compared to 2.1% in 2017. Despite challenges, the IMF projected that this rate will make continuous improvements and reach 2.2%, 2.4%, 2.6%, 2.8%, 3.0%, 3.0% for the period (2019-2024), respectively (Figure 1-10).

The Jordanian economy, as known, is a small open economy with limited resources, and, hence, not isolated from the developments in the region and the world in all aspects, including the economic aspects. In this regard, Jordan economy achieved high growth rates during the period that preceded the global financial crisis (2000-2007) with an average of 6.2%. The impact of this crisis on the economic growth was evident through its significant decline to an average of 4.4% during the period (2008-2011). In line with the challenges posed by instability in the region, these rates have declined in an accelerated pace to reach 1.9% in 2018 as previously mentioned.

The international reports indicated that economic growth in Jordan continues to be loaded by the ongoing conflicts in the region, its repercussions and security concerns, besides the weaker-than-expected public sector investment.

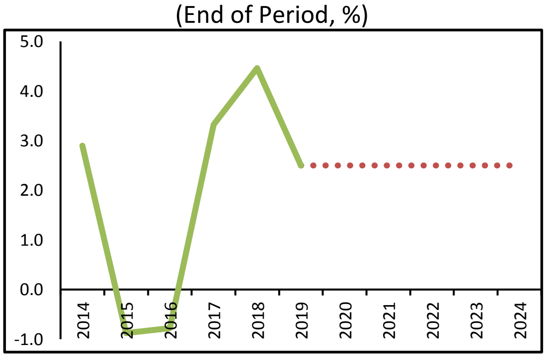
### 1.4.2 UNEMPLOYMENT AND POVERTY

Government measures and programs have helped mitigate the impact of the conflicts in the region on poverty and unemployment. Despite that, the unemployment rate rose from 18.3% in 2017 to 18.6% in 2018 coinciding with the continued low pace of growth in economic activity. Regarding poverty, the data available about the state of poverty in Jordan, that was based on the data from Household Expenditure and Income Survey 2017-2018, indicated that the poverty rate amounted to 15.7% in 2018 compared to 14.4% in 2010. The Government maintain a policy of controlling poverty despite the adverse economic developments.

### 1.4.3 INFLATION

The inflation rate as measured by the relative change in consumer prices increased from 3.3% in 2017 to 4.5% in 2018 (Figure 1-10). The main driver of this upsurge was raising the prices of some commodities such as transport, grain and its products, tobacco, cigarettes, and others, as a result of tax and regulatory measures. In contrast, the prices of another group of goods declined, which reduced the effects of raising the prices of some other commodities.

Figure 1-10. Inflation Rate in Jordan (2014-2024)
(End of Period, %)



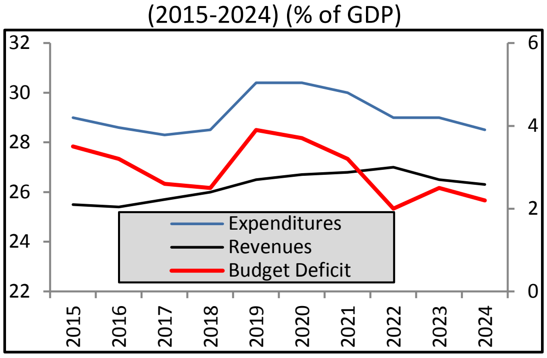

Source: CBJ, Statistical Database.

### 1.4.4 DEVELOPMENTS IN PUBLIC FINANCE

The overall fiscal deficit including grants decreased from JD 747.9 million (or 2.6% of GDP) in 2017 to JD million 727.6 (or 2.4% of GDP) in 2018 (Figure 1-11).

Regarding total public debt, it increased from JD 27,269.2 million in 2017 to JD 28,308.3 million in 2018. Despite its increase in the absolute figures, the total public debt maintained its value as a percent of GDP to a large extent realizing 94.4% in 2018 compared to 94.3% in 2017.

Figure 1-11. Summary of Public Finance in Jordan (2015-2024) (% of GDP)

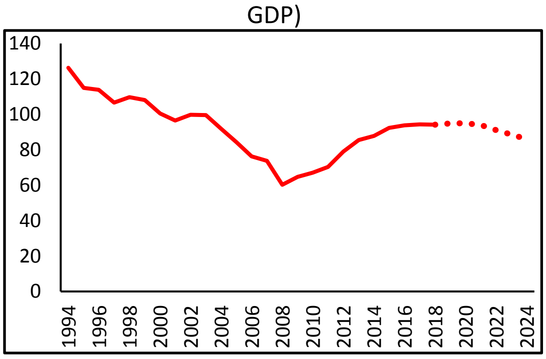



Source: Ministry of Finance, Monthly Bulletin, January 2019.

The public debt and the accumulation of fiscal deficit are indeed a chronic challenge that Jordan economy faces and which the government is pursuing to contain. Despite adopting prudent economic approach to adjusting the structural imbalances deteriorated by regional conditions, addressing public debt and budget deficits remained the greatest economic challenge. Over the past ten years, the ratio of public debt to GDP kept its upward trend. The main reasons for this increase were the slowdown in economic activity in Jordan and the increased budget deficit caused by the repercussions of regional conflicts, the rise in oil prices, and energy prices support (especially electricity).

Data shows that despite its continuous rise during the past few years, the ratio of public debt to GDP is expected to achieve some decline in the coming six years per the IMF projections (Figure 1-12).

Figure 1-12. Public Debt in Jordan (1994-2024) (% of GDP)

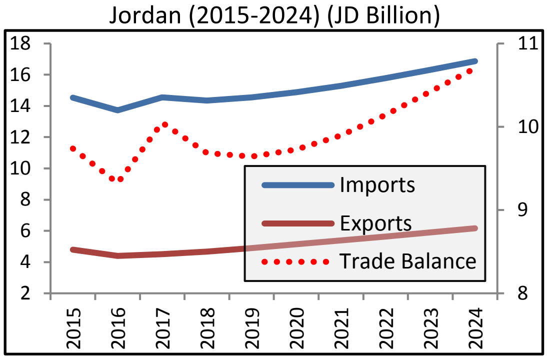



Source: IMF World Economic Outlook Database, April 2019.

### 1.4.5 EXTERNAL SECTOR

National exports increased by 3.6% from JD 4,504.2 million in 2017 to JD 4,668.4 million in 2018, whereas the value of re-exports increased by 2.6% from JD 828.9 million in 2017 to JD 850.1 million in 2018. In contrast, imports decreased by 1.4% from JD 14,553.7 million in 2017 to JD 14,353.2 million in 2018. These positive developments have resulted in a decrease in the trade balance deficit by 4.2% from JD 9,220.6 million in 2017 to JD 8,834.7 million in 2018 (Figure 1-13).

Figure 1-13. Summary of External Trade Statistics in Jordan (2015-2024) (JD Billion)



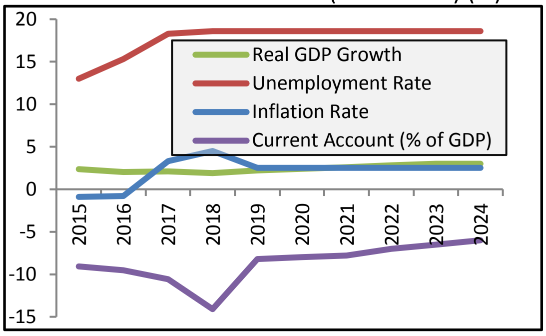

Source: CBJ, Statistical Database.

### 1.4.6 MONETARY DEVELOPMENTS

The CBJ raised the interest rates on all monetary policy instruments three times by a total of 75 basis points, and on the overnight deposit window four times by 100 basis points in total during 2018 in light of the increase of interest rates on the US dollar, and in order to ensure the competitiveness and attractiveness of instruments denominated in Jordanian Dinar. Regarding the foreign reserves of the CBJ, including gold and SDRs, they reached JD 9,495.1 million at the end of 2018, recording a decrease of 6.9% compared to 2017. The level of foreign reserves at the CBJ is comfortable and sufficient to cover imports for 6.3 months, which is a safe period that exceeds the acceptable rates according to international standards.

According to Table 1-1 and Figure 1-14, it sounds that the medium term prospect for Jordan economy looks more optimistic through the predictions supporting the improvements in economic growth rates, the stability of inflation, and the decline in public debt.

Figure 1-14. Main Basic Economic Indicators for Jordan And Their Outlook (2015-2024) (%)




Source: CBJ, Statistical Database.

Table 1-1. Some of the Main Economic Indicators for Jordan & Their Outlook (2005-2024)

| Year | GDP Growth Rate* | Inflation Rate (Period available) * | Unemployment Rate (% of Labor Force) | Population (Growth Rate) (Million) ** | Gross Debt (% of GDP) *** | Current Account (% of GDP) *** |
|---|---|---|---|---|---|---|
| 2005 | 8.1 | 3.5 | 14.8 | 2.8 | 84.3 | 18.1- |
| 2006 | 8.1 | 6.3 | 14.0 | 2.9 | 76.3 | 11.5- |
| 2007 | 8.2 | 4.7 | 13.1 | 3.0 | 73.8 | 16.8- |
| 2008 | 7.2 | 14.0 | 12.7 | 3.0 | 59.6 | 9.3- |
| 2009 | 4.5 | 0.7- | 12.9 | 3.1 | 64.4 | 5.2- |
| 2010 | 2.7 | 4.8 | 12.5 | 3.2 | 66.9 | 7.1- |
| 2011 | 2.8 | 4.2 | 12.9 | 4.3 | 70.6 | 10.2- |
| 2012 | 2.1 | 4.5 | 12.2 | 6.0 | 80.2 | 15.2- |
| 2013 | 2.4 | 4.8 | 12.6 | 8.8 | 86.6 | 10.4- |
| 2014 | 3.4 | 2.9 | 11.9 | 8.2 | 88.5 | 7.2- |
| 2015 | 2.6 | 0.9- | 13.0 | 7.9 | 92.4 | 9.0- |
| 2016 | 2.1 | 0.8- | 15.3 | 2.5 | 93.8 | 9.4- |
| 2017 | 2.1 | 3.3 | 18.3 | 2.4 | 94.3 | 10.6- |
| **2018** | **2.0** | **4.5** | **18.6** | **2.5** | **94.4** | **6.7-** |
| 2019 | 2.2 | 2.0 | - | 1.7 | 94.6 | 9.9- |
| 2020 | 2.4 | 2.5 | - | 1.4 | 94.1 | 8.7- |
| 2021 | 2.6 | 2.5 | - | 1.1 | 92.4 | 8.7- |
| 2022 | 2.8 | 2.5 | - | 0.8 | 89.2 | 8.0- |
| 2023 | 3.0 | 2.5 | - | 0.7 | 86.4 | 7.6- |
| 2024 | 3.0 | 2.5 | - | 0.6 | 83.7 | 7.3- |

Source: Actual numbers (2005- 2018); CBJ- monthly statistical bulletin / economic growth rates; IMF World Economic Outlook Database, April 2019 / Unemployment and population growth rates; Department of Statistics database/ Estimations for the years (2019- 2024); IMF World Economic Outlook Database, April 2019.

## 1.5 CHALLENGES TO STABILITY: REGIONAL CONDITIONS

Despite the easing of political unrest in the region, especially in Syria and Iraq, Jordan is still loaded with the repercussions of the conflicts that have taken place during the past few years, particularly the humanitarian refuge crisis. According to the latest statements, Jordan is the second largest refugee-hosting country in the world. Since 2011, the Jordanian economy has entered the Syrian crisis by receiving the largest number of refugees while troubled with significant economic problems.

The consequences of regional conflicts have exacerbated the economic burden on Jordan, coinciding with the decline in aid and grants and that resulted in modest performance levels of economic activity, high indebtedness, and high unemployment and poverty rates. Jordan economy bears substantial direct and indirect costs that added new economic and social burdens on the government budget, and faces massive pressure on infrastructure and services, especially in education, health, and water sectors.

## 1.6 JORDAN IN SOME INTERNATIONAL INDICATORS

### 1.6.1 TRANSPARENCY AND ANTICORRUPTION

Corruption is "the abuse of public resources to achieve private gain" that leads to distorting the state activities and slackens both economic growth and quality of life.

Transparency International has been issuing transparency and anti-corruption indicators annually since 1995 by ranking countries and regions around the world according to the assessment of experts and businessmen on the prevalence of corruption in the public sector. According to the index methodology, 180 world countries and regions around the world are ranked based on a scale of scores ranging from zero to 100, with a score of zero indicating a high level of corruption, while a score of 100 meaning that a country is free of corruption.

The report of 2018 indicates that more than two thirds of the countries included in the index ranked below 50 with a score average of 43. Although some data indicated some progress, most countries failed in achieving successes that are worth mentioning in combating corruption in the public sector.

Regarding Jordan, it ranked 58 among 180 countries in the world with a score of 49 in 2018, which is one point forward compared to its rank in the last year 2017 (Table 1-2).

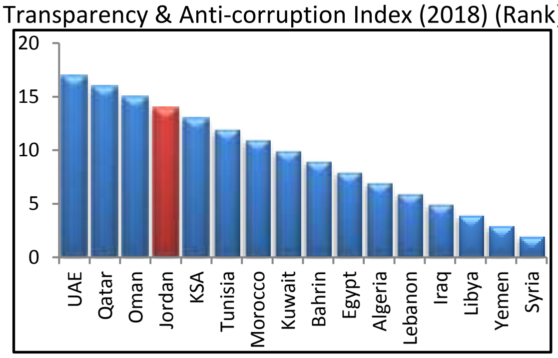
Table 1-2. Jordan Rank in Transparency and Anti-Corruption Index for Different Years

| Rank* | | | Score** | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| 57 | 59 | 58 | 45 | 49 | 53 | 48 | 48 | 49 |

Source: Transparency International. 2019. Corruption perception Index.
* Rank: The closer the rank is to one, the better is the transparency.
** Score: Ranges from zero to 100. The bigger is the score, the better is the transparency.

Compared to the other countries in the Middle East, Jordan ranked fourth. This could be considered a good ranking that reflects the determination and seriousness of the government in encouraging transparency, fighting corruption, and creating a healthy investment environment. It shall be noted that the United Arab Emirates occupied the first rank among the countries of the region in this regard (Figure 1-15).

Figure 1-15. Jordan and Selected Arab Countries in Transparency & Anti-corruption Index (2018) (Rank)

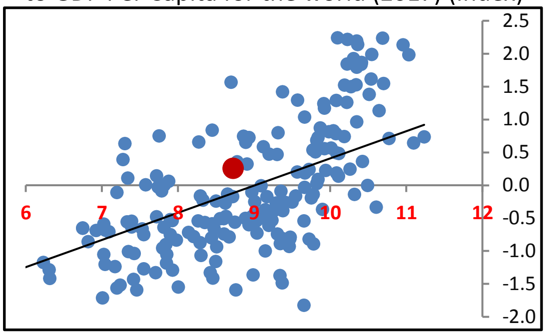



Source: Transparency International. 2019. Corruption perception Index.

The April 2019 Fiscal Monitor included a number of indicators to measure corruption and the ability of curbing it. A corruption-curbing index built was applied on 193 countries from different economies to measure the relationship between curbing corruption and the GDP per capita. The higher the index, the greater the ability to control corruption. In the empirical evidence in this context, the policy of curbing corruption has gradually improved over the past two decades, which has had a positive impact on the GDP per capita. For Jordan, the previous relationship was estimated and applied to Jordan for the period (1996-2017). The regression analysis showed a strong positive relation between the Index of curbing corruption and the GDP per capita, as mentioned in the April 2019 Fiscal Monitor.

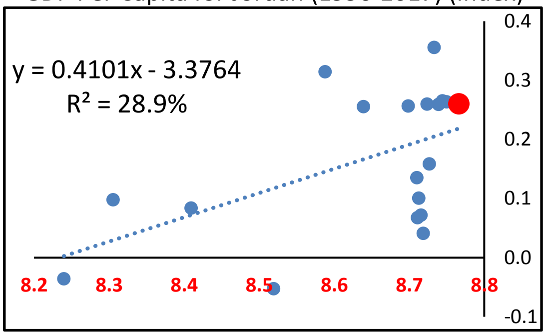
To conclude, enhancing and encouraging of measures that combat and curb corruption in all forms has positively reflected on the economic conditions by increasing the GDP per capita, thereby strengthening economic and financial stability in Jordan (Figure 1-16, Figure 1-17).

Figure 1-16. Curbing Corruption and its Relationship to GDP Per Capita for the world (2017) (Index)




Source: IMF Fiscal Monitor Database, April 2019.

Figure 1-17. Curbing Corruption & its Relationship to GDP Per Capita for Jordan (1996-2017) (Index)




Source: IMF Fiscal Monitor Database, April 2019.

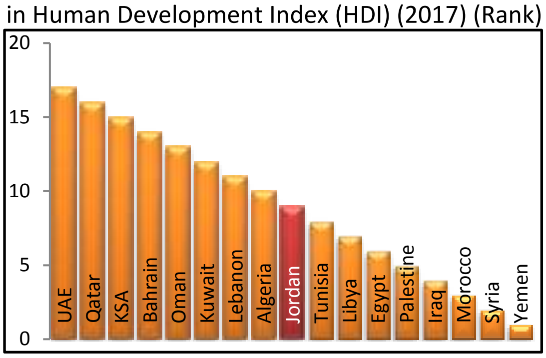
## 1.6.2 HUMAN DEVELOPMENT INDEX

The United Nations Development Program (UNDP) issues an annual report that summarizes the achievements and trends in the three key dimensions of human development: healthy life and high life expectancy rate, being knowledgeable, educated, and literate and having a decent standard of living.

The report indicates in general that the human capacities and development are of the most important standards that must be taken into consideration when judging the human development and progress in any country. It includes many sub- indicators related to human resource development. Jordan ranked 95 out of 189 countries in 2017.

Compared to 18 Arab countries included in the Human Development Report, Jordan ranked in the middle outperforming a number of Arab countries such as Tunisia, Libya, Egypt, Palestine, Iraq, Morocco, and Yemen (Figure 1-18).

Figure 1-18. Jordan and Some Other Arab Countries in Human Development Index (HDI) (2017) (Rank)




Source: UNDP. 2017. **Human Development Indicators**.

## 1.6.3 COMPETITIVENESS INDEX

The World Economic Forum (WEF) issues an annual report on competitiveness indices in which the degree of competitiveness is measured for world economies using a set of factors and sub-indicators that result in one number that summarizes the competitive stance for a given country.

The overall index includes a group of sub-indicators in addition to new and emerging parameters that measure productivity and growth. It emphasizes the role of human capital, innovation, resilience, and agility, not only as drivers but also as defining features of economic success in the fourth industrial revolution. In the 2018 report, the performance of world economies was measured using four main sub-indicators: enabling environment, human capital, markets, and innovation and sophistication.

According to the methodology of the index, the world economies are ranked from one to 140 in addition to a total score that ranges between the number 0 and 100. The closer the country rank is to the number one and the closer the total score is to the number 100, the more competitive and sustainable an economy will be in the future.

For Jordan, its ranking in the index declined in 2018 to 73/140, with a total score of 59.3/100, compared to 65 in 2017 (Table 1-3).

Table 1-3. Rank of Jordan on the Pillars of Global Competitiveness Index (2018)

| No | Indicator / Pillar | Rank | Score* | Best Performance |
|---|---|---|---|---|
| First Sub-Index: Enabling Environment | | | | |
| 1 | Institutions | 50 | 57.7 | New Zealand |
| 2 | Infrastructure | 73 | 66.6 | Singapore |
| 3 | Macroeconomic Stability | 101 | 69.9 | 31 Countries |
| 4 | Information and Communication Technology Adoption | 75 | 52.3 | Korea |
| Second Sub-Index: Human Capital | | | | |
| 5 | Health | 78 | 78.4 | 4 Countries |
| 6 | Skills and Education | 61 | 64.4 | Finland |
| Third Sub-Index: Markets | | | | |
| 7 | Product Market | 88 | 53.8 | Singapore |
| 8 | Labor Market | 91 | 55.6 | USA |
| 9 | Financial System | 32 | 70.7 | USA |
| 10 | Market Size | 81 | 48.7 | China |
| Fourth Sub-Index: Innovation and Ecosystem | | | | |
| 11 | Business Dynamism | 94 | 54.4 | USA |
| 12 | Innovation Capacity | 59 | 38.9 | Germany |
| | **Index for Jordan** | **73** | **59.3** | |

Source: World Economic Forum.2019.Global Competitiveness Report
* Score (0-100) the higher is the better.
** A number of 140 countries were entered in the classification for the 2018 report.

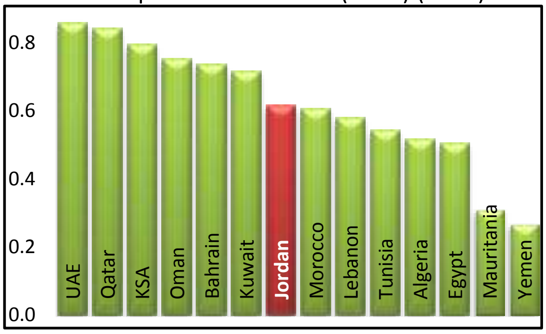
As shown by the overall average of the sub-indices in 2018, Jordan ranks at middle on the globe, while it ranks at the seventh place on the level of Arab countries. This is considered a good ranking, where Jordan leads in the ranking on Morocco, Lebanon, Tunisia, Algeria, Egypt, Mauritania, and Yemen and lags behind Arabian Gulf countries only (Table 1-4 and Figure 1-19).

Table 1-4. Jordan Rank among World Countries in Anti-corruption (2013-2018)

| Rank* | | | Score** | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| 63 | 65 | 73 | 4.20 | 4.25 | 4.23 | 4.29 | 4.30 | 59.29 |

Source: World Economic Forum.2019.Global Competitiveness Report.
* The closer the ranking is to 1, the better. It indicates a country with a more competitive and sustainable economy, and which sets plans using measures that promote the flexibility of long-term growth and expand opportunities for society.
** The score from 1-100 and the closer the total is to 100, the better. The Previous versions of the index were based on scores from 1 to 7.

Figure 1-19. Jordan and Some Other Arab Countries in Competitiveness Index (2018) (Rank)




Source: World Economic Forum.2019.Global Competitiveness Report

### 1.6.4 DOING BUSINESS INDICATOR

Since 2004, The World Bank has been issuing an annual doing business indicator that measures mainly the economic performance for 190 economies around the world using a set of quantitative indicators measuring the quality and effectiveness of business environment, and investigates government policies, laws, systems, and regulations that ease or discourage the practice of business.

Regarding Jordan, it ranked 104 out of 190 economies in 2018 listed on the indicator list scoring 60.9/100, a one point back from the previous year's number (Table 1-5).

Table 1-5. Ranking of Jordan in Doing Business Indicator (2018)

| 2017 Ranking: (104) | | Score: 60.9 | | | | Change: 1.42 | | | |
|---|---|---|---|---|---|---|---|---|---|
| Starting a Business | | Obtaining Construction Permits | | Getting Electricity | | Registering Property | | Getting Credit | |
| Rank | Score | Rank | Score | Rank | Score | Rank | Score | Rank | Score |
| 106 | 84.4 | 139 | 60.4 | 62 | 80.4 | 72 | 66.4 | 134 | 35.0 |
| Protecting Minority Investors | | Paying Taxes | | Trading across Borders | | Enforcing Contracts | | Resolving Insolvency | |
| Rank | Score | Rank | Score | Rank | Score | Rank | Score | Rank | Score |
| 125 | 46.6 | 95 | 71.4 | 74 | 79.0 | 108 | 55.5 | 150 | 30.3 |

Source: World Bank. 2019. Doing Business.

* The closer the ranking of the state is to one, the better it is as it indicates a proper regulatory environment for starting a business and activating the local commercial companies.

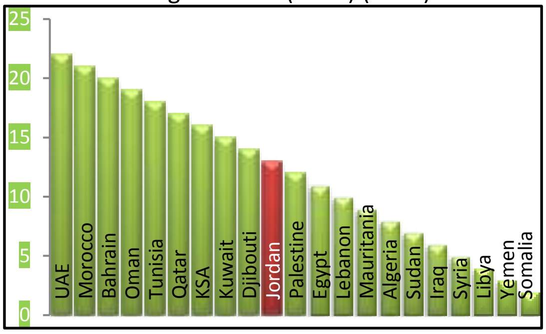
** The indicator about labor market reform was excluded from this year's classification.

*** The rank is determined by the average score of the ten categories in which each indicator contains a set of sub-indicators that are given an equal weight for each category.

Comparing Jordan with Arab countries, it ranked close to the middle in the year 2018, leading a group of countries; namely, Palestine, Egypt, Lebanon, Algeria, Sudan, Iraq, Syria, Libya, Yemen, and Somalia (Figure 1-20).

Regarding the rank of Jordan in this index in the past few years, it is noted that Jordan has been achieving a remarkable progress since 2017 compared to the preceding years.

Figure 1-20. Jordan and Some Arab Countries in Doing Business (2018) (Rank)




Source: World Bank. 2019. Doing Business.

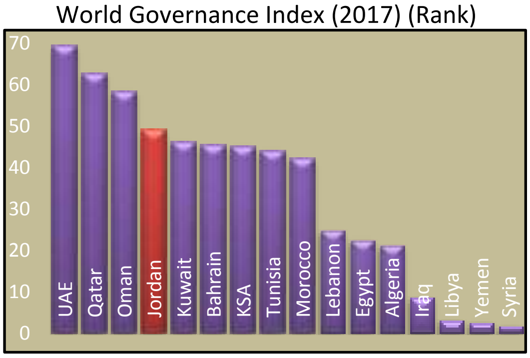
This is attributed mainly to improving the access to credit information through the establishment of a credit information company, in addition to a set of regulatory reforms that the Jordanian government is adopting to motivate the regulatory environment and improve the infrastructure. To mention a few, these reforms include facilitating cross border trade, simplifying customs procedures, establishing the one-stop investment window, improving the infrastructure in Aqaba port, and launching the National Strategy for Financial Inclusion in 2017.

### 1.6.5 GLOBAL GOVERNANCE INDEX

The World Bank has been annually publishing the global governance indicators since 1996 that summarize the developments in the governance application and adoption in the industrial and developing countries based on the response of several experts and respondents to a survey that is prepared to measure and collect the data required for overall and individual indices from institutes, research centers, nongovernment organizations, international organizations, and private sector companies. The overall index includes six dimensions for governance that are sub- indicators used to measure the overall indicator. These sub- indicators are

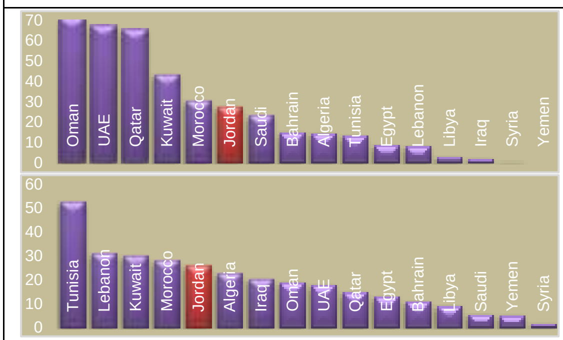
Accountability and Freedom of Expression, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, & Control of Corruption Compared with the Arab countries listed on the World Governance Index, Jordan ranked fourth among the 16 Arab countries as shown in Figure 1-21. Regarding the sub-indicators composing the Global Governance Index, Jordan ranked in leading places compared with the Arab countries, which reflects a satisfactory level of governance in Jordan. This is a necessary requirement for providing a good economic and investment infrastructure.

Figure 1-21. Jordan and Some Arab Countries in World Governance Index (2017) (Rank)



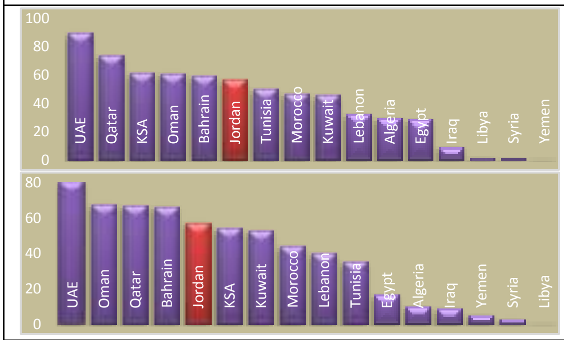

Source: World Bank. 2017. World Governance Indicators.

Figure 1-22. Jordan and Some Arab Countries in Voice & Accountability, Political Stability & Absence of Violence (2017) (Rank)



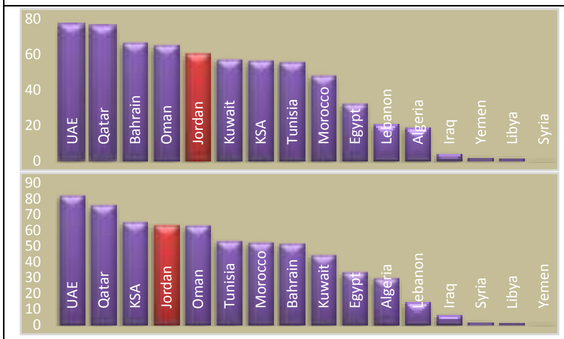

Source: World Bank. 2017. World Governance Indicators.

Figure 1-23. Jordan and Some Arab Countries in Government Effectiveness and Regulatory Quality (2017) (Rank)




Source: World Bank. 2017. World Governance Indicators.

Figure 1-24. Jordan and Some Arab Countries in Rule of Law and Control of Corruption (2017) (Rank)




Source: World Bank. 2017. World Governance Indicators.

## 1.7 CONCLUSION

**The region in particular and the world in general has been affected by several developments during the past few years that touched on the economic, political, and social conditions in a number of countries in the world, particularly the Middle East and North Africa countries. These developments has been reflected on increasing the challenges that Jordan has been facing. However, the policies and measures adopted by the Jordanian government and the CBJ have helped to mitigate the effects and repercussions of these developments and maintain economic, monetary, and financial stability in Jordan relatively.**

# Chapter Two

# Infrastructure and Legislative structure of the Financial System

## 2.1 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.

## 2.2 Promoting Financial Inclusion

### 2.2.1 The Financial Inclusion Concept

Financial inclusion is the state wherein individuals and businesses can properly access various financial products and services (payment transactions, savings, credit, financial remittances, and insurance) at a reasonable cost and in a way that meets their needs and eventually improves their living standards safely and sustainably. 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 financial infrastructure along with setting forth legislative and legal frameworks suitable for building 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.

In this regard and since 2012, the CBJ has been focusing on promoting financial inclusion in the Kingdom through keeping up to date with the latest regional and global developments in the policies adopted to enhance financial inclusion.

In 2015, CBJ began to supervise and oversee the formulation of the National Strategy for Financial Inclusion in the Kingdom, after the Prime Minister's decision to form the National Committee for the Preparation of Financial Inclusion Strategy presided by the Governor of the Central Bank of Jordan. The strategy targets in specific achieving financial inclusion for those of limited income, the youth, women, refugees, and MSMEs.

As mentioned in the Jordan Financial Stability Report for 2017, the National Financial Inclusion Strategy for the period (2018-2020) was launched on 04-12-2017. The strategy covers several pillars:

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

### 2.2.2 Vision and General Framework of Financial Inclusion in Jordan

As mentioned in the 2017 Financial Stability Report, the National Financial Inclusion Strategy highlights the priority sectors, including three main sectors of financial inclusion that include microfinance, digital financial services, and SME financing. On the other hand, there are four pillars that are considered the necessary requirements for the success of the National Strategy for Financial Inclusion, and that overlap with the three key pillars and contribute to the achievement of the objectives planned. These requirements include the use of financial technology (FinTech), financial consumer protection and enhancing financial capabilities of all society groups, data and research, in addition to laws and legislations.

Even though the National Strategy for Financial Inclusion targets all groups in the society and Micro, Small, and Medium-sized Enterprises (MSMEs); the focus is principally on empowering groups who are marginalized and disadvantaged from financial services, especially vulnerable groups with limited income within the poorest 40.0% in Jordan, women, youth (especially those in the 15-18 age group), and refugees.

The National Strategy for Financial Inclusion aims at achieving two major goals:

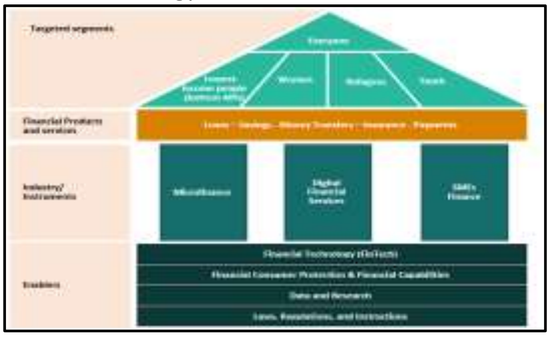
1- Increasing the financial inclusion level, measured by the number of adults who have accounts with the financial institutions, from 33.1% in 2017 to 41.5% by the year 2020.
2- Reducing gender gap from 53.0% to 35.0%.

### 2.2.3 ACTION PLAN OF THE NATIONAL STRATEGY FOR FINANCIAL INCLUSION

After launching the National Strategy for Financial Inclusion at the end of the period (2018-2020), the CBJ coordinated and collaborated with key partners from all relevant sectors to put in action plans for all the pillars of the strategy. These plans were finalized in 2018 and published on the CBJ's website.

The Monitoring and Evaluation Framework for the implementation of the National Strategy for Financial Inclusion was finalized to facilitate the collection of data on the performance indicators to ensure that the planned results are being tracked well, and that the impact of each operational and strategic objective included in the plan and its future effect on the objectives of the national strategy is measured.

Figure 2-1. General Framework for the National Strategy for Financial Inclusion



Source: The National Strategy for Financial Inclusion (2018-2020).

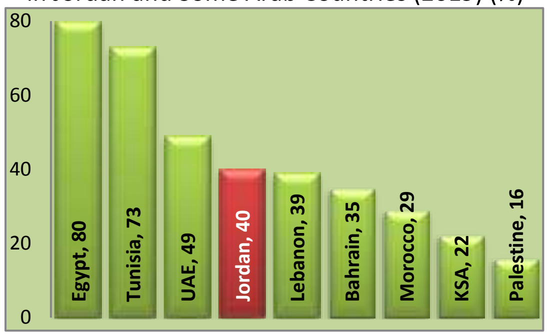
#### 2.2.3.1 THE SMEs

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.

In a report about “Advancing Micro, Small, and Medium Enterprises through Increasing Their Opportunities to Access Finance in Arab Countries '' issued in 2019 by the Arab Monetary Fund, the AMF indicated that the contribution of these projects to GDP in Arab countries ranged between 16% and 80% of GDP (Figure 2-2). It also stated that they contributed to the creation of 20% to 40% of employment opportunities.

The estimated amount of the financing gap for MSMEs for the Arab countries is a range estimated between US$ 210.0 billion and US$ 240.0 billion. Projections indicate that about 79.0% of the MSMEs in the Arab region cannot access finance.

Figure 2-2. Contribution of the SMEs Sector in GDP in Jordan and Some Arab Countries (2019) (%)

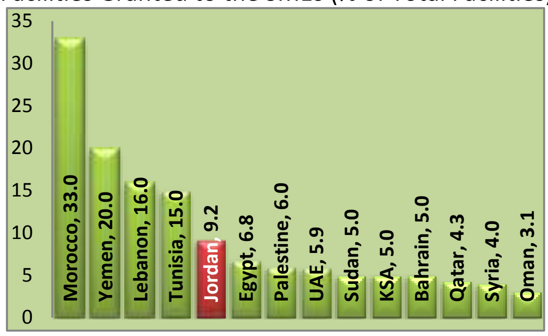



Source: Arab Monetary Fund. 2019. Questionnaire on Advancing Micro, Small, and Medium Enterprises in Arab Countries.' February.

In addition, the credit facilities extended to these projects are still limited forming only about 9.0% of total bank facilities in the Arab countries- a ratio that is substantially lower than its counterparts in middle-income countries of 18.0%.

The CBJ, believing in the important role that the MSMEs play in the Jordanian economy, continued its role in supporting and encouraging these companies. During the past five 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 $323.0 million at competitive interest rates and for suitable maturities. The funds transferred to Jordan amounted to US$ 222.0 million and were used to finance more than 15 thousand MSMEs, of which more than 64.0% are located outside the Capital Amman. The financing created more than 6,300 new jobs. The CBJ intends to withdraw the remaining balance that amounts to almost US$ 100 million during 2019 and 2020. This is in addition to the credit of US$ 120.0 million provided directly by the European Bank for Reconstruction and Development to banks. The CBJ facilitated and provided the necessary support to banks to utilize the loan optimally. Additionally, the EBRD signed agreements with three banks totaling US$ 60.0 million.

Figure 2-3. Jordan & Some Arab Countries: Credit Facilities Granted to the SMEs (% of Total Facilities)




Source: Arab Monetary Fund. 2019. Questionnaire on Advancing Micro, Small, and Medium Enterprises in Arab Countries.' February.

Moreover, the CBJ has already established financing programs targeting manufacturing, renewable energy, tourism, agriculture, information technology, engineering consultancy, health and education (vocational and technical training), and the transportation sectors (including SMEs) at a rate of 1.0% for financing 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 with a total amount of about JD 1.2 billion for such projects. A total of 991 projects have benefited from these programs and obtained JD 670.0 million as at the end of the first quarter of 2019. The distribution of loans across sectors approximated JD 332.5 million, JD 201.9 million, JD 56.0 million, JD 44.8 million, JD 14.0 million, JD 2.0 million, JD 7.9 million, JD 1.5 million, and JD 9.6 million to manufacturing, renewable energy, tourism, agriculture, information technology, engineering consultancy, health and education (vocational and technical training) and the transportation sectors (including SMEs) respectively. The CBJ has been improving the lending terms and conditions in this program since 2015 to comply with the lending programs of Islamic banks.

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 with a capital of JD 50.0 million through providing the required guarantees to access the financing through the JLGC. Furthermore, the CBJ provided an amount of JD 100 million to JLGC in order for the latter to establish the Export Credit Guarantee Fund to provide the collaterals required against export sector facilities.

It is worth mentioning that the CBJ launched the Innovative Startups and SMEs Fund (ISSF) project in September 2018. This project was launched in collaboration with the Jordanian government and the International Bank for Reconstruction and Development (IBRD). The project was part of the National Strategy for Financial Inclusion and was established as a private limited company with a capital of $98.0 million, of which the CBJ provided $48 million and the Government contributed by $ 50 million financed by a loan from the World Bank. Jordan Loan Guarantee Corporation is responsible for the implementation of this project through a board of directors consisting of seven members from the private sector. The project consists of three components: direct investment in entrepreneurial and innovative companies in the Kingdom, investment in venture capital funds, and promoting investment opportunities by supporting entrepreneurs and institutions involved in incubating and developing the capabilities of entrepreneurs, including incubators and accelerators for businesses based in the Kingdom.

The project aims mainly at enhancing the entrepreneurial business environment in the Kingdom, including the relevant institutions and legislations in force, especially that almost 90% of the investments of the Innovative Startups and SMEs fund will be through venture capital funds, in order to encourage the establishment of these funds and work with them to develop their businesses and develop their technical and investment capabilities, besides encouraging different investors to contribute to these funds while developing other entrepreneurial investment and financing channels. The ISSF will also stimulate entrepreneurial investment in the Kingdom through its direct investment in companies in cooperation with other investors to expand the financing opportunities and channels available for entrepreneurship projects in the Kingdom. Immediately after its launch, the ISSF started to receive investment applications from the entrepreneurial funds and companies. According to preliminary estimates, investment is expected to be finalized for three venture capital funds and eight companies in 2019.

It is worth mentioning that both the commercial and Islamic banks established two investment companies with a capital of JD100.0 million and JD25.0 million, respectively, to invest in the capital of medium-sized companies with an added value.

### 2.2.3.2 MICROFINANCE

As mentioned in the previous financial stability reports, the CBJ expanded its supervisory umbrella to include the microfinance sector in 2015. After that, it issued a set of instructions to organize this sector, such as instructions for the Licensing and Existence of Microfinance Companies No. 62/2016 dated 10-04-2016, and the instructions for “Protecting the Financial

Consumer in the Microfinance Sector" No. 15/2018 dated 27-06-2018. The CBJ intends to issue the detailed instructions needed for organizing the business of this sector. It is worth mentioning that nine microfinance institutions have been licensed by the CBJ.

It is worth mentioning that there is a tendency for the CBJ to regulate the entire finance sector in Jordan. In this context, the CBJ is working on building a supervisory system of all financing companies in Jordan in order to ensure the soundness of their financial and administrative positions, strengthen their developmental role, and protect their clients.

#### 2.2.3.3 FINANCIAL CAPABILITIES & FINANCIAL EDUCATION

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 the Kingdom. 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.

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 Citizens 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 program represented by financial education in schools has already been started in collaboration with the Ministry of Education and INJAZ (a Jordanian non- profit organization). 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, whereas the ninth and twelfth grade courses were offered in the academic year 2017/2018, and the tenth grade courses were offered in the academic year 2018/2019.

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

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

#### 2.2.3.4 FINANCIAL CONSUMER PROTECTION

Within the context of the CBJ's concern to enhance financial inclusion by protecting the financial consumer and enhancing transparency and fairness of the financial institutions that are under the supervision of the CBJ when dealing with their clients, in an objective of enhancing the competitiveness of these institutions and contributing to protecting them (the financial institutions) from reputational and legal risks, as well as enhancing their contribution in achieving sustainable economic development and maintaining the stability of the financial system; The CBJ, represented by the Financial Consumer Protection Department, has taken several measures in this regard as detailed next.

**For Legislative Measures**, the CBJ has issued a number of instructions, the most important of which is the instructions for "Financial Consumer Protection for Clients with Disabilities" that aim at removing any environmental, physical, and behavioral barriers that might impede or hinder the access to banking and financial services by clients suffering from disabilities. The CBJ also issued the instructions of "Basic Bank Account" in order to provide access for all segments of society, especially those who are financially excluded and the beneficiaries of the National Aid Fund, to financial and banking services. The provisions of these instructions apply to all banks operating in the Kingdom to enable all legally qualified citizens to have a bank account, the matter that promotes the culture of saving, makes things easier for them, improves their standard of living and, hence, accelerates economic development. The basic bank account is an affordable bank account that is available to individuals in the society who do not possess bank accounts but are willing to deal with banks within limits and costs that are commensurate with their income and capabilities. The instructions included a number of terms, the most important of which are simple procedures for opening the account, no requirement of a minimum balance, exempting the client from certain types of commissions and fees, and the availability of basic banking services such as withdrawals, deposits, wire transfers and electronic banking services. Moreover, the instructions paid a special attention to the role of banks in spreading the awareness among the financially excluded groups of their right to use the basic bank account and their duties and responsibilities when using the account.

In addition to the aforementioned, the draft instructions for “Rewards for Savings Accounts with Banks” have been completed. They aim at promoting real competition among banks and enhancing the culture of saving among individuals while guaranteeing their right to receive suitable returns on their accounts.

**For studies and reports**, a special report about complaints was prepared. It included complaints from clients of banks and non-bank financial institutions that are subject to the supervision and oversight of the CBJ, in order to analyze these complaints and identify any deficiencies against the receivers of the financial services. The report was published on the CBJ’s website clarifying the classifications of these complaints and the main channels through which these complaints were received. The number of complaints received by the CBJ from customers on banks and non-bank financial institutions during 2018 reached about 1,366 complaints, while the number of customer complaints received and processed by customer complaint managing units in banks operating in the Kingdom was about 13,591 complaints. The complaints related to professional conduct accounted for the largest share of customer complaints received by local commercial banks at 33.0%, followed by complaints related to electronic services composing 25.4% of total complaints, whereas the complaints about contracts and their terms composed 22.2% of total complaints.

**For the onsite and offsite supervision**, onsite and offsite supervision on banks and non-bank financial institutions was activated in terms of reviewing the contracts of credit facilities extended to individuals and highlighting any terms that might be a prejudice for the financial consumer rights, and through conducting onsite inspection on a number of banks to check the extent of the compliance with instructions related to the protection of the financial consumer, in addition to activating the division of supervision and inspection on non-bank financial institutions at the end of the previous year.

**For spreading financial awareness and literacy**. On the occasion of the Arab Financial Inclusion Day, the CBJ launched an awareness campaign (Financial Literacy Campaign) during the period (22-04-2018 to 26-04-2018) to spread the financial literacy for students of a number of Jordanian universities as a first step towards promoting financial literacy among all segments of society. Several brochures were also prepared and made available to the public detailing the role of the CBJ in protecting the financial consumer. The Financial Consumer Protection Department gave interactive lectures to a number of university and school students to raise their financial literacy and explain to them the financial consumer protection issues. The promotion of financial awareness and education was strengthened by the activation of a division specialized with these tasks at the end of 2018.

### 2.2.3.5 PROVIDING THE INFRASTRUCTURE REQUIRED FOR ENHANCING THE FINANCIAL INCLUSION

#### 2.2.3.5.1 Digital Financial Services

The CBJ initiated a process of developing and restructuring payment 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 operation of payment systems, encouraging the 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 represented by the national payment council.

In this regard, the CBJ undertook the following:

- Regarding the payment and settlement systems, The CBJ continued to operate the new Real-Time Gross Settlement system (RTGS) that complies with new messaging standard (ISO 20022) 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 2018 was about 294.6 thousand orders with an amount of JD 105.5 billion compared to 305.7 thousand orders and JD 99.2 billion during 2017. The number of secondary market operations that were completed during 2018 through the system was 8,056 transactions with an amount of JD 6,394 million.
- The CBJ continued in 2018 to operate the Automated Clearing House system that complies with the new ISO messaging standard (ISO 20022) and which 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, 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 in the system during the year 2018 reached 1.9 million orders with a total value of JD2.6 billion against 1.2 million order with a total value of JD2.0 billion in 2017.

- The CBJ continued in 2018 to operate the system for the Settlement and Deposit of Government Financial Securities (DEPO/X) that was launched on 07-02-2016. DEPO/X is a system for managing the government debt and auctions in an integrated automatic environment and it is a center for depositing and settling government financial securities. DEPO/X allows the safe access to government auctions system of government securities issuances for each of 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 through DEPO/X.
- The CBJ continued to operate the national switchboard system for paying by mobile phone (JoMoPay) during 2018. 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 five 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, Al-Mutakamilah for Payments Services via Mobile Phone (dinarak), and Middle East Payments Services (MEPS). The number of payment transactions executed through the system reached 1,587,193 transactions totaling JD75.9 million in 2018 compared to 157,529 transactions and JD6.4 million in 2017.
- The CBJ continued in 2018 to provide the electronic bill viewing and collection service using eFAWATEERcom system that is operated by Madfoo3atcom Company for e-payments and links all the banks operating in the Kingdom (Citi Bank was connected to the system in 2018), with the exception of Al-Rajhi Bank, to provide the service through various banking channels. On another hand, the number of billers participating in the system reached 164 billers in 2018, compared to 111 billers in 2017. The number of payment transactions executed through the system approximated 9.26 million transaction totaling JD6.2 billion in 2018, compared to 4.67 million transaction totaling JD3.3 billion in 2017.
- The CBJ continued in 2018 to provide the electronic bill viewing and collection service (eFAWATEERcom) through the Electronic Payment Portal via direct payment channel 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 their accounts opened in the licensed banks in Jordan and the payment credit cards issued by various banks all over the world easily and safely. The administrator and operator of the system (Madfoo3atcom Company for e-payments) 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 from the German Federal Ministry for Economic

Cooperation and Development (BMZ), extended the so-called Digi#ances, Digital Remittances, project until the end of 2021 with a financing by Euro 4.3 million. The project aims at developing and improving the access to the electronic cross-border money transfer services in a way that targets the groups that are not financially included. In addition, it aims at improving the access to the other financial services and increasing public awareness and financial capabilities of individuals about the responsible use of the digital financial services.

- The CBJ announced launching the FinTech Regulatory Sandbox in the early February of 2018 in order to create an incubator for entrepreneurs to support and encourage innovation and development in the FinTech field to enhance competitiveness in the provision of digital financial services; enhance efficiency, effectiveness, and security in the movement of funds; and enhance access to formal financial services while maintaining the integrity and stability of the financial sector and protecting the rights and data of the financial consumer. An innovative idea related to the use of **QR Quick Response** technology to combat counterfeiting on paper cheques has been put in place. A project to validate the documents exchanged between banks and issued to their clients is currently being examined and tested. In addition, several applications for accessing to the FinTech Regulatory Sandbox were received, including two projects that are based on **Blockchain** technology for the development of mobile payment services, one of them targets serving bank clients, and the other targets prepaid card customers.
- The CBJ with the support from the Bill and Melinda Foundation launched the Mobile Money for Resilience (MM4R) initiative that aims at enabling the less fortunate Jordanians and refugees to access formal financial services, and at empowering them economically and socially to achieve sustainable development. This support is also the cornerstone for securing more funding for this initiative from all donors such as humanitarian organizations as well as other organizations dealing with these groups.

#### 2.2.3.5.2 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 were also requested to provide the company with this information for the previous three years. The Credit Information Company launched the credit inquiry service in October 2016. The company makes available a comprehensive credit information database about the clients of banks and other financial institutions that extend credit. This is expected to help these entities to 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 to 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 finance. Up to 30-04-2019, CRIF Jordan Company signed agreements with 55 institutions, including 24 banks and 31 non-bank financial institutions (six financial leasing companies, eight microfinance companies, 12 other financial companies, two insurance companies, two credit card issuers and a government financial institution).

According to the Credit Information Law, every customer has the right to get information about the contents of his credit report and its impact on the customer's ability to borrow and do business. In this regard, the company provides this service free of charge to every Jordanian citizen once a year. The establishment of this company is expected to have positive impact on promoting financial inclusion and enhancing financial stability in the Kingdom.

## 2.3 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.[1] 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 2018 the comprehensive review of the legislations governing the practices of the banking and financial institutions that are under its supervision umbrella, and as follows:

### 2.3.1 LAWS AND BYLAWS

#### 2.3.1.1 THE CBJ LAW

As mentioned in JFSR2017, a Royal Decree was issued approving the Amended Central Bank Law No (24) of 2016 that was then published in the Official Gazette on 16-06-2016.

#### 2.3.1.2 THE AMENDED BANKING LAW

A Royal Decree was issued approving the Amended Banking Law No. 7 of 2019 and was published in the Official Gazette on 01-04-2019 to be read in conjunction with Law No. 28 of 2000.

This amendment came in light of the rapid developments in the profession of bank supervision on the local, regional, or international level. This implies that it is necessary to keep pace with these developments in order to strengthen the CBJ's supervision. The amended Banking Law will help regulate the ownership of effective ratios of capital and enable the CBJ to set controls and measures for the selection of bank auditors, as well as enable it to take alternative measures to address the situation of non-performing banks to prevent their liquidation and achieve financial and banking stability.

Of the most important amendments in the Banks Law No (7) of 2019 was the one about enhancing

[1] IMF. 2002. "Regulatory and Supervisory Independence and Financial Stability."

the corporate governance in Jordanian banks. New articles have been set to support the separation of the executive administrations from their boards of directors. The mechanism of selecting the members of the boards of directors of banks has been altered so that the focus is on their competencies, but not on their financial capabilities. The number of directors in the banks' board of directors was decided to be at least seven members, of which the number of independent members shall not exceed half of the members of the board of directors. The amended law also prohibited any amendment to the ownership structure of the bank or the transfer of its stocks whether in one or several transactions, directly or indirectly, without the written consent of the CBJ.

#### 2.3.1.3 REGULATING INSURANCE ACTIVITIES DRAFT LAW

In a step towards the pursuit of the CBJ to execute the Cabinet's decision issued on 24-02-2016 and in which the Cabinet directed the CBJ to assume the responsibility of supervising the insurance sector and regulating its activities as an integral part of its duties, the CBJ cooperated and coordinated with the Ministry of Industry, Trade, and Supply, the body currently responsible for supervision and oversight of the insurance sector, to prepare a draft law for regulating insurance activities with the aim to create a modern working mechanism which ensures for the CBJ the ability of supervision and follow-up of insurance activities efficiently and effectively.

The developed Regulating Insurance Activities Draft Law reflects the CBJ's vision and its pursuit towards enhancing regulatory and supervisory frameworks of insurance activities in accordance with best international standards and global experiences, within the framework of CBJ's orientation towards enhancing the stability and soundness of the insurance sector and developing it to enable it to perform its prospective role in serving the economy.

During the preparation of the draft law, the CBJ considered its inclusion of supervisory and regulatory tools necessary for protecting the insured and beneficiaries of insurance documents and enhancing institutional governance requirements for insurance companies. The CBJ was also keen to include in the draft law the regulatory and precautionary requirements and the necessary corrective measures to improve the provided services.

### 2.3.2 INSTRUCTIONS

#### 2.3.2.1 INSTRUCTIONS FOR IMPLEMENTING THE INTERNATIONAL FINANCIAL REPORTING STANDARD (9)

The instructions for the **Implementation of the International Financial Reporting Standard (IFRS9)** No. (13/2018) were issued on 06-06-2018 and addressed to all banks operating in the Kingdom and on all levels. These instructions included governance requirements for sound implementation of the requirements of standard (9) in addition to the requirements of the three pillars covered by standard 9 and which are; (classification and measurement), (expected credit loss/ impairment), and (hedge accounting), as IFRS 9 represents a methodology for risk management in banks (in addition to the accounting framework).

IFRS 9 in the impairment pillar aims at measuring the expected credit loss through a forward perspective on historical data as well as current and expected information on credit exposure, unlike previous methodologies which depended on incurred losses for recording them (IAS 39). Implementing the new standard will also have reflections and overlaps with other supervisory requirements (such as Basel III, capital adequacy, liquidity, and ICAAP), in addition to managing credit exposure mechanism in the bank in terms of products' type, pricing, guarantees, or relation with clients. This requires effective supervision from the bank's board of directors, its relevant committees, and executive management on the proper implementation of the new standard and they should work on providing and protecting the systems used in implementation. It is noteworthy that as for Islamic banks only the part of instructions related to expected credit loss is applicable, whereas the Islamic Accounting Standard No. 25 requirements are applicable to other parts, until the special instructions for Islamic banks are issued according to Islamic Accounting Standard No. 30 requirements.

#### 2.3.2.2 INSTRUCTIONS FOR ANTI-MONEY LAUNDERING AND COMBATING FINANCING OF TERRORISM

The CBJ issued the instructions of **Anti-Money Laundering and Combating the Financing of Terrorism for Licensed Banks** No. (14/2018) dated 26-06-2018, instructions of Anti-Money Laundering and Combating the Financing of Terrorism for Companies of Payments Services and Electronic Fund Transfer No. (12/2018) on 28-05-2018, and of Anti-Money Laundering and Combating the Financing of Terrorism for Exchange Companies No. (70/2018) dated 17-01-2018. These instructions specified the due diligence requirements that the relevant institutions must comply with, and prohibited conducting any banking businesses with unidentified persons or with fictitious or untrue names or with fictitious banks or fictitious companies. These instructions require adopting internal control and monitoring systems to manage risks and document risk assessment processes, as well as implementing policies and controls and determining the bases for identifying, assessing, and monitoring the risk associated with money laundering and terrorist financing. Moreover, the instructions identified the programs that are to be applied on the financial groups and external branches regarding combating money laundering and terrorist financing and the provisions to be taken into account when dealing with all incoming and outgoing wire transfers, including wire transfers sent or received by the company subject to these instructions. The instructions also included the obligation to notify the Anti-Money Laundering and Terrorism Financing Unit of any suspected money laundering or terrorist financing operations. According to these new instructions, the instructions of Anti-Money Laundering and Combating Terrorist Financing for Banks No. 51/2010 dated 23-11-2010, the instructions of Anti-Money Laundering and Combating Terrorist Financing for Mobile Payment Services Providers No. 1/2014 of 2014, and the instructions for Anti-Money Laundering and Combating Terrorist Financing for Money Exchange Companies No. 2/2010 dated 30-12-2010 were all cancelled.

#### 2.3.2.3 INSTRUCTIONS FOR LARGE CREDIT EXPOSURE LIMITS AND CREDIT CONTROLS

The CBJ issued instructions for **the Large Exposure Limits and Credit Controls** No. (2/2019) dated 04-03-2019, which are to be in force as of 30-06-2019, and are mandatory to all banks operating in the Kingdom at the level of the banking group inclusive of subsidiary financial companies (excluding insurance companies), branches in Jordan, and the subsidiary banking companies. The instructions included a definition of the concept of exposure, which includes all forms of direct and indirect credit granted to a person, bonds, Islamic bonds, debt instruments issued by the same person and bought from the bank, in addition to the investment of the bank in that (legal) person, whether in the form of equity rights or any other investments. The instructions also included the definition of the relevant and related (persons) to the bank and the capital base. In addition, these instructions also included a mechanism for computing the exposure value, the maximum exposure limits per person or group of relevant clients, and the maximum credit cap granted to constructing or buying real estate, the credit granted as a debit to current account, or the credit granted to the largest ten customers of the bank in the Kingdom. In addition, these instructions included the exposure cap to the parties involved in a relationship with the bank.

#### 2.3.2.4 Instructions for Basic Bank Account

The CBJ issued the instructions of **Basic Bank Account** No. 1/2019 dated 04-02-2019 addressed to all banks operating in the Kingdom. They aim at facilitating the access of all segments of society, especially those who are financially excluded, to financial and banking services, promoting financial inclusion, and contributing to the achieving of financial, economic, and social stability. The instructions included a number of terms to qualify for using the basic bank account. They include a bank account in Jordanian Dinar for the clients residing in Jordan with special terms and features that target the financially excluded persons who do not have access to bank accounts through putting a set of requirements for opening a basic bank account. These requirements include the access of the bank to minimum amount of identification data about the clients using simplified due diligence procedures to minimize the account opening requirements. The instructions also determined the basic services made available to the account holders, the prohibited services, steps and justifications for closing the account, and the upper bounds on fees and charges that the banks collect for providing the services available to this account.

#### 2.3.2.5 Instructions for Financial Consumer Protection for Clients with Disabilities

The CBJ issued instructions for **Financial Consumer Protection for Clients with Disabilities** No. (18/2018) dated 18-11-2018 whose provisions apply to all (financial) service providers, including banks and non-bank financial institutions operating in the Kingdom and under the supervision and surveillance of the CBJ. These instructions aim at designing and offering financial products and services properly to the clients suffering from disabilities. These instructions also set out the due diligence procedures that the service providers should follow when dealing with people with disabilities. They also include the facilities that the bank must provide to ensure the accessibility of persons with disabilities to benefit from the services provided without any difficulties, the requirements for approving the signature of the client with visual impairment or illiterate client with disabilities, and fairness and transparency in dealing with clients with disabilities. The instructions include more details about the provision of banking services to people with disabilities.

#### 2.3.2.6 Instructions For Dealing With Major Foreign Currencies And Precious Metals On A Margin Basis For The Benefit Of Clients

The CBJ Issued instructions for **Dealing with Major Foreign Currencies and Precious Metals on a Margin Basis for the benefit of Clients** No. 16/2018 dated 18-07-2018. The provisions of these instructions apply to all banks operating in the Kingdom, except for the external branches of these banks, if any. The instructions included the controls that banks must abide by when they provide the service of dealing in foreign currencies and major precious metals based on margin for the benefit of their clients, either by the bank following the requests (orders) of the clients or by the bank based on an authorization from their clients. By these new instructions, the instructions of Dealing with Margin No. 31/2006 dated 18-10-2006 were canceled.

### 2.3.2.7 INSTRUCTIONS FOR FINANCIAL CONSUMER PROTECTION IN THE MICROFINANCE SECTOR

The CBJ Issued instructions for **Financial Consumer Protection in the Microfinance Sector** No. 15/2018 dated 27-06-2018. The provisions of these instructions apply to all microfinance institutions operating in the Kingdom and to all microfinance services provided in accordance with the provisions of Islamic Sharia to the extent that does not contradict their nature as of 01-10-2018. The instructions included the provisions that the company must comply with when designing the product or service and when preparing its credit policy and pricing its products and services. They also included the measures that the company must take to protect its customers from the risks associated with excessive debt, protect its customers' data, comply with the provisions of dealing with customers fairly and respect its customers' complaints, if any, and address them.

### 2.3.2.8 FINTECH REGULATORY SANDBOX GUIDE

As mentioned in the JFSR2017, the CBJ launched the FinTech Regulatory Sandbox[2] guide in early 2018, with the aim to create an incubator for business pioneers to support and promote innovation and development in the field of financial technology to enhance competitiveness in the area of digital financial services, as well as efficiency, effectiveness, and security in the transfer of funds, and to foster access to official financial services while maintaining the integrity and stability of the financial sector and protecting the rights and data of the financial consumer. The guide included the definition of the FinTech Regulatory Sandbox, its goals, scope, targeted segments, related risks, methodology, and the phases through which the work in the Sandbox goes through.

### 2.3.2.9 CLOUD COMPUTING GUIDELINE

The CBJ launched the Cloud Computing Guideline in March 2018.[3] This guideline clarifies the concept of cloud computing technology and its basic characteristics, publication templates, and related service templates. it also includes directions on some important issues which institutions should carefully consider when using this technology, of which; cloud computing governance, its risk management, its business continuity, in addition to the controls and mechanisms used to protect its data for safe and effective usage. The guideline also included a special annex for instructions and circulars issued by the CBJ and related to outsourcing operations in light of the compulsory full commitment to these regulations and circulars by the licensed banks operating in the Kingdom, as the cloud computing technology lies within outsourcing operations to make it easier for the banks to refer to them.

### 2.3.2.10 INSTRUCTIONS OF CYBER RISKS RESILIENCE

Instructions of Cyber Risks[4] Resilience No. (26/1/1/1984) were issued on February 6th, 2018, which provisions are applicable on all licensed banks, financial institutions, credit information companies, and microfinance companies subject to CBJ's oversight and supervision. These instructions aim at enhancing the banks and financial institutions' capability to face cyber-attack attempts with high

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[2] FinTech Regulatory Sandbox: is a safe, controlled, and disciplined/ supervised experimental environment that allows businesses or entrepreneurs to test FinTech products and services newly developed by them without directly being subject to regulatory and supervisory requirements, and without bearing legal costs in the beginning, in order to support them in accessing the local market aiming at accelerating their businesses.

[3] Cloud Computing Technology: a model for enabling network access from any place, in a proper way, and on demand to a group of configurable computing sources (like networks, servers, storage means, applications and services) with the cloud service provider.

[4] Cyber Risks (electronic risks): a risk of the occurrence of financial losses and/ or distortion of the bank's reputation resulting from a defect/failure in its technical infrastructure.

professionalism and technicality, enabling them to continue providing their services and safely undertaking their operations, and encouraging them to invest in the field of cyber and electronic security, due to its importance and role in achieving a technical progress that serves the national economy. These instructions require the subject parties to set and regulate the appropriate measures in line with best international practices for managing cyber risks and penetration tests, and enhancing the controls for protecting the systems, software, networks, networking devices, in addition to detecting and responding to emergency cyber security events, and recovering from them, in order to achieve an effective and efficient approach for cyber governance.

#### 2.3.2.11 REGULATORY CAPITAL INSTRUCTIONS FOR ISLAMIC BANKS.

The CBJ issued Regulatory Capital Instructions No. (72/2018) dated February 4$^{th}$, 2018 according to the amended standard No. 15 issued by the Islamic Financial Services Board (IFSB), whose provisions are applied on all licensed Islamic banks. The Central Bank shall be provided with capital adequacy templates in accordance with these instructions as of first quarter 2018 data. These instructions included regulatory capital requirements for Islamic banks, its components, and additional capital requirements (including capital conservation buffer, countercyclical capital buffer, and capital surcharge for domestic important banks). The instructions also included the weighted weights allocation methodology for covering risks, in addition to Islamic financing formulas and minimum capital requirements for Islamic financing assets, and calculating the financial leverage ratio for Islamic banks.

#### 2.3.2.12 INSTRUCTIONS RELATED TO PAYMENT SERVICES AND ELECTRONIC FUNDS TRANSFER ACTIVITIES

The CBJ issued a bundle of instructions related to regulating the sector of payment services and electronic fund transfer, of which the most important are:

- Instructions on payment and electronic transfer of funds companies' licensing fees No.2/2018 dated 14-03-2018, which identified the mechanism and time period for paying licensing fees for payment services and electronic transfer companies.
- Instructions on capital requirements for payment services and electronic transfer of funds companies No. 3/2018, dated 14-03-2018, which included the minimum limit for paid-in capital for the company to practice payment services activities whose value differs by the type of activities that the company practices.
- Technical and technological requirements instructions for payment services and electronic funds transfer companies No. (8/2018) dated 02-05-2018, which included information technology and communications environment requirements necessary for providing payment services or managing and operating the electronic payment systems and their protection requirements. They also included the necessity of separating actual working environments of the company from other environments in addition to other requirements ensuring the continuity and security of different systems at the company.
- Technical and technological outsourcing instructions for payment services and electronic funds transfer companies No. (9/2018) dated 02-05-2018 that include the necessity of the company's approval on the

outsourcing policy, as well as identifying the nature and scope of the outsourcing which occurs when using a third party or delegating it or employing its resources to run all or part of the company's technical and technological activities within its responsibility.

- Corporate governance instructions for payment services and electronic transfer of funds companies No. 10/2018 dated 02-05-2018 which include corporate governance requirements for payment and electronic transfer of funds companies, as corporate governance is represented by the system which directs and manages the company, and which aims at identifying institutional objectives of the company and achieving them, managing companies' operations safely, protecting clients' interests, and committing to the necessary responsibility towards shareholders and other stakeholders, as well as to the company's commitment to legislations and its internal policies
- The requirements of providing issuance and management of electronic money services No. 11/2018 dated 02-05-2018. They mandate the licensed companies to provide payment services and want to practice the provision of issuing and managing electronic money services activity, as well as licensed exchange companies, to meet the requirements and terms set by the provisions of these instructions in terms of electronic money issuance and management stipulations and the controlling disciplines.

## 2.3.3 SUPERVISORY CIRCULARS

The CBJ issued in 2018 and in the first half of 2019 several supervisory circulars to regulate several issues, the most important of which are:

### 2.3.3.1 CIRCULAR ABOUT SEMI-ANNUAL FINANCIAL STATEMENTS OF BANKS

The CBJ released Circular No. 10/1/5378 on 04-04-2019 that allowed banks, within their legal responsibilities to comply with bylaws and instructions and to complete the necessary steps related to releasing their semi-annual financial statements. Without a prior approval of the CBJ, in light of the opinion of the external auditor, and in line with the laws and legislations that are in force as of 30-06-2019. The issuance of this circular came in line with the CBJ policy to continue its approach of following up and reviewing the instructions and circulars issued by the CBJ and as an emphasis of the concept of responsibility and accountability.

### 2.3.3.2 ADJUSTING THE POSITION OF EXCHANGE COMPANIES WITH THE PROVISIONS OF THE PAYMENT AND ELECTRONIC TRANSFER SYSTEM

The CBJ issued Circular No. 9/3/4092 on 14/3/2019 and the Circular No. 26/3/12543 on 24-09-2018 concerning the fine-tuning the position of exchange companies that are involved in the business or activities of managing and operating electronic payment systems or any other activities of payment services, including the electronic transfer of funds, with the provisions of the electronic payment and transfer of funds system and instructions issued pursuant thereto. The issuance of such a circular comes in line with the policy of the CBJ to ensure the continued availability of safe and secure channels for the licensed exchange companies to practice any of the payment services and electronic transfer of funds.

### 2.3.3.3 CIRCULAR ABOUT REWARDS FOR THE SAVINGS ACCOUNTS WITH BANKS

The CBJ released Circular No. 27/5/3808 on 10-03-2019 that regulates the eventual exit from the phenomena of offering rewards on savings accounts with banks. The relevant banks were given enough time to address the issue without adversely affecting their activities. By the circular, the banks were allowed to continue with their reward programs on savings accounts as planned in 2019. However, effective the beginning of 2020, the process of awarding prizes on savings accounts was subjected to quantitative and qualitative controls attached to the circular. After the end of 2020 and effective the beginning of 2021, these award programs on savings accounts must be completely cancelled, excluding the rewards and benefits that all customers obtain from using the services and products of the bank. However, it is the responsibility of banks to set interest rates on their savings accounts and to advertise them on their websites, headquarters, and branches. The decision to cancel these reward programs effective the beginning of 2021 aims at encouraging real competition among banks based on price and deepening financial inclusion within an integrated framework of fairness, transparency, financial consumer protection, equal opportunities among customers, and the protection of small depositors, as well as ensuring their rights to obtain appropriate returns on their accounts, besides enabling the banks operating in the Kingdom to attract savings deposits and expand their sources of fund.

#### 2.3.3.4 NOTIFYING THE ANTI-MONEY LAUNDERING AND TERRORISM FINANCING UNIT

The CBJ issued Circular No. 10/4/3011 on 21-02-2019 that included stressing the necessity that notification managers at banks should notify the Anti-Money Laundering and Terrorism Financing Unit only of crimes that result in financial proceeds which may be the subject of money laundering or terrorist financing crime.

#### 2.3.3.5 OBTAINING APPROVAL FROM THE CABINET FOR BANK CUSTOMERS WHO RECEIVE CASH DONATIONS, AID, & FUNDING FROM FOREIGN SOURCES

The CBJ issued Circular No. 10/4/2091 on 05-02-2019 including requesting the banks to ensure that their customers who receive cash donations, aid, and funding from foreign sources had obtained the prior approval from cabinet and complied with the relevant regulatory framework.

#### 2.3.3.6 AMENDMENTS TO THE INSTRUCTIONS ON THE GOVERNANCE AND MANAGEMENT OF INFORMATION AND ASSOCIATED TECHNOLOGY

The CBJ issued Circular No. 10/6/984 on 21-01-2019 concerning some amendments to the instructions on The Governance and Management of Information and Associated Technology No. 65/2016 dated 25-10-2016 in line of keeping abreast of developments and updates that have taken place in the proposed international frameworks in this regard, specifically the reference framework (COBIT 2019) issued by the Information Systems Audit and Control Association (ISACA) at the end of 2018.

#### 2.3.3.7 GIVING UTMOST ATTENTION TO THE IMPLEMENTATION OF SECURITY COUNCIL RESOLUTIONS

The CBJ issued Circular No. 10/4/17361 on 26-12-2018 regarding giving utmost attention to the implementation of Security Council resolutions through the intensification of training courses and workshops for all employees of the bank in order to advance their level of awareness and commitment to the implementation of these resolutions that allow for effective risk management.

#### 2.3.3.8 Obtaining Pre Approval from CBJ for Banks Willing to Provide Money Transfer Service (Money Sending) to Their Customers

The CBJ issued Circular No. 10/3/16506 on 10-12-2018 concerning the need for banks wishing to provide money transfer service (money sending) to their customers to obtain prior approval from the CBJ to do so and to specify how they manage the risks associated with providing such a service.

#### 2.3.3.9 Simplifying the Measures of Banks to Deal with Their Customers Who Face Difficulties in Repaying Their Debt

The CBJ issued Circular No. 10/1/11084 on 27-08-2018 that came as a continuation of the measures taken to address the repercussions of the global financial crisis and to enable individual customers, SMEs, and large companies to obtain financing and fulfill their obligations while continuing their economic activity. Yet, it is to be taken into consideration that the repayment schedules set for the customers are appropriate to the cash flow of their businesses and do not affect the quality of credit facilities portfolio of banks. In this regard, a number of procedures have been put in place to deal with the difficulties of the commitment of customers in repaying their debts for all of retail, SMEs and large companies.

#### 2.3.3.10 Providing Customers with Copies of Contracts, Notifications, any Data, or Statements Related to Their Bank Accounts

The CBJ issued Circular No. 27/2/9421 on 17-07-2018 requesting the banks to provide their customers with copies of contracts, notifications, data, or statements related to their accounts at the bank even in case there was any judicial dispute between the customer and the bank.

#### 2.3.3.11 MENA Financial Action Task Force Report on Electronic Money Laundering (MENA- FATF)

The CBJ issued Circular No. 9/1/9476 on 15-07-2018 regarding the Electronic Money Laundering Applications Report issued by the Middle East and North Africa Financial Action Task Force (MENAFATF) that aims at detecting and understanding money laundering ways through electronic means, identifying the risks of abuse, and identifying the best ways to address these risks and address the effects resulting from them. So that for the exchange companies take the necessary measures.

#### 2.3.3.12 The Report of the Egmont Group on Methods of Money Laundering and Terrorist Financing Using Virtual Currencies

The CBJ issued Circular No. 9/1/9477 on 15-07-2018 concerning the report released by the Egmont Group on the methods used for money laundering and terrorist financing using virtual currencies, in order to benefit from it through the identification of risks, trends, and methods of money laundering and terrorist financing, as well as identifying the indicators and patterns associated with them in the virtual currencies.

#### 2.3.3.13 Abiding by the Prohibitions Issued by the Countries in Which Transactions Are Carried Out by Banks Within Their Jurisdiction

The CBJ issued Circular No. 10/4/7537 on 30-05-2018 stressing the necessity of adhering to the ban lists issued by the countries where banks carry out operations within their jurisdiction in order to avoid legal and reputational risks that the Bank may face as a result of the lack of commitment.

#### 2.3.3.14 Deterrence Procedures Against Attacks on Banks

The CBJ issued Circular No. 10/4/5445 dated 16-04-2018 regarding procedures to deter attacks on banks and which includes the measures that must be followed by the banks to deter attacks or burglary on banks branches operating in the Kingdom and maintain the safety and soundness of the banks and their employees. The measures also include working on connecting all banks and their branches through anti-burglar alarms with the Command and Control Center and relevant security centers, as well as connecting the surveillance cameras for the entrances and exits of the banks' buildings with the Command and Control Center /Public Security Directorate, and installing electronic security doors on the branches' entrances, in addition to ensuring guarding service to all branches operating in the Kingdom throughout their working time.

#### 2.3.3.15 CONTINUED PROHIBITION OF DEALING WITH VIRTUAL CURRENCIES

The CBJ issued a circular No. 10/3/3777 on 14-03-2018 regarding the continuity of the prohibition of dealing with Bitcoins and all other cryptocurrencies.

#### 2.3.3.16 LINKING CHANGING INTEREST RATE WITH THE MONTHLY AVERAGE OF THE ACTUAL OVERNIGHT INTERBANK RATE

The CBJ issued Circular No. 27/3/2502 on 15-02-2018 directed to licensed banks, which includes amending Article No.(6/D) of the Instructions on Dealing with Customers Fairly and Transparently No.56/2012, that linked changing interest rate with the monthly average of the actual overnight interbank rate, announced by the CBJ.

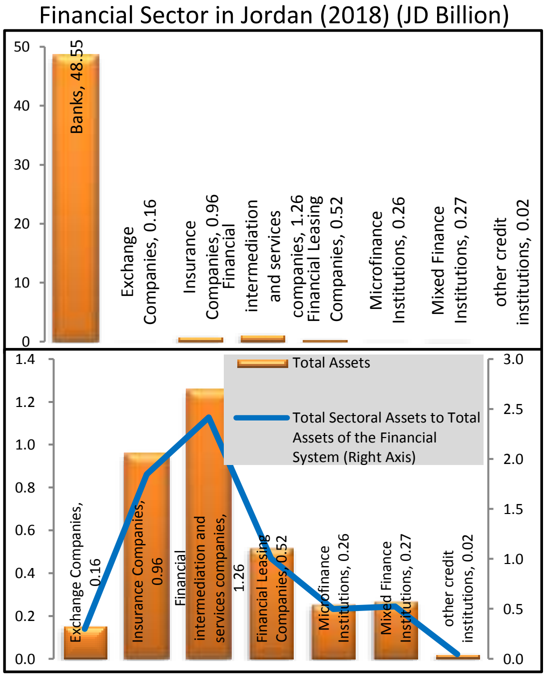
# Chapter Three

# Financial Sector Developments and Risks

## 3.1 Introduction

The financial sector in the Hashemite Kingdom of Jordan encompasses banks, insurance companies, financial intermediation companies, service companies, exchange companies, microfinance companies, financial leasing companies, multi finance companies, and SMEs financing companies.

Figure 3-1. Distribution of Total Assets of the Financial Sector in Jordan (2018) (JD Billion)




Source: CBJ.

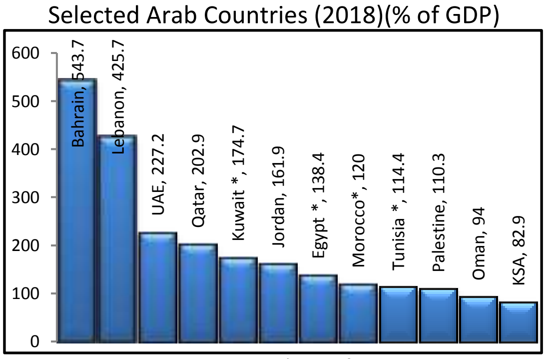
The CBJ undertakes the responsibility of monitoring and supervising the banking sector and foreign exchange sector, besides the microfinance companies that became part of the supervisory umbrella of the CBJ on 01-06-2015. The responsibility for monitoring and supervising insurance companies is currently being transferred from the Ministry of Industry, Trade, and Supply to the CBJ. [1]

The licensed banks are the major component of the financial sector in Jordan whose assets totaled JD 52.0 billion at the end of 2018, of which the assets of licensed banks formed 93.4% (Figure 3-1).

## 3.2 The Most Important Developments in the Banking System in Jordan (Assets and Liabilities) at Jordan Branches Level

The licensed banks' assets reached JD 48.6 billion at the end of 2018, forming 161.9% of GDP compared to 165.5% at the end of 2017. Jordan comes in the middle rank amongst selected Arab countries with which the comparison was conducted (Figure 3-2).

Figure 3-2. Banks' Total Assets to GDP for Jordan and Selected Arab Countries (2018)(% of GDP)

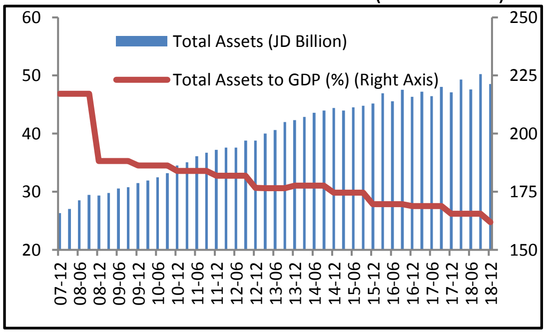



Source: Relevant central banks. * Data for 2017.

Despite this high ratio of assets to GDP in Jordan, it followed a declining trend during the period (2007-2018). It reached 217.2% at the end of 2007 and decreased to 161.9% at the end of 2018. The reason for this trend is attributed to the growth of GDP at higher rates than the growth of banks' assets (Figure 3-3).

[1] 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.

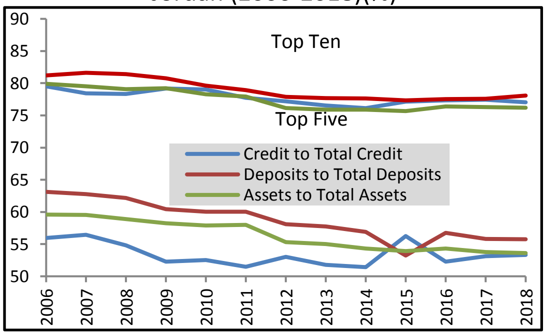
Figure 3-3. Evolution of Operating Banks' Assets in Jordan and Their Ratio to GDP (2007-2018)




Source: CBJ.

Regarding the market share for banks (concentration), the assets of the largest five banks out of 24 banks approximated 53.6% of total assets of the licensed banks at the end of 2018. Whereas the assets of the largest ten banks out of 25 banks approximated 76.2% of total assets of the licensed banks at the end of 2018. 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 3-4).

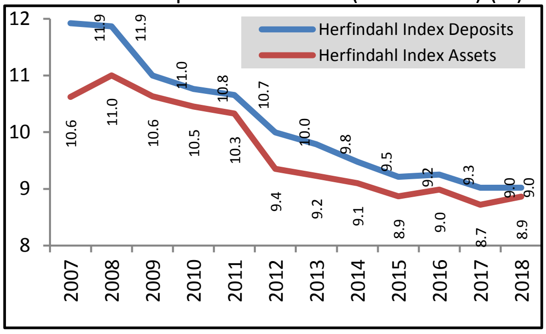
Figure 3-4. Concentration Ratio for Banking Sector in Jordan (2006-2018)(%)




Source: CBJ.

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 8.9% at the end of 2018. The main reason for the continuous 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 3-5).

Figure 3-5. Herfindahl Index for Operating Banks' Assets and Deposits in Jordan (2007-2018) (%)



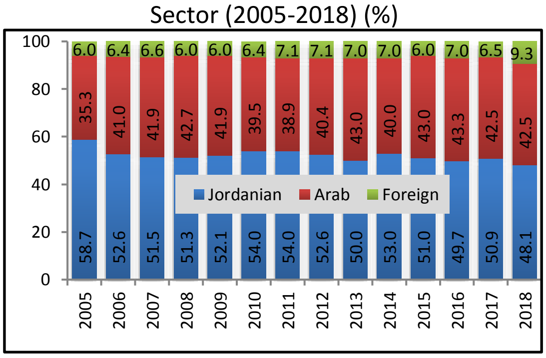

Source: CBJ.

### 3.2.1 OWNERSHIP STRUCTURE IN BANKS

The capital share of foreigners (Arabs and Non-Arabs) in the total capital of Jordanian licensed banks approximated 52.0% at the end of 2018, compared to 49.0% at the end of 2017.

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 thereafter, reflecting the increased confidence of investors in the banking system in particular, and the Jordanian economy in general, given that most of these properties are stable strategic contributions (Figure 3-6).

Figure 3-6. Ownership Structure in the Banking Sector (2005-2018) (%)

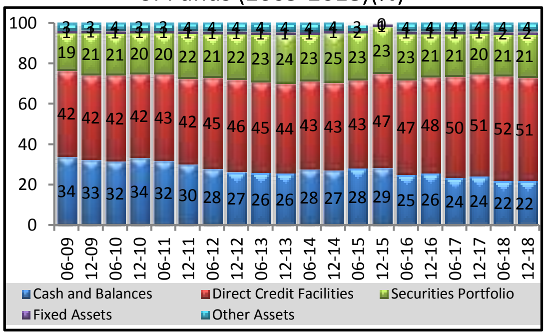



Source: CBJ.

### 3.2.2 USE OF FUNDS (ASSETS)

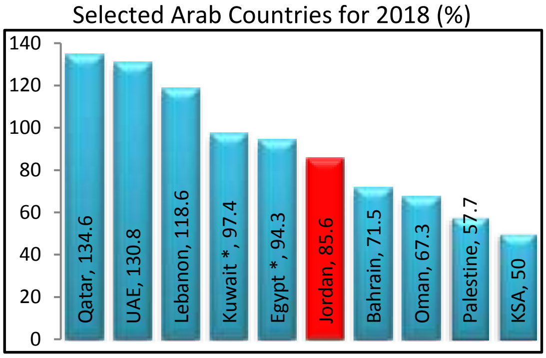
By reviewing the structure of the assets of banks operating in the Kingdom (uses of funds), it is noted that the credit facilities portfolio is still the largest component of the banks' assets at the end of 2018, composing about 51.3% of the total assets of banks, compared to 50.6% at the end of 2017. The high share of credit facilities in total assets of banks is attributed to the growth of credit facilities at higher rates than the growth in total assets (Figure 3-7).

Figure 3-7. Assets Structure for Banking Sector - Uses of Funds (2009-2018)(%)




Source: CBJ.

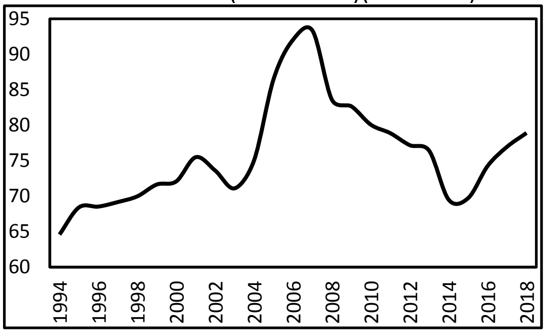
Figure 3-8. Credit Facilities to GDP for Jordan and Selected Arab Countries for 2018 (%)




Source: Relevant Central Banks. Data for 2017.

The direct credit facilities grew by 5.3% at the end of 2018 to reach about JD 25.7 billion. The same figure for 2017 was 8.0%. It is worth mentioning that the ratio of total credit facilities to GDP approximated 85.6% at the end of 2018 compared to 86.1% at the end of 2017. In this regard, Jordan occupies almost a middle rank among some countries of the region (Figure 3-8). The results of the credit gap analysis in Jordan showed that the ratio of the credit granted by banks to the private sector to GDP in Jordan does not indicate the possibility of the accumulation of risks at the financial sector level (systemic risks) in the present time. This ratio as at the end of 2018 surpasses its historical trend by a small percent of 0.6% that does not require imposing additional capital requirements buffers on banks. This is, however, expected in light of the normal growth rates of credit granted to the private sector that are associated with low economic growth rates compared to the pre global financial crisis levels (Figure 3-9).

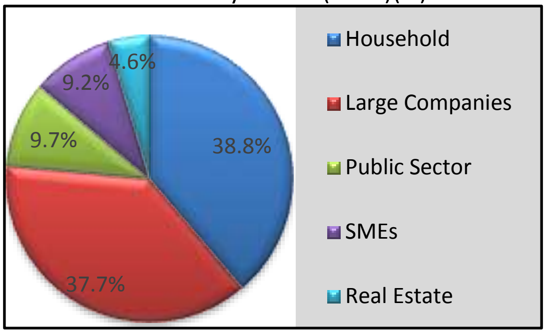
Figure 3-9. Credit Granted by Operating Banks to Private Sector (1994-2018)(% of GDP)




Source: CBJ

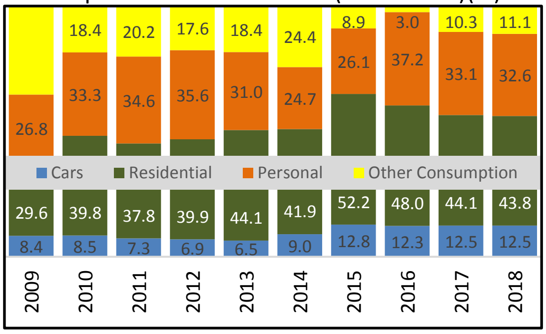
With regard to the distribution of direct credit facilities at the end of 2018, the largest share was for the household credit facilities that comprised 38.8% of total credit facilities at the end of 2018 compared to 37.7% at the end of 2017. The credit facilities extended to large companies is next in the rank, comprising 37.7% of total direct credit facilities at the end of 2018 compared to 38.1% at the end of 2017. For the credit facilities extended to the government and the public sector, they declined to 9.7% at the end of 2018 compared to 12.4% at the end of 2017. Concerning the share of credit facilities extended to the SMEs to total credit facilities, it increased to 9.2% at the end of 2018, compared to 7.4% at the end of 2017, noting that the average of this ratio for the emerging market economies ranges between 20.0% - 25.0%. The lowest share was for the credit facilities extended for financing commercial real estate. It formed only 4.6% of total credit facilities at the end of 2018 compared to 4.5% at the end of 2017 (Figure 3-10).

Figure 3-10. Distribution of Operating Banks' Credit Facilities by Sector (2018)(%)




Source: CBJ.

Figure 3-12. Distribution of Household and Corporate Credit Facilities (2009-2018)(%)

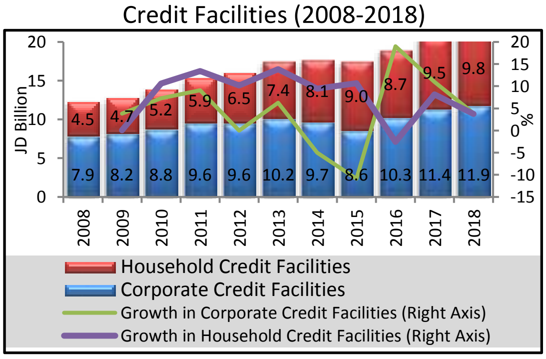



Source: CBJ.

With regard to loans extended to household sector, the largest share of these loans was in the form of household residential loans that formed about 43.8% of household debt at the end of 2018 compared to 44.1% at the end of 2017. The second largest share was for the personal advances that formed 32.6% of total household debt at the end of 2018 compared to 33.1% at the end of 2017. Auto loans accounted for 12.5% at the end of 2018 – same as its counterpart at the end of 2017. 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 project in 2015.

Regarding the corporate credit facilities, they grew by 11.9% at the end of 2018 compared to 11.0% at the end of 2017 after its decline during the period (2014-2015) (Figure 3-11 and Figure 3-12).

Figure 3-11. Evolution of Household and Corporate Credit Facilities (2008-2018)



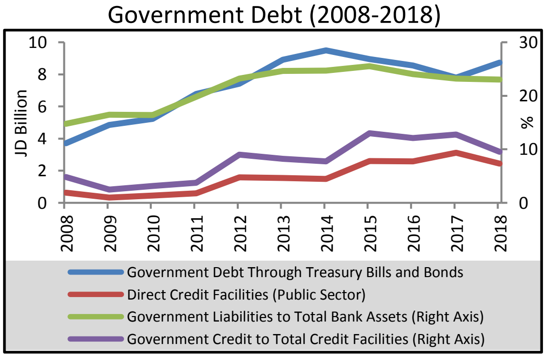

Source: CBJ.

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 JD 11.2 billion at the end of 2018 accounting for 23.0% of the total assets of banks, compared to JD 10.9 billion at the end of 2017, representing about 23.2% of the total assets of banks.

This decline is a positive indicator on the decline in the competition of the government with the private sector on domestic liquidity, especially that the government turned to external borrowing. It is worth mentioning that the amount of government indebtedness to banks is consisted of JD 8.7 billion in the form of government bonds and JD 2.4 billion in the form of credit facilities per the 2018 figures.

The exposure of banks to government or government- guaranteed debt as a percentage of banks' assets rose from 14.8% at the end of 2008 to 23.0% at the end of 2018 (Figure 3-13).

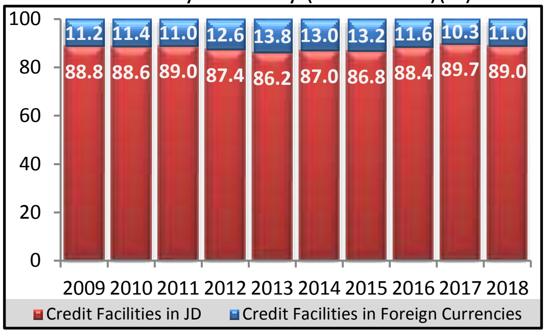
Figure 3-13. Exposure of Operating Banks to Government Debt (2008-2018)




Source: CBJ

Regarding the classification of the facilities by currency, the facilities denominated in JD s are the major component of the credit facilities. They composed about 89.0% of total credit facilities at the end of 2018, declining from 89.7% at the end of 2017 (Figure 3-14).

Figure 3-14. Distribution of Operating Banks' Credit Facilities by Currency (2009-2018)(%)




Source: CBJ.

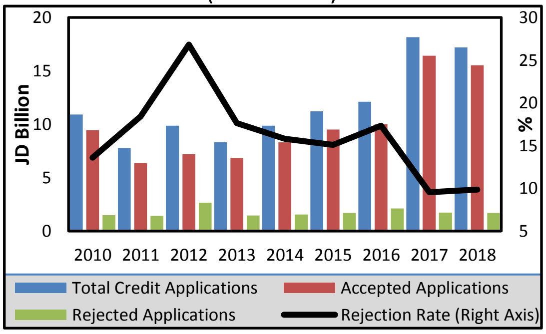
### 3.2.2.1 DEMAND FOR CREDIT AND THE REACTION OF BANKS

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 31-12-2018. 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 2018 was about 362.6 thousand applications with a value totaling JD 17.2 billion. About 15.8% of the submitted applications were rejected.

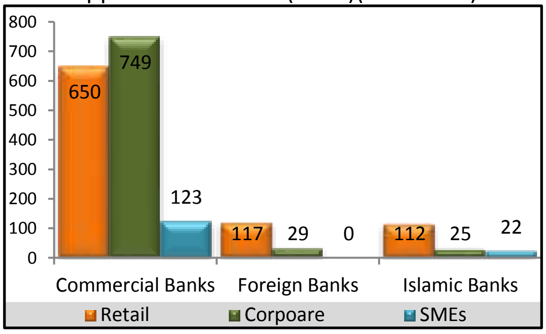
Their value totaled JD 1.7 billion and accounted for 9.8% of the value of all submitted applications compared to 9.5% in 2017. Except for 2016, this share has been declining during the period (2013-2017). It resumed its upward trend during the year 2018 (Figure 3-15 and Figure 3-16).

Figure 3-15. Total Value of Credit Applications to Banks: Accepted, Rejected and Rejection Rate (2010-2018)




Source: CBJ.

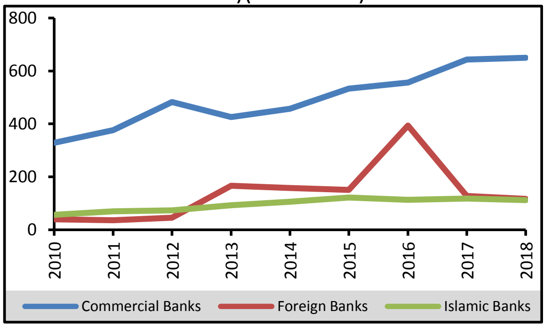
Figure 3-16. Value Rejected Applications Per Type of Applicant and Bank (2018)(JD Million)




Source: CBJ.

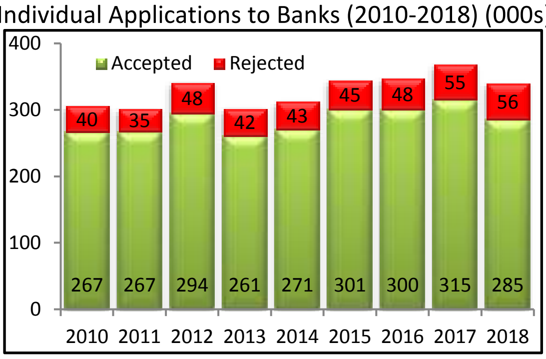
Regarding credit facilities to individuals, the number of applications for obtaining new credit facilities during 2018 reached about 341.1 thousand requests with a total value of JD 4,042 million. Of them, 16.4% were rejected with a value amounting to JD 879.1 million composing 21.7% of the total value of applications submitted during the year 2018 compared to 20.6% during 2017. The highest rejection ratio, in value, was for applications submitted to foreign banks that approximated to 33.3%, compared to 26.1%, and 9.4% for the applications submitted to commercial banks and Islamic banks, respectively (Figure 3-17).

Figure 3-17. Value of Credit Applications Submitted by Individuals and Rejected per Bank Type (2010-2018)(JD Million)




Source: CBJ.

Figure 3-18. Number of Accepted/ Rejected Individual Applications to Banks (2010-2018) (000s)



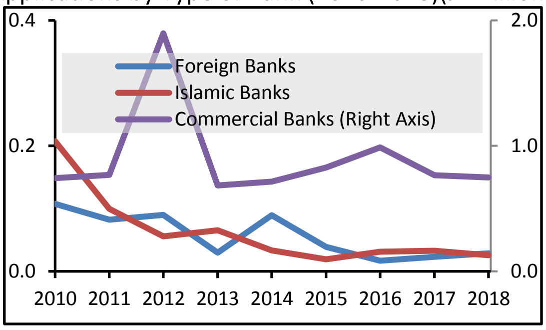

Source: CBJ.

As for credit facilities requested by companies (large, medium, and small ones), the number of applications for new credit facilities reached during 2018 to about 11.2 thousand applications with a total value of JD 5,157 million. About 10.0% of them were rejected, totaling JD 804.0 million and composing 15.6% of the total value of applications submitted in 2018, compared to 14.4% in 2017. The highest rejection rate, in value, was for applications submitted to commercial banks that approximated 18.3%, compared to 12.5% and 3.1% for applications submitted to foreign banks and Islamic banks, respectively.

By comparing the rejected applications of household and companies sectors in 2018, by value, it is noted that the rejection rate for household sector was higher than the counterpart rejection rate for the companies sector. This shows the awareness of banks for the relatively high risks associated with the loans extended to household sector that are attributed to the relatively high household debt to income ratio – despite its decline in the last two years, as discussed in Chapter Four of this report.

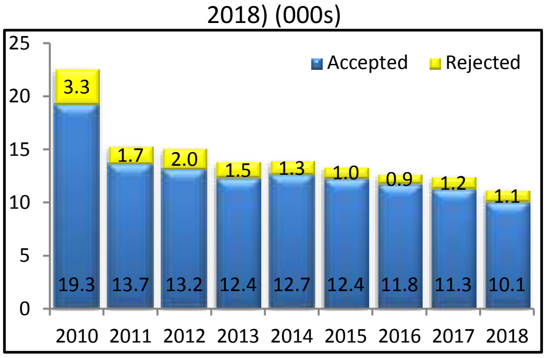
It is worth noting that the number of credit facilities applications submitted to banks by SMEs formed 65.4% of total number of applications submitted by all companies. The applications for obtaining new credit facilities reached about 7.3 thousand applications, with a total value of JD 898.0 million.

Figure 3-19. Value of Rejected Corporate Credit Applications by Type of Bank (2010-2018)(JD Billion)




Source: CBJ.

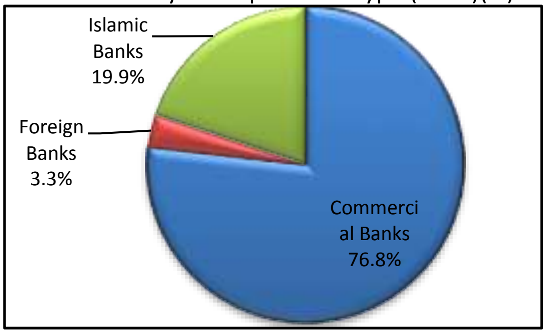
Figure 3-20. Number of Accepted/ Rejected Corporate Applications Submitted to Banks (2010-2018) (000s)




Source: CBJ.

Of the total value of applications submitted by SMEs in 2018, 16.2% were rejected compared to 15.3% in 2017. The highest share of credit applications submitted by the SMEs was to commercial banks, forming about 76.8% of the total value. The credit applications submitted to Islamic banks formed about 19.9% of total value, whereas those submitted to foreign banks were relatively small and composed 3.3% (Figure 3-21).

Figure 3-21. Distribution of Applications Value Submitted by SMEs per Bank Type (2018)(%)




Source: CBJ.

The number of rejected applications submitted by the SMEs formed 77.7% 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 88.0% of the total value of rejected credit applications submitted by all companies.

In light of the above analysis, the following can be concluded:

1. The value and number of rejected applications for credit facilities for the household sector have been following an upward trend since 2013, reflecting the awareness and cautiousness of banks in dealing with the risks associated with lending to this sector and improving its lending standards. The high number and value of the rejected applications for household credit are due to a number of challenges that household sector in Jordan faced during 2018, including:

- The decrease in the household disposable income as a result of the increase in inflation rates and the increase in income tax rates after the adoption of the new income tax law, the matter that resulted in higher rejection rates of the credit applications submitted by individuals because of the deterioration in their financial position.
- The increase in interest rates in the market.

2. The tendency of banks to direct lending towards the productive sectors (companies) at the expense of consuming sectors (household credit facilities) as this may reflect positively on stimulating economic growth. It is known in the empirical evidence that the contribution of the household sector to economic growth is less than other sectors. The analysis of the data in this study shows the following:

- The amounts of increase in corporate credit balances were larger than the amounts of increase in the household credit
- Rejection rates for applications for facilities were greater for household than for companies, both in number and value.

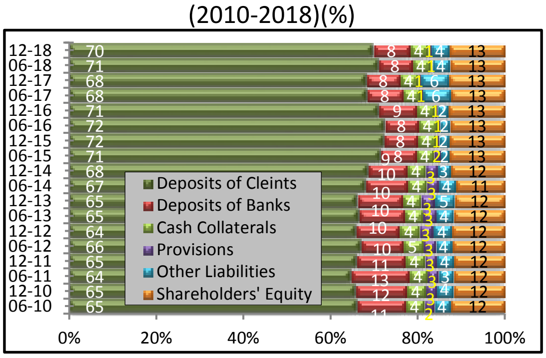
3. The reservation of commercial banks in granting facilities to individuals and companies compared to Islamic banks. This might be attributed to the nature of Islamic banking products. For example, credit facilities for real estate and autos at Islamic banks composite the highest share of loans granted to household. It is known that the real estate and cars are mortgaged as collaterals for paying the due installments, resulting in reducing the risk of lending significantly.
4. The following are the main reasons as to why banks might refuse to grant credit facilities to household customers:

- Incompatibility with the terms and conditions of the credit policy of the bank such as income, employer, duration of employment, and age of the customer.
- High debt burden ratio (DBR) for customers (exceeding the ratio accepted by the bank).
- The existence of bounced cheques for reasons of insufficient balance, and, hence, blacklisting the customer.

### 3.2.3 SOURCES OF FUNDS (LIABILITIES)

Analyzing the sources of funds in the banking system reveals that deposits represent the major source of funding, forming about 69.7% of total sources of funds as at the end of 2018 compared to 68.2% at the end of 2017, or a growth by 2.0% (Figure 3-22).

Figure 3-22. Liabilities Structure of Banking Sector (2010-2018)(%)



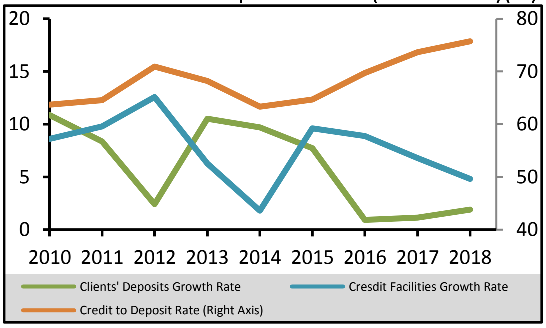

Source: CBJ.

Regarding the second source of funds, shareholders' equity, it decreased from JD 6.3 billion at the end of 2017 to JD 6.2 billion at the end of 2018. The shareholders equity decreased by 1.3%. This decline is attributed to the implementation of the International Financial Reporting Standard No. 9 on the 2018 data and statements. This application of the IFSR 9 standard has resulted in the transfer of additional amounts to the credit loss provision. These amounts have been deducted from equity and specifically from retained earnings. However, the application of IFRS 9 should enhance the soundness and resilience of banks over the medium and long terms through improving transparency and timely recognition of credit losses compared to the International Accounting Standard (IAS) 39.

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. They 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 at the end of 2016. They then declined at the end of 2017 to 7.7% of total sources of funds. In 2018, the deposits grew by 10.0% from the previous year 2017, composing 8.5% of the total sources of funds for banks.

Regarding the evolution of deposits in the banking system, the deposits increased by 2.0% as at the end of 2018 to reach about JD 33.8 billion, compared to a growth of 1.1% for the year 2017. It is to be noted that the growth in deposits is lower than the growth in total credit facilities in 2018 that approximated 5.3%. Consequently, the ratio of credit facilities to deposits at the banking system in the Kingdom increased from 73.6% at the end of 2017 to 75.7% at the end of 2018 (Figure 3-23).

Figure 3-23. Deposits and Credit Facilities Growth Rate and Credit to Deposits Ratio (2010-2018)(%)

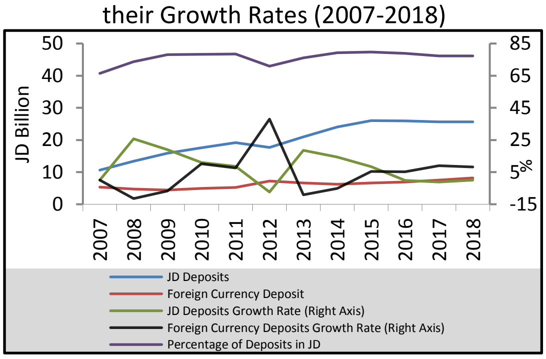



Source: CBJ.

It is worth mentioning in this regard that the modest growth of client deposits at banks during the years (2016-2018) in comparison with the previous period has resulted partially from several non- recurrent forces, such as the termination of the classification of certain deposits that are essentially bank deposits, within customer deposits. Other forces include the request of the Ministry of Finance from the other ministries and government institutions to consolidate their accounts and deposits at banks in a unified account with the CBJ. Another force is the completion of some transactions of purchasing stocks of some banks and companies such as the Arab Bank and Arab Potash Company deals. This, thus, lead some investors to withdraw part of their deposits to complete these transactions.

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 then decreased during the period (2016-2018) to 75.8% at the end of 2018. This is indeed a comfortable figure that reflects the confidence in the Jordanian Dinar as a savings currency and, hence, promotes monetary and financial stability in the Kingdom (Figure 3-24).

Figure 3-24. JD and Foreign Currency Deposits and their Growth Rates (2007-2018)




Source: CBJ.

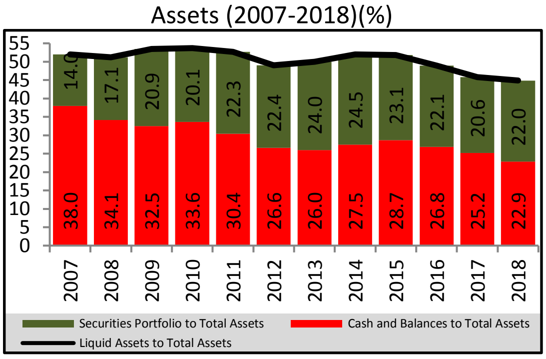
### 3.2.4 BANKING SYSTEM RISKS IN JORDAN- FINANCIAL SOUNDNESS INDICATORS

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.

#### 3.2.4.1 LIQUIDITY

Jordanian banking system enjoys a safe liquidity position. The liquidity ratios at the end of 2018 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 22.9% at the end of 2018, compared to 25.2% at the end of 2017. As for the share of securities portfolio (highly liquid) to total assets, it roughed 22.0% at the end of 2018 compared to 20.6% at the end of 2017. Consequently, the total highly liquid assets constituted about 44.9% of total assets at the end of 2018 compared to 45.8% at the end of 2017. The decline in this ratio is attributed mainly to the growth of credit facilities at higher rates than the growth in deposits (Figure 3-25).

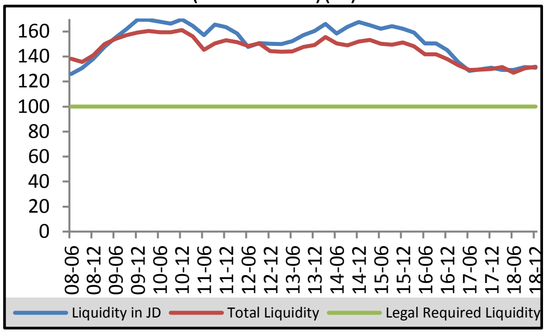
Figure 3-25. Components of Liquid Assets to Total Assets (2007-2018)(%)




Source: CBJ.

Regarding legal liquidity ratio in total that is enforced by the CBJ on banks (the minimum required ratio is 100.0%), the ratio almost maintained in 2018 its level of 131.0% in 2017 (Figure 3-26).

Figure 3-26. Total Legal Liquidity and Liquidity in JD (2008-2018)(%)



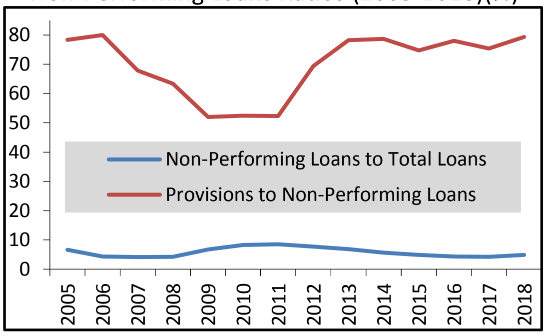

Source: CBJ.

### 3.2.4.2 ASSET QUALITY

Concerning the ratio of non- performing loans to total loans, it continued its downward trend during the period (2012-2017) to reach 4.2% at the end of 2017, compared to 7.7% at the end of 2012. At the end of 2018, however, it achieved a slight increase of 4.9% of total debt.

Regarding the provisions coverage ratio for the non-performing loans, it continued its upward trend that started in 2011 to reach 79.3% at the end of 2018 compared to 75.4% at the end of 2017. This is a positive indicator as it implies that about 80% of the non- performing loans at banks are covered by provisions (Figure 3-27).

Figure 3-27. Non-Performing Loans and Provisions to Non-Performing Loans Ratios (2005-2018)(%)

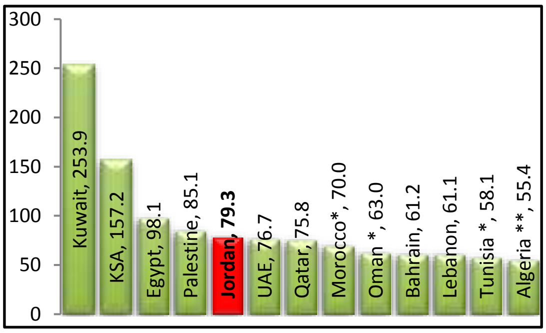



Source: CBJ.

The banking system in the Kingdom ranked fifth among 13 Arab countries in the provisions coverage ratio of the non-performing loans (Figure 3-28).

Analyzing the balance of NPLs (excluding outstanding interests) at the banking system shows that it (the balance) reached JD 1,236.0 million at the end of 2018 registering an increase from its counterpart amount at the end of 2017 by JD 216.7 million, as the balance of NPLs in 2017 reached JD 1,019.4 million. Despite the high ratio of NPLs at banks, the provisions coverage ratio for the non-performing loans has also increased, helping as a result in reducing the risks of these loans on banks.

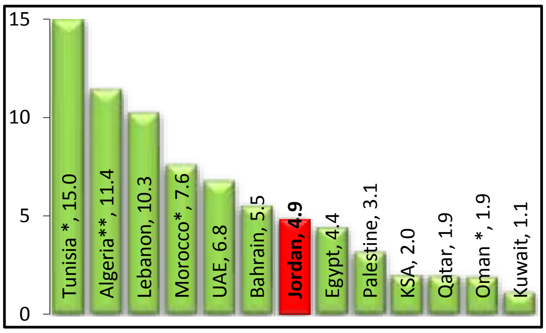
Figure 3-28. Provisions Coverage Ratio for Non-Performing Loans for Jordan and Selected Arab Countries (2018)(%)




Source: For Jordan, CBJ. For other countries, IMF and relevant Central Banks. *Data available for 2017. **Data available for 2016.

The comparison of the NPLs to total debts ratio in Jordan with some Arab countries reveals that Jordan is ranked in the middle amongst 13 Arab countries (Figure 3-29).

Figure 3-29. Non-Performing Loans to Total Loans for Jordan and Selected Arab Countries (2018)(%)

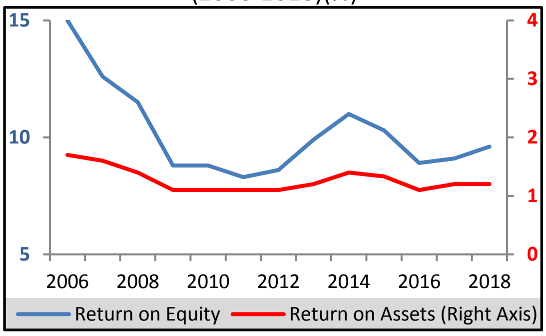



Source: For Jordan, CBJ. For other countries, IMF and relevant Central Banks. *Data available for 2017. **Data available for 2016.

### 3.2.4.3 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 slightly 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. It then returned to the increasing trend to reach 1.2% at the end of 2018. (Figure 3-30).

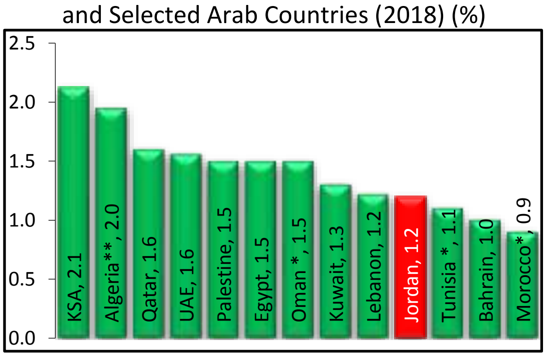
Figure 3-30. Return on Assets and Return on Equity (2006-2018)(%)




Source: CBJ.

By comparing Jordan with some Arab countries in the rate of return on assets in the year 2018, it is noted that Jordan occupied the fourth lowest rank among 13 Arab countries whose data are available. Morocco was the lowest country- among the selected countries- with a rate of return on assets of 0.9%, whereas Saudi Arabia had the highest rate of return on assets of 2.1% (Figure 3-31).

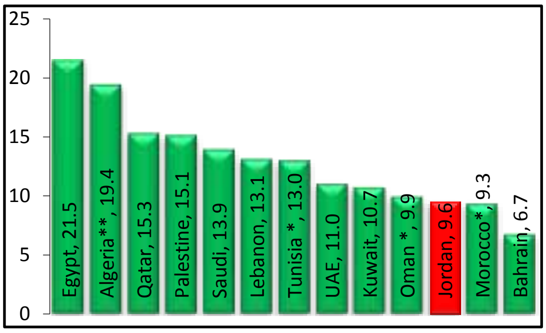
Figure 3-31. Average Return on Assets for Jordan and Selected Arab Countries (2018) (%)




Source: For Jordan; CBJ. For other countries IMF and relevant CBs. * Data available for 2017. ** Data available for 2016.

Regarding the return on equity, 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. After that, it increased in the years 2017 and 2018 to 9.1% and 9.6%, respectively. Therefore, the year 2018 has witnessed an improvement in the profitability rates in banks (Figure 3-30). Compared to several Arab countries, the return on equity is still low, as Jordan occupied the third lowest rank in terms of the return on equity. Bahrain had the lowest return on equity of 6.7%. Egypt had the highest rate of 21.5% (Figure 3-32).

Figure 3-32. Average Return on Equity for Jordan and Selected Arab Countries (2018) (%)




Source: For Jordan; CBJ. For other countries IMF and relevant CBs. * Data available for 2017. ** Data available for 2016.

The low rate of the return on equity 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.

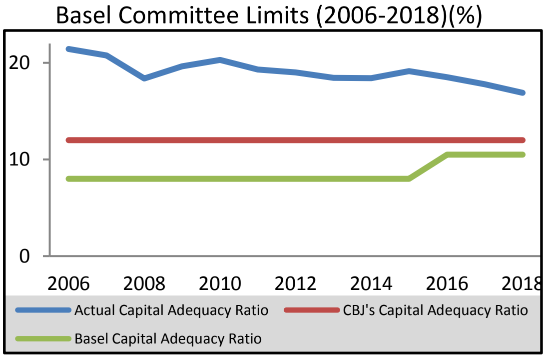
### 3.2.4.4 CAPITAL ADEQUACY

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 set by Basel Committee of 10.5%. However, it declined during 2017 and 2018 to 17.8% and 16.9%, respectively. This decline was a result of the introduction and implementation of International Financial Reporting Standard (IFRS) Number 9 to the 2018 financial statements. This application of the IFSR 9 has resulted in the transfer of additional amounts to the credit loss provision. These amounts have been deducted from equity and specifically from retained earnings. However, the application of IFRS 9 should enhance the soundness and resilience of banks over the medium and long terms through improving transparency and timely recognition of credit losses compared to the International Accounting Standard (IAS) 39.

The tier I core capital ratio has declined as well to 15.4% at the end of 2018, compared with 17.4% at the end of 2017 for the same reason just mentioned above about IFSR 9.

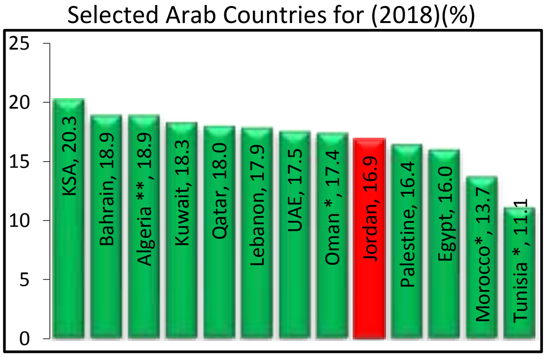
It is worth mentioning that most of the capital of banks in Jordan is composed of tier one core capital that is the highest quality component of capital and the most capable of absorbing losses (Figure 3-33 and Figure 3-34).

Figure 3-33. Actual CAR Compared with the CBJ and Basel Committee Limits (2006-2018)(%)




Source: CBJ.

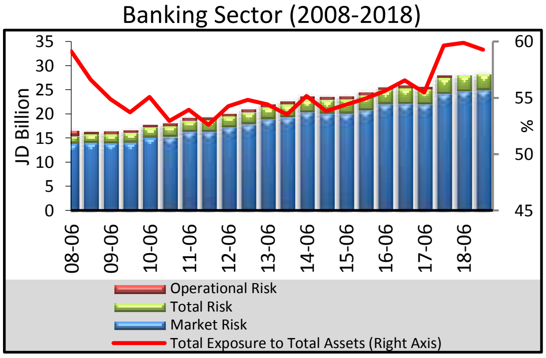
Figure 3-34. Capital Adequacy Ratio for Jordan and Selected Arab Countries for (2018)(%)




Source: For Jordan, CBJ. For other countries IMF and the Relevant Central Banks. *Data available for 2017. **Data available for 2016.

As for the main risks faced by banks, the credit risk is in the forefront of these risks and constituted 87.0% of total risks at the end of 2018, followed by operational risk, which constituted 11.7% of total risk, and market risk, which constituted 1.3% of the total risk. These figures are close to their counterparts in 2017 signaling the relative stability of risk structure in banks without any substantial changes (Figure 3-35).

Figure 3-35. Components of Total Exposures in the Banking Sector (2008-2018)




Source: CBJ.

## 3.2.5 OPERATIONAL EFFICIENCY OF BANKS

Cost (excluding interests)- 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.

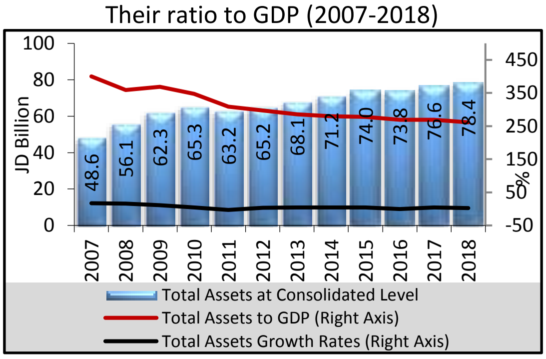
The CIR for the banking system in the Kingdom approached 55.5% at the end of 2018 compared to 56.2% at the end of 2017. On the individual bank level, there were variations among banks in operational efficiency, where the CIR exceeded 55.0% for 14 banks, and was less than 55.0% for ten banks. This means that more than 58.0% of banks in Jordan need to improve their operational efficiency through exercising more control on operational expenses.

## 3.3 ASSETS AND LIABILITIES OF THE BANKING SYSTEM AT THE CONSOLIDATED LEVEL (BRANCHES IN JORDAN AND ABROAD AND SUBSIDIARY COMPANIES AND BANKS)

### 3.3.1 ASSETS

The number of Jordanian banks that have affiliations outside the Kingdom is eight, with the majority being for Arab Bank, whose assets outside Jordan formed about 84.9% of the total affiliations outside the Kingdom as at the end of 2018. The total assets of the Arab Bank outside the Kingdom formed about 72.6% of its total assets on the consolidated level at the end of 2018. The total assets of the Jordanian banking system on the consolidated level approximated JD 78.4 billion at the end of 2018 compared to JD 76.6 billion at the end of 2017, an increase by JD 1.7 billion, or 2.3%. The total assets of the banking system for Jordan branches formed about 61.9% of total assets on the consolidated level at the end of 2018 compared to 61.4% at the end of 2017. Despite the increase in the banking system's assets on the consolidated level from JD 48.6 billion at the end of 2007 to JD 78.4 billion at the end of 2018, the growth rate of these assets followed a clear downward trend as it declined from about 17.0% in 2007 to 2.3% in 2018 (Figure 3-36).

Figure 3-36. Evolution of Total Assets of Banks Operating in Jordan at the Consolidated Level and Their ratio to GDP (2007-2018)




Source: CBJ.

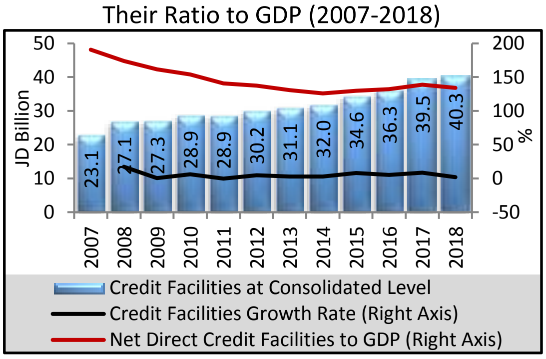
This result is, inevitably, normal, as it is one of the repercussions of the political instability in the region and the decline in the global economic activity, particularly in the Euro Zone, which both affected the existence of Jordanian banks' branches outside the Kingdom.

Regarding the ratio of the assets of the banking system on the consolidated level to GDP, it has followed a downward moving trend. It declined from 269.4% at the end of 2017 to 261.4% at the end of 2018. However, it was much higher back at the end of 2007 and reached 400.0%.

### 3.3.2 CREDIT FACILITIES

The net balance of credit facilities of the banking system on the consolidated level approximated JD 40.3 billion at the end of 2018, recording a growth of 2.0%, compared to JD 39.5 billion at the end of 2017, when the growth was 8.6%. Regarding the ratio of credit facilities of the banking system on the consolidated level to GDP, it reached 134.3% at the end of 2018 compared to 138.7% at the end of 2017 (Figure 3-37).

Figure 3-37. Evolution of Credit Facilities of Banks Operating in Jordan at the Consolidated Level and Their Ratio to GDP (2007-2018)

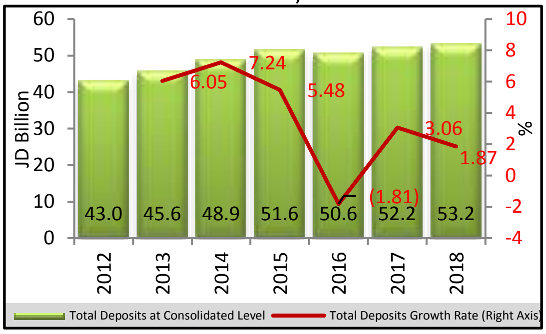



Source: CBJ.

### 3.3.3 DEPOSITS

The deposits of customers in the banking system at the consolidated level increased to JD 53.2 billion, or a growth by 1.9%, at the end of 2018, from JD 52.2 billion at the end of 2017, or a growth of 3.1% (Figure 3-38).

Figure 3-38. Evolution of Deposits at Banks Operating in Jordan at the Consolidated Level (2012-2018)




Source: CBJ.

## 3.3.4 SHAREHOLDERS' EQUITY

The shareholders' equity balance at the banking system on the consolidated level reached JD 11.7 billion at the end of 2018, compared to JD 11.4 billion at the end of 2017. It is worth mentioning that the balance of shareholders' equity followed an upward trend since 2009 (Figure 3-39). This enhances banks' solvency and capacity to confront risks and, hence, promotes the stability of the financial system.

Figure 3-39. Evolution of Shareholders' Equity at the Consolidated Level (2009-2018)

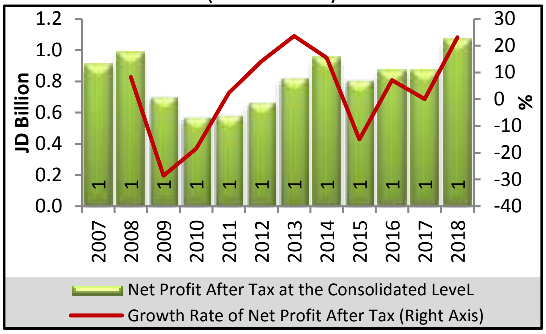

Source: CBJ.

## 3.3.5 NET AFTER- TAX PROFIT, RETURN ON ASSETS AND RETURN ON EQUITY

### 3.3.5.1 NET AFTER- TAX PROFIT

The year 2018 witnessed a remarkable improvement in the net after- tax for the banking system at the consolidated level that amounted to JD 1,071.7 million at the end of 2018, compared to JD 870.1 million at the end of 2017, or a growth by 23.2% (Figure 3-40).

Figure 3-40. Evolution of Net Profit After Tax at Banks Operating in Jordan at the Consolidated Level (2007-2018)




Source: CBJ.

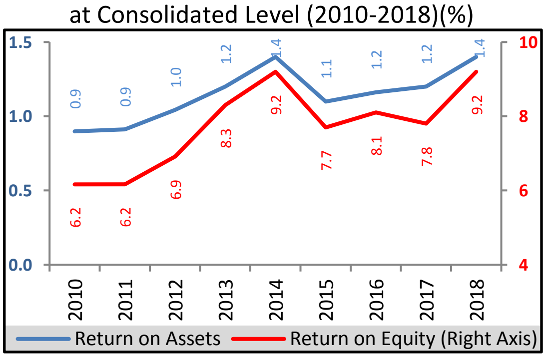
### 3.3.5.2 RETURN ON ASSETS

Because of the increase in the profits of banks, the return on assets in the banking system at the consolidated level increased from 1.2% at the end of 2017 to 1.4% at the end of 2018 (Figure 3-41).

### 3.3.5.3 RETURN ON EQUITY

As well, the return on equity in the banking system at the consolidated level increased from 7.8% at the end of 2017 to 9.2% at the end of 2018 (Figure 3-41).

Figure 3-41. Return on Assets and Return on Equity at Consolidated Level (2010-2018)(%)




Source: CBJ.

## 3.4 FINANCIAL STABILITY INDEX

### 3.4.1 INTRODUCTION

As mentioned in previous financial stability reports, the CBJ developed the Financial Stability Index in 2017 after studying the experiences of several countries in building their financial stability index. Varying methodologies were used in terms of variables, statistical methods, weights, and some other factors. Based on these experiences, international best practices in this regard have been taken into consideration while taking into consideration the specificity of the financial and economic system in Jordan, to build the financial stability index in the Hashemite Kingdom of Jordan. In light of keeping pace with the most important developments in this field and according to the paper issued by the (IFC) [2] and published on the website of (BIS), the CBJ included a new variable in the computation of the index for this year; namely, the Leverage Ratio that was included in the data used to compute the banking stability index, more specifically within the capital adequacy ratio. The variable of the foreign reserves of the CBJ was added to the macroeconomic index. The higher the level of the foreign reserves at the CBJ is, the more stable the Jordanian dinar is, and, hence, the more favorable the monetary, financial, and economic stability in the Kingdom is. The aggregate index consists of three sub-indices, each of which represents a major component of the Jordanian financial system. These sub- indicators are; namely, the banking sector index, represented by ten variables, the macroeconomic index, represented by seven variables, and the capital market index represented by two variables. The aggregate index, thus, consists of 19 sub-variables that were calculated and analyzed historically during the period (2007-2018).

### 3.4.2 METHODOLOGY

The methodology used in building the Financial Stability Index for Jordan is the most common methodology used in countries[3] that developed such and index. The experiences of several countries were utilized and the best international practices were selected to be implemented. As noted from country experiences and after studying the reviewing of several countries in building their financial stability index. The international best practices in this regard have been taken into consideration while taking into consideration the specificity of the financial system in Jordan through the domination of the banking sector over the other components in the financial system. Therefore, the components of the banking sector formed more than half the indicators used in in build the aggregate financial stability index. Box 3-1 includes a detailed explanation of the methodology of calculating the Financial Stability Index for Jordan.

**Box 3-1. Calculating the Financial Stability Index**

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:

$$\mathrm{d_i} = \frac{\mathrm{A_i} - \min\limits_{\mathrm{i}} \mathrm{A_n}}{\max\limits_{\mathrm{i}} \mathrm{A_n} - \min\limits_{\mathrm{i}} \mathrm{A_n}} \qquad (1)$$

Where:

**Ai**: The actual indicator value.

**di**: The rescaled (normalized) indicator.

**Min[4]** & **max**: The minimum and maximum value of the sub-indicator.

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 the Kingdom. The following weights were allocated to the banking sector indicators.

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 (The weighted average of the sub-indices used in calculating it):

$$\mathrm{BS_i} = \frac{\sum_1^{10} W_b d_b}{10} \qquad (2)$$

[2] Measures of Financial Stability – a Review (IFC Bulletin No 31)
[3] Banking Stability Index: A Cross-Country Study.
[4] The minimum limit of ratios that have lower limits in the relevant instructions were used instead of the minimum observation during the study period.

The Macro Economy Index:

$$Es_i = \frac{\sum_1^7 d_E}{7} \tag{3}$$

The Capital Market Index:

$$Ms_i = \frac{\sum_1^2 d_M}{2} \tag{4}$$

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:

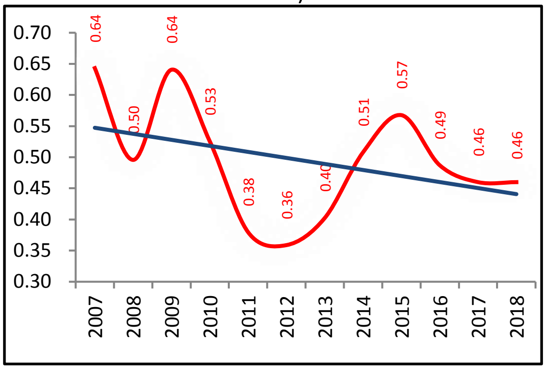
$$JFSI = 10/19\,Bs_i + 7/19\,Es_i + 2/19\,Ms_i \tag{5}$$

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

### 3.4.3 FINANCIAL STABILITY INDEX CALCULATION RESULTS IN JORDAN

As previously mentioned, the value of the financial stability index ranges from zero to one. As the closer the value is to one, the greater is the degree of stability in the financial system. The value of the financial stability index in Jordan was 0.64 at the end of 2007 before the financial crisis and then decreased due to the global financial crisis to record 0.50 at the end of 2008. Then the index rose again to 0.64 at the end of 2009 and returned to the declining path during the period (2010-2012) to record its lowest value of 0.36 at the end of 2012. This record low value is due to the events of the Arab Spring, the refugee crisis, and the difficult economic conditions experienced by the Kingdom, especially in 2012. After that, the index did a partial recovery to reach 0.49 at the end of 2016 before declining slightly to 0.46 in 2017 and maintaining the same figure in the year 2018 (Figure 3-42).[5]

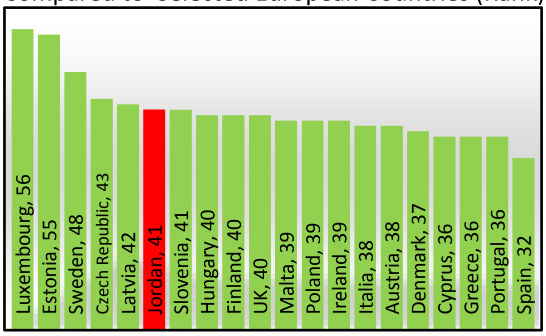
Figure 3-42. Jordan Financial Stability Index (2007-2018)




It could be concluded that the developments of the Financial Stability Index in Jordan tell that the degree of financial stability in Jordan is considered relatively satisfactory when taking into consideration the economic developments in Jordan and the region and its possible impact on financial stability.

By comparing the Banking Sector Stability Index with some selected group of countries that developed it using the same methodology used by Jordan, Jordan ranked sixth out of 20 countries as shown in Figure 3-43. This confirms that Jordan has a sound, resilient, and stable banking sector to a high degree.

Figure 3-43. Banking Sector Stability Index: Jordan Compared to Selected European Countries (Rank)




Source: Banking Stability Index: A Cross-Country Study.

[5] One of the main downsides of the Financial Stability Index, which has been recognized by most of the countries that developed it, is that this indicator is highly sensitive to any changes in the values of sub-indices that are included in the calculation regardless of how small these values are.

## 3.5 DEVELOPMENTS IN NON-BANK FINANCIAL SECTOR (NON- BANK FINANCIAL INSTITUTIONS)

### 3.5.1 INSURANCE SECTOR

Insurance sector is one of the primary components of the financial sector. 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 2.1% in 2018.

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

1. 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.
2. Transferring the supervision of the insurance sector to the CBJ within two years at most.
3. Updating the supervisory frameworks of the insurance business- within two years at most- to comply with the market developments with regards to the following:

a- Improving the financial solvency of the insurance companies and setting clear and transparent standards to supervise the financial solvency of these companies.

b- Setting regulatory requirements that ensure separating life insurance business from the other forms of general insurance for the companies that offer both categories.

c- Implementing the prudential regulatory requirements for the investment policies of these companies.

d- Determining the supervisory authorities and responsibilities for the insurance companies that are part of a group of financial companies.

e- Enhancing corporate governance requirements for the insurance companies.

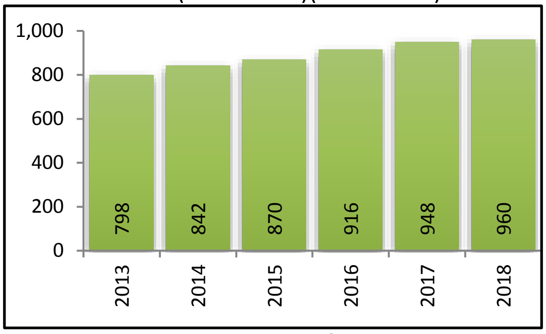
4. The formation of a committee headed by the Deputy Governor of the CBJ and with the membership of the acting director of the insurance department at the Ministry of Industry, Trade, and Supply; a representative of the Legislation and Opinion Bureau; and a representative of the Ministry of Public Sector 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.

To enforce the Cabinet's decision, the CBJ in cooperation and coordination with the Ministry of Industry, Trade, and Supply (that is responsible currently for the supervision and oversight of the insurance sector) drafted a law to regulate the insurance business which aims at developing a cutting edge working mechanism that enables the CBJ to supervise and oversee the insurance sector effectively and efficiently. The draft law is still under discussion by the House of Representatives where it was referred to the parliamentary committee concerned with economy and investment and which has completed reviewing some of its articles.

The Insurance Sector in Jordan consists of 24 companies; one company is licensed for offering life insurance, eight companies are licensed to practice general insurance business, while 15 companies are licensed to provide general and life insurance. In addition, the insurance sector includes 1,044 entities offering supporting insurance services including insurance agents and brokers, reinsurance brokers, loss settlement specialists, inspectors, subscription delegates, actuaries, insurance consultants, insurance business management companies, banks licensed to practice insurance business, as well as reinsurance brokers residing abroad.

Total assets of insurance companies in the Kingdom totaled JD 960.0 million at the end of 2018 compared to JD 948.0 million at the end of 2017, an increase of 1.3% (Figure 3-44).

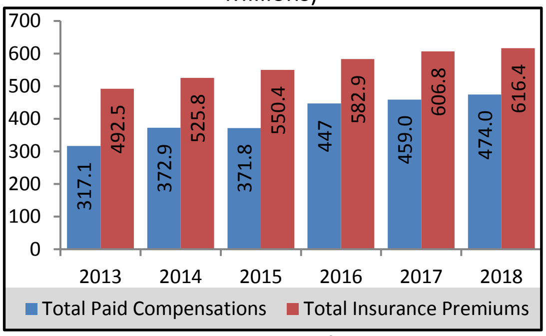
Figure 3-44. Evolution of Insurance Companies Total Assets (2013-2018)(JD Millions)




Source: Annual Financial Reports of Insurance Companies, 2018.

According to 2018 annual reports, total insurance premiums increased by 1.6% in 2018 to reach JD 616.4 million, compared to JD 606.8 million in 2017. On another hand, total paid claims increased slightly by 3.3% to reach JD 474.0 million in 2018 compared to JD 459.0 million in 2017 (Figure 3-45).

Figure 3-45. Evolution of Total Insurance Premiums and Total Paid Compensations (2013-2018) (JD Millions)




Source: Annual Financial Reports of Insurance Companies, 2018.

As for the financial outcomes of the business of insurance companies, total investments declined from JD 569.0 million in 2017 to JD 563.4 million in 2018. while the paid-in capital increased from JD 265.0 million at the end of 2017 to JD 266.4 million at the end of 2018 (Table 3-1). As for the profits of insurance companies, the net profit after tax in 2018 amounted to JD 15.0 million compared to JD 3.0 million in 2017, a growth rate of almost 400%.

Table 3-1. Financial Results of Insurance Companies (2013-2018)

| Statement | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Total Investments | 504.9 | 534.4 | 533.6 | 543.5 | 569 | 563.4 |
| Total assets | 798 | 842.2 | 869.7 | 915.6 | 948 | 960 |
| Shareholders' equity | 317.7 | 332.8 | 330.7 | 343.7 | 335 | 318 |
| Total written premiums in Jordan | 492.5 | 525.8 | 550.4 | 582.9 | 606.8 | 616.4 |
| Total claims paid | 317.1 | 372.9 | 371.8 | 447 | 459 | 474 |
| Paid in capital | 281 | 268 | 269 | 267 | 265 | 266.4 |

Source: Data for the period (2013-2016): The Jordanian Insurance sector results report. Data of 2017 and onward: annual balance sheets of insurance companies and monthly publications of the insurance department.

### 3.5.2 NON-BANKING FINANCIAL INSTITUTIONS

Non-banking financial institutions play a fundamental role in the economy as they provide credit to segments facing difficulties to access banks.

Non-banking financial institutions extend credit to customers without accepting deposits, and are subject to the supervision of the Ministry of Industry, Trade, and Supply. However, as a part of its endeavor to include non-banking financial institutions under its umbrella (such as the MFIs that were included in 2015); the CBJ outsourced Ernst & Young company to conduct a comprehensive market study on the state of non-banking financial institutions in Jordan, which was finalized in March 2018. The sample included the majority of financial institutions that provide financing, which were divided into these categories:

1- Microfinance institutions.
2- Financial Leasing companies.
3- Multi financing companies.
4- SMEs financing companies.

The main results of the study that included 43 companies with a total capital forming approximately 97% of the financing institutions capital are stated next (Table 3-2).

Table 3-2. Non-Banking Financial Institutions

| Item | Financial Leasing Companies | Microfinance Institutions | Mixed financing Companies | SMEs Financing Companies | Total non-banking |
|---|---|---|---|---|---|
| Number of companies | 15 | 14 | 12 | 2 | 43 |
| Size of loans Portfolio (JD million) | 408 | 198 | 199 | 17 | 822 |
| Market share (%) | 49.7 | 24.1 | 24.2 | 2.1 | 100 |
| Paid in capital (JD million) | 127 | 24 | 137 | 0.1 | 289 |
| Total Shareholders' equity (JD million) | 240 | 80 | 164 | 9 | 493 |
| Total Liabilities (JD million) | 174 | 128 | 64 | 13 | 378 |
| Total assets (JD million) | 443 | 228 | 272 | 24 | 968 |
| provided products | Real Estate, Cars, Industrial Equipment, Office Equipment, and Medical Equipment. | Production loans, Consumption loans, technical support services and consultation. | Financing working capital, equipment financing, auto loans, real estate, personal loans, and credit cards. | Production loans, factoring services, technical support services and consultation. | |
| Size of loans | JD 50,000- JD 1.5 million | JD 300 - JD 50,000 | JD 1,000- JD 500,000 | JD 10,000- JD 1.4 million | |

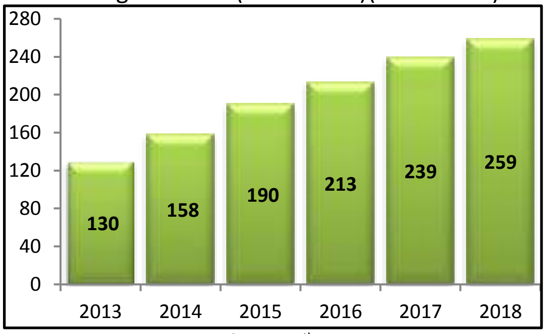
### 3.5.2.1 MICROFINANCE SECTOR[6]

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%.

Whereas during the period (2016-2018), the growth rate of loans started to decrease gradually to 12.0%, 12.0%, and 9.0% for the years 2016, 2017, and 2018, respectively (Figure 3-46).

The total loan portfolio of the microfinance companies approximated JD 259.0 million at the end of 2018 compared to about JD 239.0 million at the end of 2017. The number of borrowers reached 465,717 borrowers at the end of 2018 compared to 438,279 borrowers at the end of 2017 at a growth rate of 6.0%. Moreover, the average value of loans increased from JD 550.0 at the end of 2017 to JD 573.0 at the end of 2018, at a growth rate of 4.0%.

Figure 3-46. Evolution of Microfinance Companies' Lending Portfolio (2013-2018)(JD Millions)



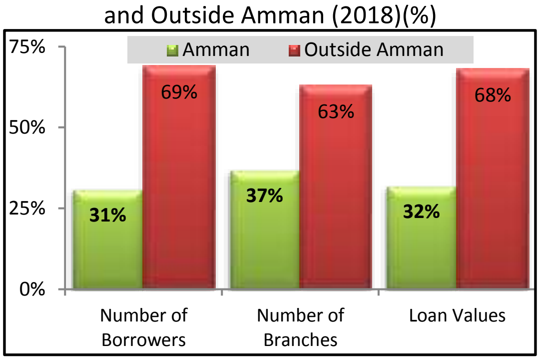

Source: Tanmiyah Report for the 4th Quarter, 2018.

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:

### 3.5.2.2 THE ACTIVITIES OF MICROFINANCE SECTOR OUTSIDE THE CAPITAL

The microfinance sector focuses on governorates outside the capital. In this regard, 69.0% of borrowers, 63.0% of loans value, and 68.0% of microfinance companies' branches are located outside the Capital Amman. (Figure 3-47). The growth ratio of the number of borrowers during 2018 inside Amman got to 5.0%, while the growth in the governorates outside Amman ranged between 3.0% and 16.0% for the same period.

Figure 3-47. Activity of Microfinance Sector Inside and Outside Amman (2018)(%)

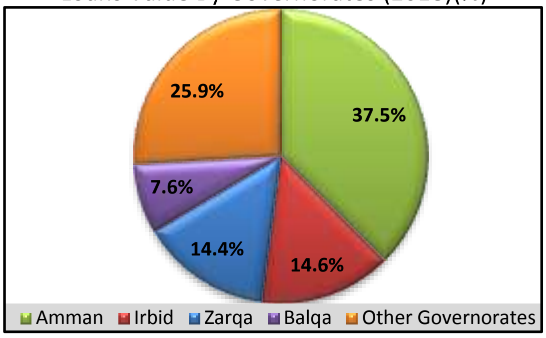



Source: Tanmiyah Report for the 4th Quarter, 2018.

[6] According to Tanmiyah Report for the fourth quarter of 2018.

Regarding the distribution of loans value extended by microfinance companies among governorates during 2018 (Figure 3-48), the Capital Amman obtained 37.5% of the total loans, followed by Irbid that obtained 14.6% of total loans, then Zarqa and Balqa that obtained 14.4% and 7.6% of total loans, respectively. All other governorates together obtained 25.9% of total loans.

Figure 3-48. Distribution of Microfinance Companies Loans Value By Governorates (2018)(%)




Source: Tanmiyah Report for the 4th Quarter, 2018 and CBJ accounts.

Major characteristics of microfinance companies in Jordan are discussed as follows:

- Microfinance institutions in Jordan totaled 15 institution, of which nine institutions are members of Tanmiyah Jordan Microfinance Network, one institution is a subsidiary to a bank, and one institution is affiliated to UNRWA.
- Total paid-in capital of microfinance institutions approximated to JD 20.45 million.[7]
- These companies provide productive loans to micro and small companies, in addition to individual loans that include property maintenance loans, durable goods loans, student loans, and group loans (loans provided to two or more persons who all guarantee the loan).
- In addition to financing, these institutions provide technical support and consultation such as the appointment of an accountant to assist small institutions in financial management, and enabling small enterprises to conduct feasibility studies of projects using financial forecasting and performance analysis.
- The size of a loan provided by microfinance companies ranges from JD 300.0 to JD 75.0 thousand.
- The services offered by the microfinance institutions cover all governorates in the Kingdom, including remote areas.
- These companies charge rates that amount to 18% on average.
- The sources of funding of microfinance institutions constitute of loans and shareholders' equity, with the exception of two Islamic companies that rely solely on shareholders' equity.
- The member institutions of Tanmiyah network can inquire about the credit applicants through the network. In addition, eight microfinance companies are subscribed to (CRIF) Credit Bureau.

### 3.5.2.3 FINANCIAL LEASING COMPANIES[8]

Total assets of financial leasing companies that are subsidiaries of banks in Jordan approximated JD 521.7 million at the end of 2018 compared to JD 499.7 million at the end of 2017, at a growth rate of 4.4%.

Shareholders' equity increased from JD 251.8 million at the end of 2017 to JD 266.0 million at the end of 2018. Concerning the business results of these companies, the net profit after tax increased slightly from JD 17.6 million at the end of 2017 to JD 17.7 million at the end of 2018, or by 0.5%. The Return on Equity decreased from

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[7] According to the market study conducted by Ernst & Young Company that was outsourced by CBJ.
[8] Data includes the eight financial leasing institutions that are subsidiaries of banks and that dominate most of the financial leasing activity in the Kingdom. Financial leasing funded by Islamic Banks themselves was not taken into account.

7.3% in 2017 to 6.8% in 2018. The Return on Assets also decreased from 3.9% in 2017 to 3.5% in 2018 due to the growth of shareholders' equity and assets at rates greater than the growth of profits (Table 3-3).

Table 3-3. Financial Leasing Companies Developments (2013- 2018) (JD Million)

| Statement | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Revenues | 24.4 | 26.5 | 30 | 32.3 | 37.7 | 43.3 |
| Paid-In Capital | 100 | 101 | 111 | 121 | 142.5 | 175 |
| Total Assets | 249.1 | 271.3 | 327.1 | 401.6 | 499.7 | 521.7 |
| Shareholders' Equity | 174.2 | 184.8 | 205.5 | 227.8 | 251.8 | 266 |
| After-Tax Profit | 12.7 | 13.4 | 15.7 | 17.3 | 17.6 | 17.7 |
| ROE (%) | %7.8 | %7.5 | %8.1 | %8 | %7.3 | %6.8 |
| ROA (%) | %5.3 | %5.1 | %5.3 | %4.8 | %3.9 | %3.5 |

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

It is worth mentioning that the number of financial leasing companies, according to the study conducted by Ernest & Young company, reached 15 companies, including nine subsidiaries of banks that accounted for the bulk of the financial leasing activity in the Kingdom.

The main features of the financial leasing institutions are displayed below: [9]

1. The total credit portfolio of these companies is approximately JD 408.0 million.
2. These companies are primarily providing financial leasing to the real estate sector (more than 70.0% of the financial leasing portfolio), which encouraged them to mitigate this concentration by providing financing to medical, industrial, and machinery equipment. However, financial leasing provided to individuals is granted mainly for housing loans and auto loans.
3. Leasing companies offer their products at a floating interest rate ranging from 9.5%-13.0% with lower rates for housing loans and auto loans.
4. As for financial leasing granted to the SMEs sector, it is granted mainly to companies operating in the real estate sector, in addition to the health care, education, transport, and industrial sectors.
5. These companies finance their business primarily through borrowing from banks and shareholders' equity.

### 3.5.2.4 MIXED FINANCING COMPANIES

Mixed financing companies provide services to individuals and MSMEs. Following are the main features of these companies:[10]

1. Total credit portfolio of these companies approached JD 200 million.
2. The mixed financing companies offer diversified financing services that are distinguished from other non-banking financing institutions, including: financing working capital, equipment financing, cars financing, real estate financing, credit cards, furniture loans, and student loans.
3. These companies offer financing services only without any consultation services included.
4. With regard to the financing provided to individuals, these companies provide financing to any person who owns a bank account, and offer the highest financing amounts for housing loans and auto loans.
5. The extended loans for MSMEs by these companies range between JD 5,000- JD 250,000, and may reach up to JD one million for certain customers.
6. Financing is obtained against collaterals that are cheques, bills, or both. For loans exceeding certain amounts, a mortgage of a real estate or a car is required as collaterals. These companies require a guarantor to provide the financing.

- These companies are based in four governorates only: Amman, Zarqa, Irbid, and Aqaba. These companies avoid providing

[9] According to the market study conducted by Ernst & Young Company that was outsourced by CBJ.
[10] According to the market study conducted by Ernst & Young Company that was outsourced by CBJ.

credit to remote areas due to the difficulty of the collection process.

- The financing is provided at an interest rate ranging from 7%-13%.
- These companies rely on shareholders' equity as a major source of funding, and are the least among non-bank financing institutions that access to bank loans.

#### 3.5.2.5 SMEs Financing Companies

Despite the fact that 63.0% of banks in Jordan have departments/ specialized units to provide lending to SMEs, only 13% of total loans are granted to SMEs. This essential sector is financed mainly by mixed financing companies, microfinance institutions in addition to two companies specializing in financing SMEs exclusively. Following are the main characteristics of these two companies:[11]

- Total credit portfolio of the two companies reached JD 17 million, while the total equity is JD 9 million.
- These two companies provide the following services:

1. Providing loans to SMEs in all economic sectors except the agricultural sector due to its high risk.
2. Technical support and consultation services.
3. One of the two companies provides the factoring service (purchase of invoices from companies at a price below its value).

- For projects seeking financing, a feasibility study is usually requested. One of the two companies may conduct it and free of charge, if the customer is unable to do that.

### 3.5.3 Currency Exchange Sector

The number of exchange companies licensed in the Kingdom reached 138 companies operating through headquarters, in addition to 151 branches that are distributed across all governorates in Jordan - totaling 289 exchange sites (Table 3-4).

Table 3-4. Foreign Exchange Companies and Their Branches

| Governorate | No. Of Companies | No. Of Branches | Total |
|---|---|---|---|
| Capital | 85 | 98 | 183 |
| Zarqa | 13 | 14 | 27 |
| Irbid | 9 | 15 | 24 |
| Aqaba | 7 | 8 | 15 |
| Other Governorates | 24 | 16 | 40 |
| Total | 138 | 151 | 289 |

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

[11] According to the market study conducted by Ernst & Young Company that was outsourced by 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 3-5).

Table 3-5. Most Important Indicators for the Currency Exchange Sector in 2018

| Indicator | JD Million, % |
|---|---|
| Total Business size | 156 |
| Total Capital | 96.2 |
| Total Financial guarantees offered | 31 |
| Total Purchases of foreign currency | 8,229 |
| Total Sales of foreign currency | 8,244 |
| Return on capital (%) | 3.07% |
| Return on assets (%) | 1.79% |

According to the Exchange Law, instructions about Holding Foreign Currency Accounts with Foreign Banks By Licensed Exchange Companies were enacted on 29/1/2017, and the instructions on Anti-Money Laundering and Combating Financing of Terrorism of Exchange Companies and amendments No. (70/2018), were amended and circulated in their final form on 5/7/2018. Instructions of Cyber Risks Adaptation for Exchange Companies No. 17/2018, dated 3/10/2018 were also issued.

### 3.5.4 SOCIAL SECURITY CORPORATION[12]

The social security corporation (SSC) has a major contribution in the society as the social security umbrella includes 51,279 active firms, 59.6% 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 2018. 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 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 34.1% of GDP at the end of 2018 compared to 32.5% at the end of 2017.
- 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 SSC 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, the Social Security

[12] 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.

Investment Fund (SSIF) started its activities 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 JD 10,237.9 million at the end of 2018, compared to about JD 9,237.9 million at the end of 2017, registering a growth of 10.8% and by JD one billion. The SSIF also achieved a net profit of JD 439.0 million at the end of 2018 compared to approximately JD 360.0 million at the end of 2017; or an increase of JD 132.0 million representing a ratio of 22.0%. The SSIF investment portfolios are composed of seven main portfolios (Table 3-6).

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 instruments portfolio (matures in less than a year) and securities portfolio (matures in a year or more). Besides, the SSIF has a loan portfolio that includes medium and long-term loans, of which some are direct loans and multi- bank loans. The stock portfolio includes the stocks of public companies enlisted in Amman Stock Exchange and the stocks of strategic private shareholding companies as allowed by the investment fund's policy. The real estate portfolio includes all types of real estate like lands, commercial projects or commercial development projects, and investment buildings. The tourism investments portfolio includes tourist facilities in all forms, as a way to diversify its investment portfolios and mitigate risks. Of course, the SSIF abides by preset regulations and constrains for investments.

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 JD 287.8 million as of the end of March 2019, forming 11.75% of the total capital of banks in Jordan (Table 3-7).

Table 3-6. Distribution of SSIF Portfolios (2017-2018) (JD Million)

| Investment Portfolios of SSIF | 2017 | 2018 |
|---|---|---|
| Money Market Instruments | 962.8 | 1,382.4 |
| Securities | 4,680.7 | 5,148.4 |
| Loans | 229.6 | 274.2 |
| Investment in Stocks | 2,071.3 | 2,051.8 |
| Real Estate | 581.1 | 597.7 |
| Tourism | 250.3 | 251.3 |
| Other | 462.2 | 532.2 |
| Total | 9,237.9 | 10,237.9 |

Source: The official site of SSIF

Table 3-7. Distribution of SSC Contribution in Jordanian Banks' Capitals (March 2019)

| Bank | Value (JD Million) | Share (%) |
|---|---|---|
| Jordan Kuwait Bank | 21.04 | %21.04 |
| Jordan Commercial Bank | 23.81 | %19.84 |
| Arab Bank PLC. | 108.84 | %16.98 |
| Housing Bank for Trade & Finance | 48.48 | %15.39 |
| Jordan Ahli Bank PLC | 19.29 | %10 |
| Capital Bank of Jordan | 18.54 | %9.27 |
| Safwa Islamic Bank | 9.05 | %9.05 |
| Cairo Amman Bank | 12.97 | %7.20 |
| Bank al Etihad | 8.47 | %5.29 |
| Jordan Islamic Bank | 9.00 | %5.00 |
| Arab Jordan Investment Bank | 6.12 | %4.08 |
| Bank – ABC | 2.25 | %2.05 |
| Total | 287.86 | %11.75 |

Source: Official site of the Securities Depository Center

### 3.5.5 AMMAN STOCK EXCHANGE (ASE)

ASE indices witnessed an evident decline during 2018 compared to the previous year. The trading volume decreased by 20.7%, whereas free- float share price index decreased by 10.25%. On the other hand, the market value of shares listed on ASE decreased by an amount of JD 839.9 million, or 4.95%, to get to JD 16,122.7 million, representing 56.2% of GDP. The net investment by non- Jordanians recorded an inflow of JD 484.5 million during 2018. Following is a summary review of the most important performance indicators of the ASE during 2018:

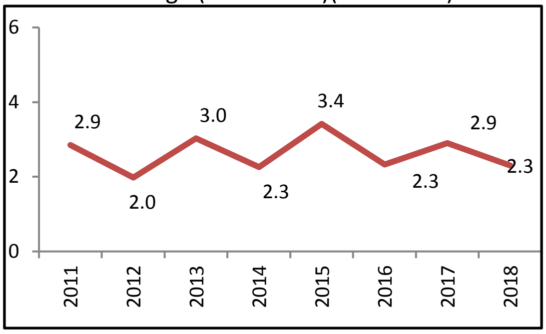
- The trading volume in ASE decreased by JD 606.9 million to reach JD 2,319.3 million in 2018 (Figure 3-49). This decline is the outcome of the following factors:

1- Decrease in the trading volume of the financial sector by JD 781.97 million.

2- Decrease in the trading volume of the services sector by JD 148.04 million.

3- Increase in the trading volume of the industry sector by JD 323.1 million.

Figure 3-49. Trading Volume in Amman Stock Exchange (2011-2018)(JD Billions)




Source: Amman Stock Exchange

The number of traded shares in 2018 decreased by 470.8 million shares to reach 1,245.9 million shares, compared to 1,716.7 million shares traded in 2017. Moreover, the number of executed contracts decreased to 511.8 thousand contracts at the end of 2018 from about 717.5 thousand contracts at the end of 2017. Regarding the number of traded shares by sector, the financial sector had the largest share that composed about 48.01% of the trading volume during 2018, followed by the industry sector whose share composed 42.2%, and then the services sector whose share comprised 9.79% (Table 3-8).

Table 3-8. Relative Importance of Trading Volume by Sector (2012-2018)(%)

| Sector | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Manufacturing | 19.5 | 13.1 | 16.7 | 10.1 | 30.2 | 22.4 | 42.2 |
| Services | 20.4 | 13.5 | 16.5 | 21.2 | 18.2 | 12.8 | 9.79 |
| Financial | 60.1 | 73.4 | 66.8 | 68.7 | 51.6 | 64.8 | 48 |

With respect to transactions of the non-Jordanian investors in the ASE, they recorded an increase of JD 484.5 million during 2018, compared to a net outflow of JD 334.3 million during 2017. The value of shares bought by the non- Jordanian investors reached about JD 1,231.8 million during 2018, while the value of shares sold by the non-Jordanian investors roughed JD 747.3 million (Table 3-9).

Table 3-9. Purchases and Sales of Stocks in ASE by Non-Jordanian Investors (2013-2018) (JD million)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Total bought | 939.5 | 362.7 | 981.7 | 666.5 | 994.9 | 1231.8 |
| Arabs | 818.5 | 262.1 | 894.3 | 520.3 | 638.7 | 214.4 |
| Foreigners | 121.0 | 100.6 | 87.4 | 146.2 | 356.3 | 1,017.4 |
| Total Sold | 792.6 | 384.8 | 971.1 | 429.4 | 1329.2 | 747.3 |
| Arabs | 693.2 | 247.8 | 873.5 | 304.1 | 1177.6 | 177.1 |
| Foreigners | 99.4 | 137 | 97.6 | 125.3 | 151.6 | 570.2 |
| Net Investment | 146.9 | 22.2- | 10.6 | 237.1 | 334.3- | 484.5 |
| Arabs | 125.3 | 14.3 | 20.7 | 216.2 | 538.9- | 37.3 |
| Foreigners | 21.6 | 36.5- | 10.1- | 20.9 | 204.7 | 447.2 |

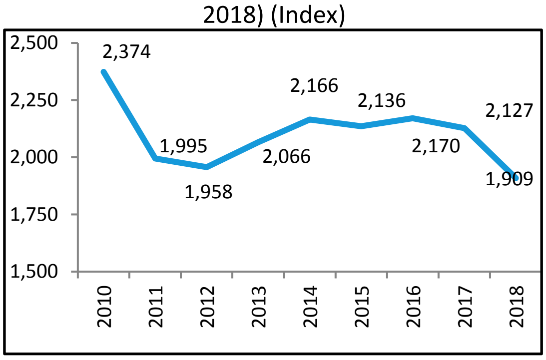
### 3.5.5.1 FREE FLOAT SHARE PRICE INDEX (FFSPI)

The FFSPI reached 1,908.8 points at the end of 2018, recording a decrease of 218.0 points from its level at the end of the previous year. This decrease was due to the decline in the FFSPI of the services sector by 169.9 points and by 11.72%, the decline in the FFSPI for the financial sector by 228.8 points and 7.94%, and the decline in the FFSPI for industry sector by 346.8 points and 15.5%; from their counterparts in 2017.

### 3.5.5.2 WEIGHTED SHARE PRICE INDEX

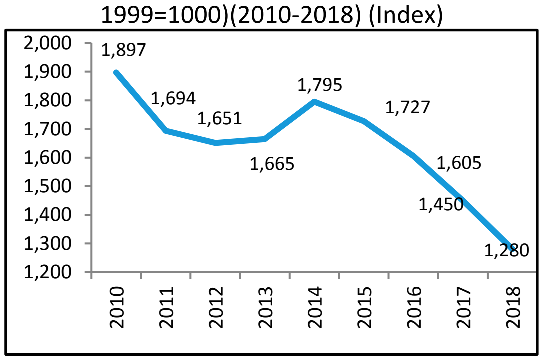
The WSPI declined in 2018 by 212.35 points from its level at the end of 2017 to reach 3,797.09 points, compared to a decline by 60.3 points in 2017. This decline is the outcome of the decline in the SPI of the sectors of banks, financial institutions, services companies, and industrial companies.

Figure 3-50. Market Capitalization Weighted FFSPI of Shares (December Closing Price, 1999=1000)(2010-2018) (Index)



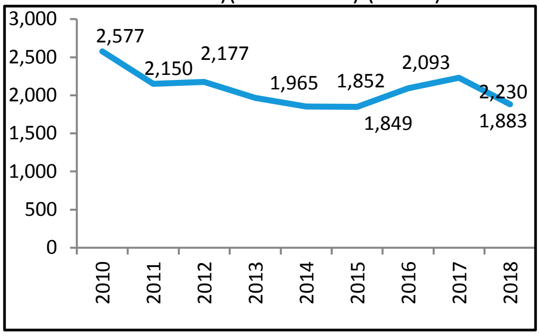

Source: Amman Stock Exchange.

Figure 3-51. Market Capitalization Weighted FFSPI of Financial Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2018) (Index)




Source: Amman Stock Exchange.

Figure 3-52. Market Capitalization Weighted FFSPI of Service Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2018) (Index)

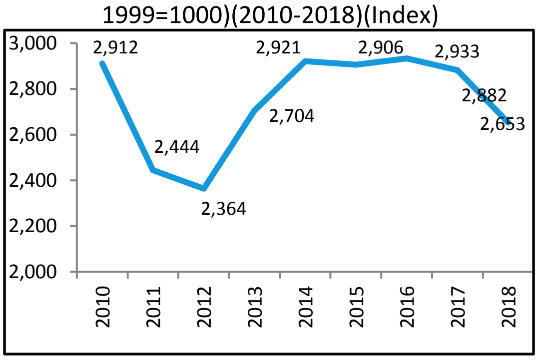



Source: Amman Stock Exchange

### 3.5.5.3 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.

Figure 3-53. Market Capitalization Weighted FFSPI of Manufacturing Sector's Shares (Dec. Closing Price, 1999=1000)(2010-2018)(Index)

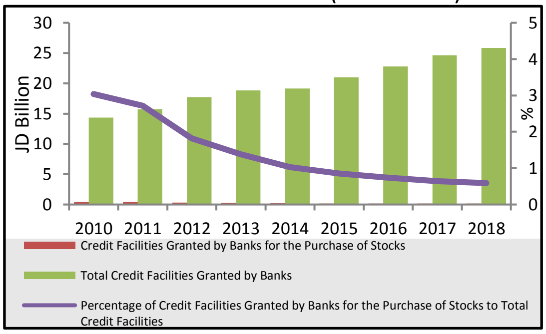



Source: Amman Stock Exchange.

### 3.5.5.4 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 JD 152.0 million at the end of 2018, representing 0.59% of the total facilities granted by banks, compared to JD 158.1 million at the end of 2017 with a decline of 3.9%. The facilities granted for the purchase of shares took a downward trend during the period (2010-2018) (Figure 3-54).

Figure 3-54. Total Credit Facilities Granted by Banks for the Purchase of Shares & Total Credit Facilities Granted to All Sectors (2010-2018)

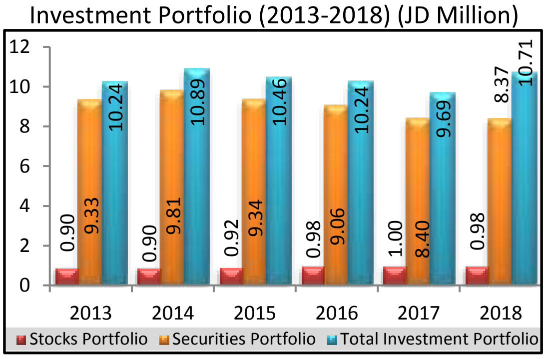



Source: CBJ.

### 3.5.5.5 THE SIZE OF BANKS' INVESTMENTS IN SHARES

The size of securities portfolio of banks in Jordan approximated JD 10,707.0 million at the end of 2018 compared to JD 9,689.0 million at the end of 2017, or an increase by 10.5%. The banks' investments in shares comprised 9.2% of the total investments in securities at the end of 2018, which is relatively low compared to the banks' investments in bonds that 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 3-55).

Figure 3-55. Distribution of Banks' Securities Investment Portfolio (2013-2018) (JD Million)




Source: CBJ.

# Chapter Four

# Non-Financial Sector Developments and Risks

## 4.1 Household Sector

### 4.1.1 Exposure of Banks and Other Financial Institutions to Household Sector

Due to the importance of household debt to banks and non-banking financial institutions and the systemic risks it could cause, and in the course of the follow- up of the ratio of total household debt to income and the monthly debt burden to income, the ratio of household debt for the year 2018 was calculated using the same methodology that was outlined in the JFSRs for the previous years. Next is a summary of the main developments in the household indebtedness and the relevant ratios and indicators.

### 4.1.2 Household Indebtedness to Banks and Non-Bank Financial Institutions

Table 4-1 shows the evolution of household debt with banks and non- bank financial institutions during the period (2014 - 2018). As shown in the table, the household debt increased from JD 10.4 billion at the end of 2017 to JD 10.8 billion at the end of 2018, or by 3.7%, compared to a percent increase of 8.9% at the end of 2017 – which is an evident decline in the growth rate of household debt in 2018 relative to 2017.

The modest increase in the household debt in 2018 is attributed to the increase in the household debt at the non-banking financial institutions by 4.0% at the end of 2018. Whereas the growth rate of household debt with the banking system grew by 3.7% at the end of 2018, which is lower than the growth rate of total credit facilities of 5.0% in general.

Table 4-1. Household Debt at Banks and Non-Banking Financial Institutions (2014-2018)

| Debt | | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Banking Sector | JD Million | 8,066.3 | 8,967.2 | 8,737.2 | 9,452.5 | 9,801.3 |
| | Y-o-Y growth (%) | 15.9 | 11.2 | -2.6 | 8.2 | 3.7 |
| Non-Banking Financial Institutions | JD Million | 721.7 | 781.3 | 847.3 | 982.9 | 1,018.0 |
| | Y-o-Y growth (%) | 11.9 | 8.3 | 8.4 | 16.0 | 4.0 |
| Total | JD Million | 8,788.0 | 9,748.5 | 9,584.5 | 10,435.4 | 10,819.3 |
| | Y-o-Y growth (%) | 15.6 | 10.9 | -1.7 | 8.9 | 3.7 |

Source: CBJ.

As for the household debt with non-bank financial institutions, it increased from JD 983.0 million at the end of 2017 to JD 1,018.0 million at the end of 2018, at a growth rate of 4.0% in 2018 compared to 16.0% in 2017. Table 4-2 shows the details of this debt.

Table 4-2. Household Debt at Non-Banking Financial Institutions (2014-2018) (JD Million)

| Company | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| Microfinance Institutions* | 149.2 | 180.2 | 206.3 | 227.0 | 259.0 |
| Companies Listed in ASE** | 111.8 | 117.4 | 185.7 | 221.4 | 236.9 |
| Finance Leasing Companies (Subsidiaries of Banks) | 460.7 | 483.7 | 455.2 | 534.5 | 521.7 |
| Total | 721.7 | 781.3 | 847.3 | 983.0 | 1,018 |

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

### 4.1.3 Household Debt-to- Income Ratio

It should be clarified here that the above ratios represent the total balance of the debt of borrowing individuals to their annual available income. Therefore, they do not belong to all Jordanians. Rather, they belong only to borrowing individuals who do not exceed 16.6% of the total number of adult population in Jordan. Furthermore, the household debt-to-income ratio does not represent the monthly debt burden to income that is measured by the value of monthly installments and interest paid by the borrower and which represent- on average- around 40% of the total monthly income of the borrower. This is an acceptable ratio according to international standards.

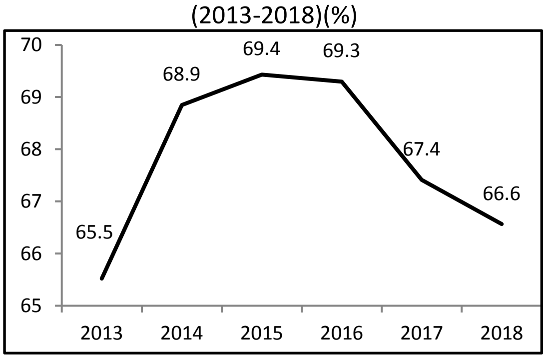
Table 4-3 details the household debt- to- income ratio over the period (2013 - 2018) in Jordan. As it appears in the table, the ratio witnessed a continuous increase during the period (2013 - 2015), as it increased from 65.5% at the end of 2013 to 69.4% at the end of 2015. The driver for this increase 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 2017, the ratio declined to 67.4% approximately. A further decline of the ratio to 66.6% was realized in 2018. This is a positive indicator on the decline of household debt risk (Table 4-3 and Figure 4-1).

Table 4-3. Household Debt-to-Income Ratio (2013-2018) (JD Millions)*

| Year | Household Debt | Household Income | Ratio (%) |
|---|---|---|---|
| 2013 | 7,602.7 | 11,603.5 | 65.5 |
| 2014 | 8,788 | 12,763.9 | 68.9 |
| 2015 | 9,748.5 | 14,040.3 | 69.4 |
| 2016 | 9,584.5 | 14,742.3 | 69.3 |
| 2017 | 10,435.4 | 15,479.4 | 67.4 |
| 2018 | 10,818.9 | 16,253.4 | 66.6 |

* Source: For 2010 and 2013: Expenditure and Income of Families Survey conducted by Department of Statistics. Other years are simple growth estimates (10% for 2012- 2015/ 5% for 2016 and onward).

Figure 4-1. The Ratio of Household Debt to Income (2013-2018)(%)



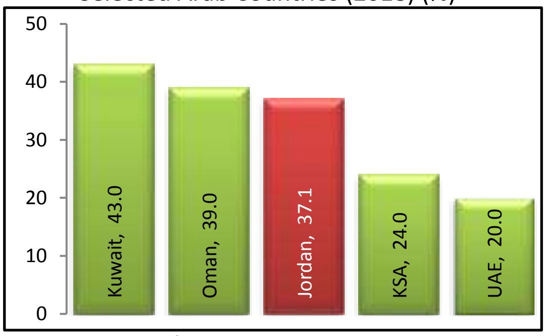

Source: CBJ.

It should be clarified here that the above ratios represent the total balance of the debt of borrowing individuals to their annual available income. Therefore, they do not belong to all Jordanians. Rather, they belong only to borrowing individuals who do not exceed 16.6% of the total number of adult population in Jordan. Furthermore, the household debt-to-income ratio does not represent the monthly debt burden to income that is measured by the value of monthly installments and interest paid by the borrower and which represent- on average- around 40% of the total monthly income of the borrower. This is an acceptable ratio according to international standards.

### 4.1.4 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 37.1% in 2018 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 4-2).

Figure 4-2. Proportion of Household Credit Facilities to Total Credit Facilities from Banks for Jordan & Selected Arab Countries (2018) (%)*




Source: Websites of the relevant central banks.

### 4.1.5 CONCLUSION

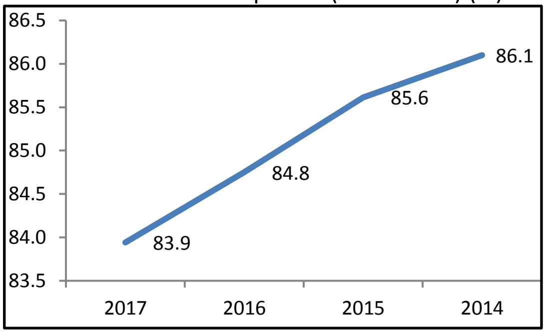
The follow-up of the development of the ratio of household debt relative to income over the last five years reveals that this ratio has continuously increased until 2015, and then kept its value of 2015 in 2016 before following a declining trend in the years 2017 and 2018. This is a positive indicator on the decline of household debt risk on the borrowing individuals themselves and on the banking sector. However, banks, despite the favorable trend in household debt figures, must continue to be cautious and aware of the risks of extending credit to the household sector, as well as take into consideration the evolution of these risks when studying expanding this type of credit. This takes a special concern as there are ten 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 no banks whose DBR is exceeds the 50.0% bound.

## 4.2 NON-FINANCIAL COMPANIES SECTOR

### 4.2.1 INTRODUCTION

The companies sector in Jordan consists of non-banking financial companies and non-financial companies.[1] 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 sector of non-financial companies is composed of the companies that are listed on Amman Stock Exchange. It consists of manufacturing, services, 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 2017 amounted to JD 10,998.0 million, forming 83.9% of the total assets of the companies sector, compared to JD 10,692.0 million at the end of 2016, representing 84.8% of total companies assets (Figure 4-4).

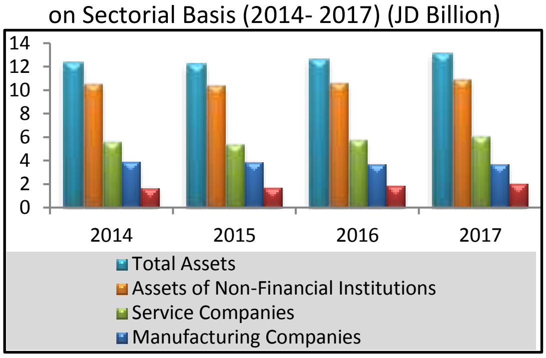
Figure 4-3. Assets of Non-Financial Institutions to Total Assets of Companies (2014-2017) (%)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

The size of assets of the nonbank public shareholding financial companies amounted to JD 2,104.0 million, representing 16.0% of the total assets of the companies sector at the end of 2017. And the size of assets of the services companies amounted to JD 6,166.8 million, representing 56.0% of the total assets of the non-financial companies at the end of 2017. Moreover, the size of assets of the manufacturing companies amounted to JD 3,761.2 million, representing 34.2% of the total assets of the non- financial companies at the end of 2017. Finally, size of assets of the real estate companies amounted to JD 1,070.5 million, representing 9.7% of the total assets of the non-financial companies at the end of 2017 (Figure 4-4).

Figure 4-4. Total Assets of Companies Listed on ASE on Sectorial Basis (2014- 2017) (JD Billion)

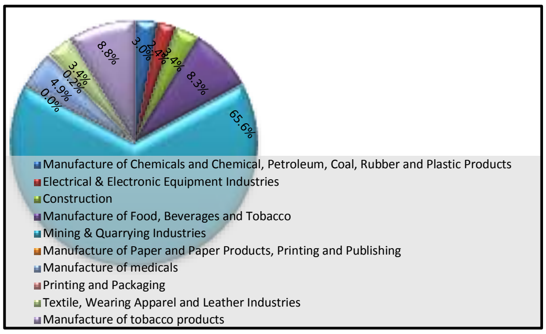



Source: Amman Stock Exchange Website https://www.ase.com.jo/.

[1] The analysis is based ONLY on the data about the non-financial companies listed on ASE in 2017 due to the unavailability of data on the non-financial companies that are NOT listed on ASE, given that some of the data for previous years was changed by the data source.

As for the sub- sectors of the non- financial companies, the assets of Mining and Extraction industries formed about 65.6% of the total assets of manufacturing companies (Figure 4-5).

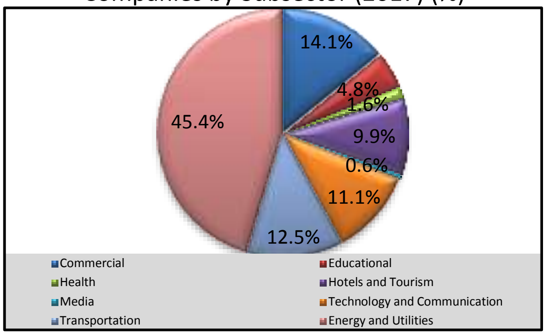
Figure 4-5. Distribution of Assets of the Manufacturing Companies by Subsector (2017) (%)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

As for the service companies sub- sector, the assets of the energy and utilities sub- sector accounted for 45.4% of the total assets of the service companies (Figure 4-6).

Figure 4-6. Distribution of Assets of the Services Companies by Subsector (2017) (%)



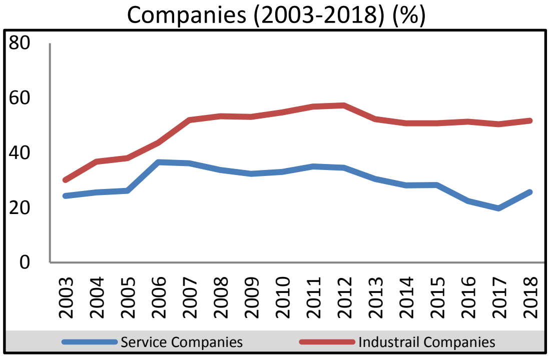

Source: Amman Stock Exchange Website https://www.ase.com.jo/.

Following is an analysis of the developments in the non- financial institutions sector (manufacturing, services, and real estate) that consists of 194 enlisted companies as per the website of the ASE and at the end of 2017. As for the financial companies sector, its developments and risks were detailed in Chapter 3.

### 4.2.2 Ownership Structure of the Non-Financial Companies

The capital share of non- Jordanians (Arabs and foreigners) in the total capital of the non- financial manufacturing and services companies approximated 51.7% and 25.7%, respectively, at the end of 2018, compared to 50.5% and 19.7%, respectively, at the end of 2017. 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 4-7).

Figure 4-7. The Ownership of Non-Jordanians (Arabs and Foreigners) in the Capital of the Non-Financial Companies (2003-2018) (%)

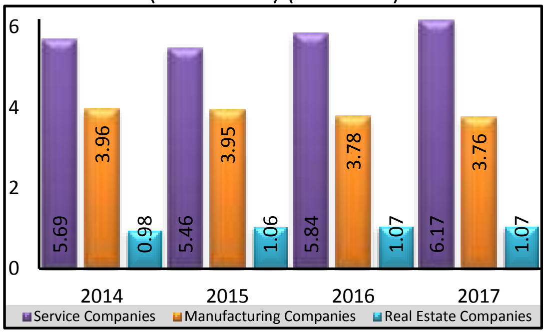



Source: Amman Stock Exchange Website https://www.ase.com.jo/.

### 4.2.3 Assets of the Non-Financial Companies

The assets of non-financial companies listed on the ASE amounted to approximately JD 10,998.0 million at the end of 2017, compared to JD 10,692.0 million at the end of 2016, or an increase by 2.9%. This increase is mainly attributed to the notable rise in the assets of the services companies. The size of the assets of these companies reached JD 6,166.8 million at the end of 2017, compared to JD 5,837.9 million at the end of 2016, or an increase by 5.6%. As for the real estate companies sector, its assets increased very slightly from JD 1,070.1 million at the end of 2016 to JD 1,070.5 million at the end of 2017. As for the manufacturing companies sector, its assets reached about JD 3,761.2 million at the end of 2017 compared to JD 3,783.6 million at the end of 2016 - a slight decrease of 0.6% (Figure 4-8).

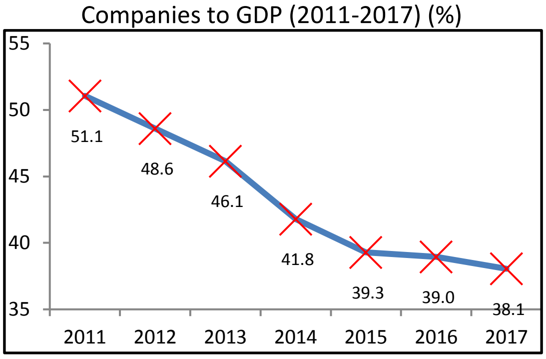
Figure 4-8. Assets of the Non-Financial Companies (2014-2017) (JD Billion)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

As for the ratio of the non- financial corporate sector's assets to GDP, it has followed a downward trend during the period (2011-2017). It reached 38.1% at the end of 2017, compared to 39.0% at the end of 2016 and to 51.1% at the end of 2011, as a result of the growth in the assets of the non- financial companies during the period (2011-2017) at a lower rate than the growth rate of GDP (Figure 4-9).

Figure 4-9. Ratio of Assets of the Non-Financial Companies to GDP (2011-2017) (%)

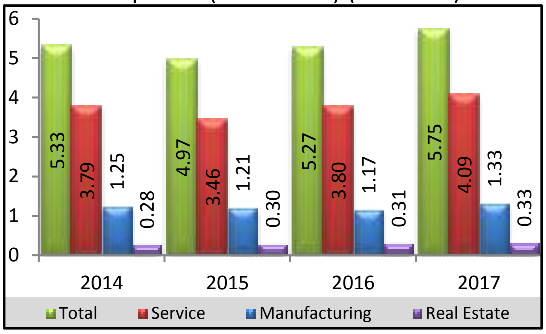



Source: Amman Stock Exchange Website https://www.ase.com.jo/ and staff calculations.

## 4.2.4 LIABILITIES OF THE NON- FINANCIAL COMPANIES

Regarding the liabilities of the non- financial companies, they reached JD 5,746.3 million at the end of 2017, compared to JD 5,272.0 million at the end of 2016, with a growth rate of 9.0%. The liabilities of the services companies roughed JD 4,089.1 million at the end of 2017 compared to JD 3,795.9 million at the end of 2016, or a percentage increase of 7.7%. While the size of liabilities of the manufacturing companies reached about JD 1,326.0 million at the end of 2017, compared to JD 1,165.6 million at the end of 2016, or a growth at a rate of 13.8%. For the real estate companies sector, their liabilities reached JD 331.2 million at the end of 2017 compared to JD 310.4 million at the end of 2016, or a growth by 6.7% (Figure 4-10).

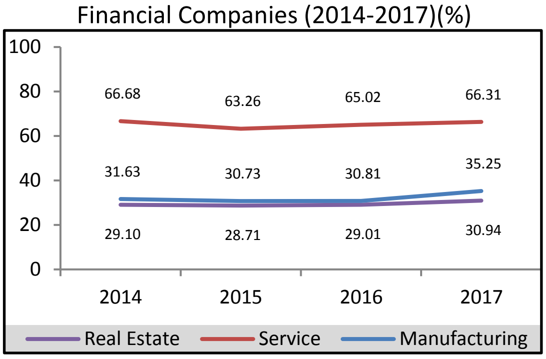
Figure 4-10. Liabilities of the Non-Financial Companies (2014-2017) (JD Billion)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

Regarding the liabilities- to- assets ratio, it increased slightly in all sectors from 29.0%, 30.8%, and 65.0% for the real estate, manufacturing, and services sectors, respectively, at the end of 2016 to 30.9%, 35.3% and 66.3% , respectively, at the end of 2017 (Figure 4-11).

Figure 4-11. Liabilities- To- Assets Ratio for the Non-Financial Companies (2014-2017)(%)

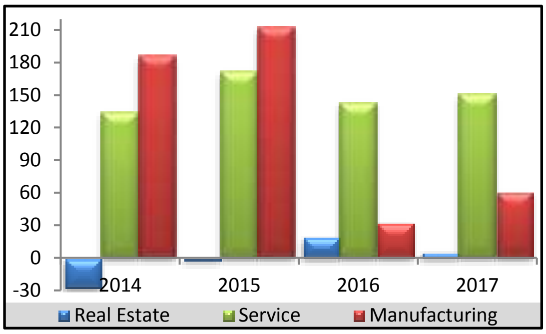



Source: Amman Stock Exchange Website https://www.ase.com.jo/.

## 4.2.5 PROFITABILITY OF THE NON- FINANCIAL COMPANIES

Net profits of non- financial companies at the end of 2017 rose to about JD 217.5 million, compared to JD 195.0 million at the end of 2016, growing by 11.5%. This remarkable increase in net profits is attributed to the notable increase of net profits of the manufacturing companies from JD 32.3 million at the end of 2016 to JD 60.8 million at the end of 2017, or by 88.2%. This remarkable increase in net profits is also attributed to the increase in the net profit of the services companies from JD 143.0 million at the end of 2016 to JD 151.0 million at the end of 2017. For real estate sector, its net profit declined significantly in 2017 to about JD 5.0 million from JD 20.0 million at the end of 2016 due to the slowdown that the real estate market is witnessing in the present time (Figure 4-12).

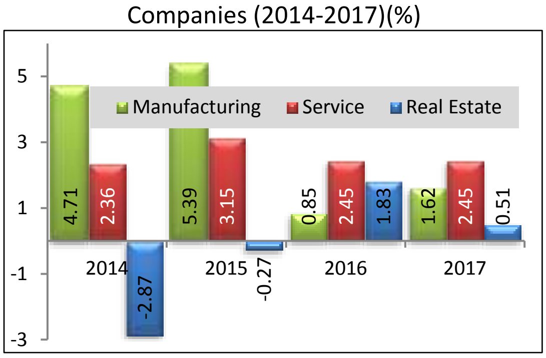
Figure 4-12. Net Profits for the Non-Financial Companies (2014-2017) (JD Million)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

As for the return on assets, it rose for the manufacturing companies to reach 1.62% at the end of 2017, compared to 0.85% at the end of 2016, whereas the service companies maintained at the end of 2017 its value as at the end of 2016 of 2.45%. For the real estate companies, the return on assets decreased from 1.83% at the end of 2016 to 0.51% at the end of 2017 (Figure 4-13).

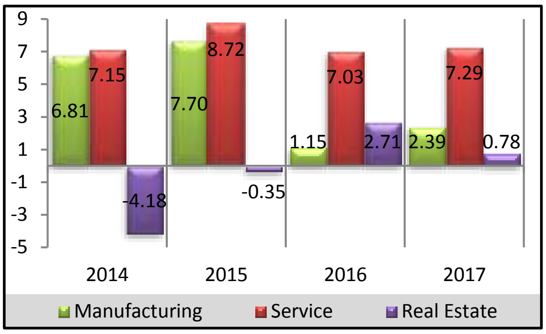
Figure 4-13. Return on Assets for the Non-Financial Companies (2014-2017)(%)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

As for the return on equity, it also increased for the manufacturing companies to reach 2.4% at the end of 2017, compared to 1.15% at the end of 2016. For services companies, it increased to 7.3% at the end of 2017 from 7.0% at the end of 2016. The return on equity for the real estate companies declined from 2.71% at the end of 2016 to 0.78% at the end of 2017 (Figure 4-14).

Figure 4-14. Retrun on Equity for the Non-Financial Companies (2014-2017)(%)

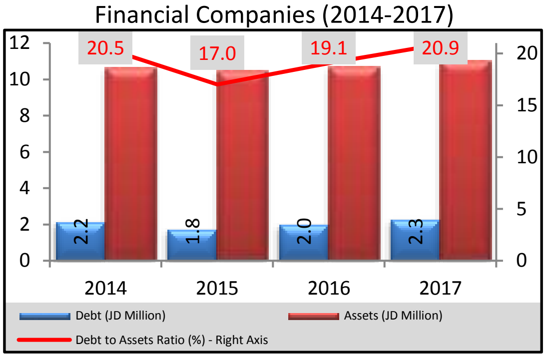



Source: Amman Stock Exchange Website https://www.ase.com.jo/.

## 4.2.6 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 20.9% at the end of 2017, compared to 19.1% at the end of 2016 (Figure 4-15).

Figure 4-15. Debt to Assets Ratio of the Non-Financial Companies (2014-2017)

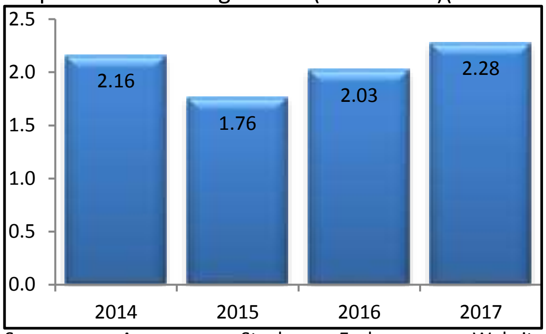



Source: Amman Stock Exchange Website https://www.ase.com.jo/.

## 4.2.7 INDEBTEDNESS OF THE NON-FINANCIAL COMPANIES TO THE BANKING SECTOR

The total credit facilities granted by banks to the non- financial companies sector enlisted on ASE roughed JD 2,277.0 million at the end of 2017 compared to JD 2,027.0 million at the end of 2016, an increase by 12.3%. The credit facilities granted to service companies amounted to JD 1,599.6 million at the end of 2017 compared to JD 1,456.2 million at the end of 2016, or an increase by 9.8%. The credit facilities granted to real estate companies amounted to JD 117.0 million at the end of 2017 compared to JD 95.0 million at the end of 2016, a growth by 23.2%. For the credit facilities granted to the manufacturing companies sector, they approximated JD 560.7 million at the end of 2017 compared to JD 475.7 million at the end of 2016, an increase by 17.8% (Figure 4-16).

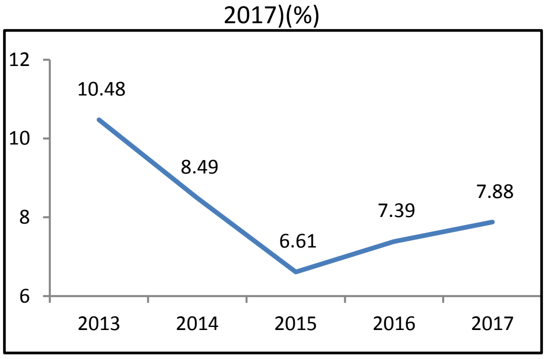
Figure 4-16. Indebtedness of the Non-Financial Companies to Banking Sector (2014-2017)(JD Billion)




Source: Amman Stock Exchange Website https://www.ase.com.jo/.

As for the ratio of indebtedness of the non-financial companies enlisted on ASE with the banking sector to the GDP, it increased slightly in 2017 and the previous year 2016 after witnessing a slowdown during the period (2013-2015). This ratio reached 7.9% at the end of 2017 against 7.4% at the end of 2016 (Figure 4-17).

Figure 4-17. Ratio of Non-Financial Companies Indebtedness to the Banking Sector to GDP (2013-2017)(%)




Source: Amman Stock Exchange Website https://www.ase.com.jo/ and staff calculations.

### 4.2.8 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 after building 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%.

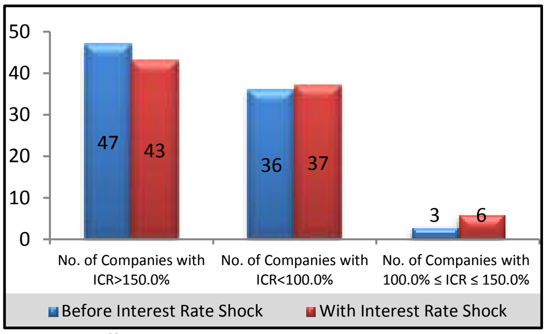
In order to conduct these tests, some shocks that relate either to the increase of interest rates in the market or the decline of companies' profits were assumed. The impact of each shock on the ICR, and, hence, assessing the ability of companies to repay their debts to banks in light of the new ICR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

#### 4.2.8.1 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, and, therefore, negatively affects 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 293.0% to 230.0%. 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 debt.

On the individual level, the ICR will decline below the 100.0% limit for one company only. For another three companies, the ratio will decline to range between 100% and 150%. Consequently, the number of companies with a safe debt will decrease from 47 companies to 43 companies. Moreover, the number of companies with an ICR that is below 100.0% will increase from 36 to 37 companies, whereas the number of companies with an ICR that ranges between 100.0% and 150.0% will increase from three to six companies (Figure 4-18).

Figure 4-18. 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 321.0% to 250.0% for the manufacturing companies, from 245.0% to 198.0% for the services companies, and from 160.0% to 126.0% for the real estate companies. This means that the real estate companies sector is the most affected sector by this shock as it has the lowest rate of coverage before and after the shock.

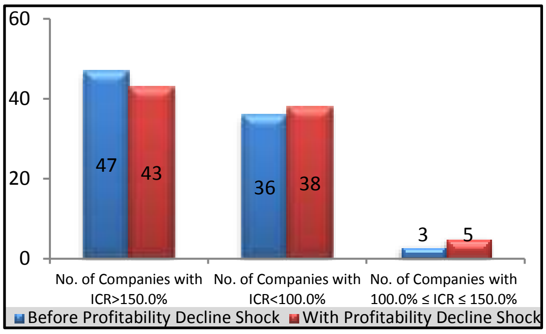
#### 4.2.8.2 THE SHOCK OF A DECLINE IN CORPORATE PROFITS OF THE BORROWING COMPANIES

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 293.0% to 205.0%. 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 above the lower limit for considering the indebtedness of companies as safe, which is set at 150.0%.

On the individual level, the ICR will decline below the 100.0% limit for two companies. Consequently, the number of companies with an ICR that is below 100.0% will increase from 36 to 38 companies and the number of companies with an ICR that ranges between 100% and 150% will increase from three to five companies (Figure 4-19).

On the sectoral level, the average ICR will decrease from 321.0% to 224.0% for the manufacturing companies, from 245.0% to 176.0% for services companies, and from 160.0% to 101.0% for the real estate companies. This implies that manufacturing and services companies are both capable in general of withstanding such a shock also. However, the impact of the shock on the real estate companies sector will be present since its ICR before the shock is relatively low.

Figure 4-19. Interest Coverage Ratio for Non-Financial Companies before and after Profitability Decline Shock




Source: Staff calculations.

## 4.3 CONCLUSION

**By analyzing the financial conditions for the non-financial companies sector, it could be stated 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 (2013-2015) through sustaining high profits. Despite its decline at the end of 2016, especially because of the decline in profits of Phosphate and Potash companies, the profitability returned to improve significantly in 2017, especially for manufacturing companies. Regarding the real estate sector, it witnessed a clear decline in its business and profitability during the period (2013-2015). It improved slightly in 2016, but returned to slow down in 2017. However, these are expected outcomes. The slowdown in the real estate sector that is attributed majorly to the repercussions of the economic and political situation in the region. The results of the stress testing of companies showed that about 92.0% of the companies were capable of withstanding the two shocks of the increase in interest rates or the decline in corporate profits. Yet, the real estate companies sector was impacted more significantly.**

# CHAPTER FIVE

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

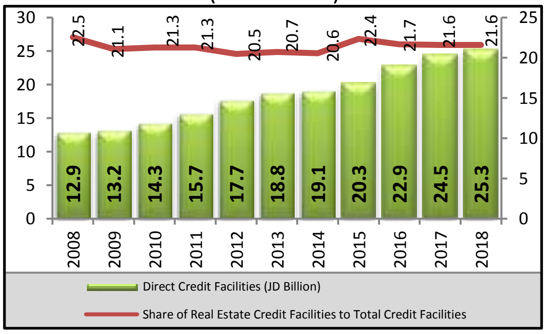
## 5.1 INTRODUCTION

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 JD 5.46 billion at the end of 2018, accounting for 21.6% of the total facilities granted by banks, compared to JD 5.29 billion at the end of 2017, at a growth rate of 3.2% in 2018 compared to 6.5% in 2017. It is worth mentioning in this context that the average annual growth rate during the period (2008-2018) amounted to 8.6% (Figure 5-1).

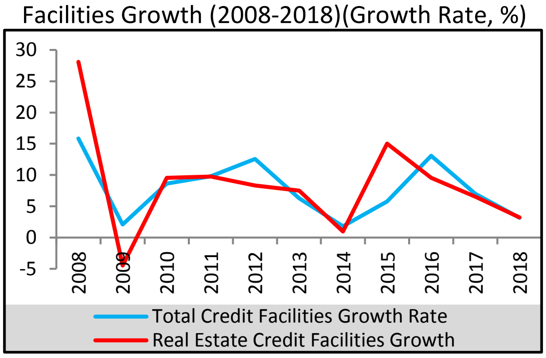
Figure 5-1. Credit Facilities and the Share of Real Estate Credit Facilities to Total Credit Facilities (2008-2018)




Source: CBJ.

The comparison of the average annual growth rates of real estate credit facilities and total credit facilities during the period (2008-2018) shows that the average annual growth rate of real estate credit facilities was slightly higher than the average annual growth rates of total credit facilities, as the relevant rates were 8.6% and 7.8% respectively (Figure 5-2).[1]

Figure 5-2. Total Credit Facilities & Real Estate Credit Facilities Growth (2008-2018)(Growth Rate, %)




Source: CBJ.

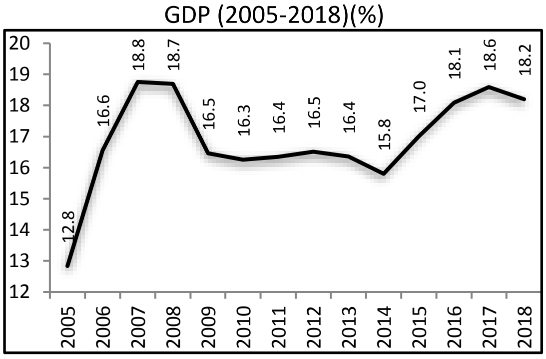
However, the growth rate of real estate credit facilities realized a decline in 2018 and reached by 3.2% to fall short of the growth rate of total

[1] Department of Lands and Survey. 2018. Annual Report.

facilities of 5.3%. Which is attributed to the decrease in the trading volume in the Jordanian real estate market during 2018 by 13.0% relative to 2017 due to the slowdown in economic activity in the Kingdom and its outcomes on the real estate sector.

Regarding the ratio of credit facilities extended to the real estate sector to the GDP, Figure 5-3 depicts the evolution of this ratio during the period (2005-2018). 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 (2005-2008). 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 to 18.2% in 2018, recording a decline from its counterpart in 2017 of 18.6%.

Figure 5-3. The Ratio Real Estate Credit Facilities to GDP (2005-2018)(%)

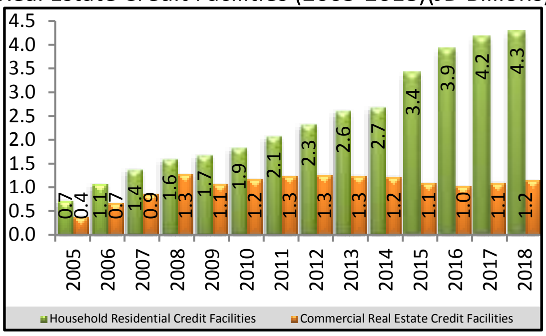



Source: CBJ.

## 5.2 COMPONENTS OF CREDIT FACILITIES EXTENDED TO REAL ESTATE SECTOR

As far as the components of credit facilities extended to the real estate sector are considered, household housing credit formed 78.6% of total credit facilities extended to real estate sector at the end of 2018, whereas commercial real estate credit formed 21.4% of total credit extended to real estate sector (Figure 5-4).

Figure 5-4. Household Residential and Commercial Real Estate Credit Facilities (2005-2018)(JD Billions)

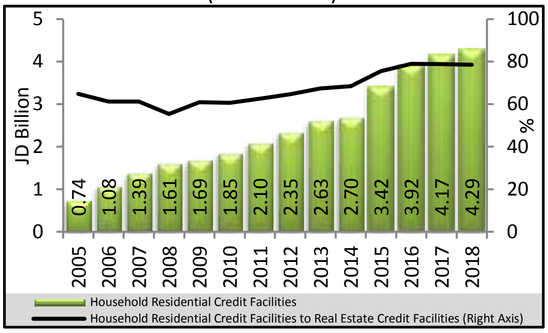



Source: CBJ.

### 5.2.1 HOUSEHOLD RESIDENTIAL LOANS

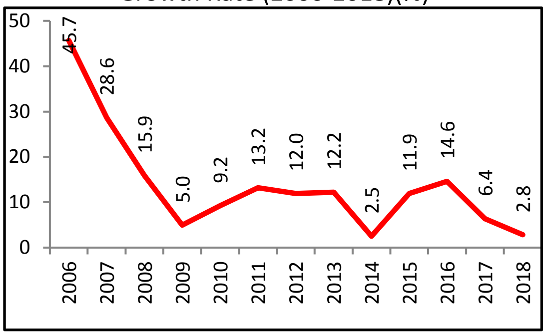
The total housing loans granted to individuals by banks reached JD 4,288.0 million at the end of 2018, compared to JD 4,170.0 million at the end of 2017, at a growth rate of 2.8%. The bulk of the growth of the household residential real estate credit was during the period (2006-2008) (the period preceding 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 (2011-2015) 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, the growth during the period (2016-2018) has declined gradually impacted by geopolitical developments in the region and the increase in uncertainty and its effects on the economic sectors in the Kingdom, especially the real estate sector (Figure 5-5 and Figure 5-6).

Figure 5-5. Household Residential Credit Facilities and Their Share of Total Real Estate Credit Facilities (2005-2018)




Source: CBJ.

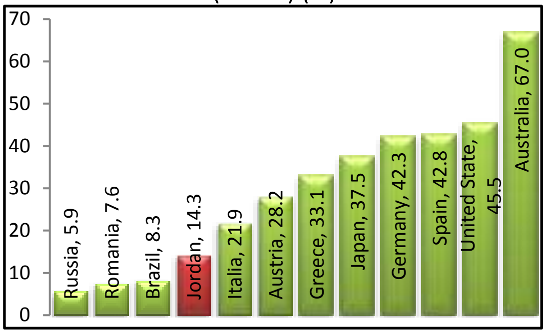
Figure 5-6. Household Residential Credit Facilities Growth Rate (2006-2018)(%)




Source: CBJ.

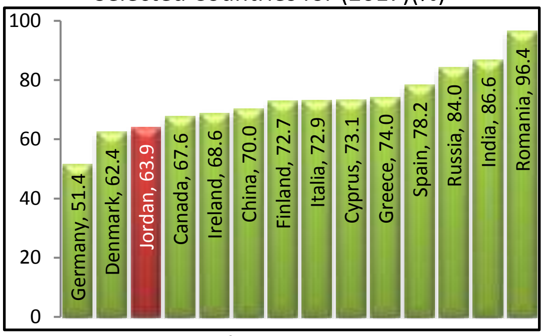
*The rate for 2015 drops to 11.9% if the reclassification of Ijarah ending into ownership for real estate as real estate loans by one of the Islamic banks is removed.

Figure 5-7. Ratio of Residential Real Estate Credit Facilities to GDP for Jordan and Selected Countries (2018*) (%)




* Data for the comparison countries are for the year 2017.

Figure 5-8. Home Ownership Rate in Jordan and Selected Countries for (2017)(%)




Source: Department of General Statistics. Household Expenditure and Income Survey.

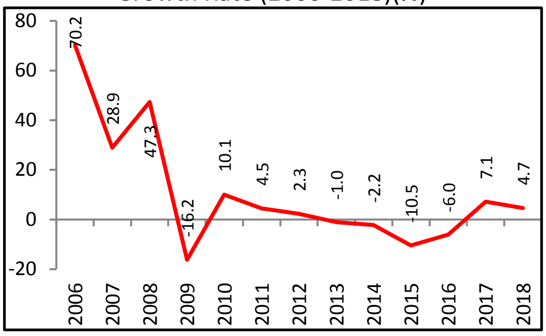
As for the ratio of household housing loans to GDP, it approximated 14.3% at the end of 2018 compared to 14.7% at the end of 2017. Compared to some world countries, Jordan was the fourth lowest country amongst them (Figure 5-7). The main reason behind this low ratio is that about 63.9% of Jordanians own their living places as the statistics indicate for the period (2017-2018). 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 5-8).

It is worth mentioning that the number of sold residential apartments approximated 34,260 unit during the year 2018, compared to 36,651 unit during the year 2017. Whereas this figures amounted to 13,281 unit (or apartment) in the first half of 2019, compared to 15,816 unit sold during the first half of 2018, declining by 16.0%, implying a clear drop in the demand for residential apartments.

### 5.2.2 COMMERCIAL REAL ESTATE LOANS

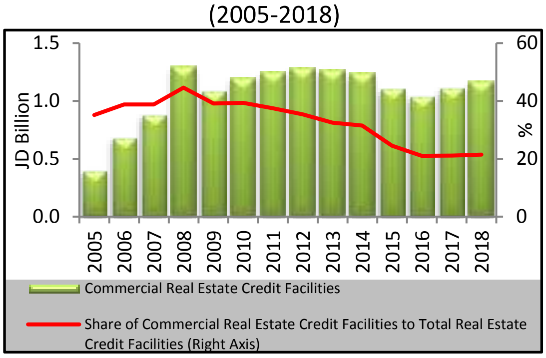
The total commercial real estate loans granted by banks at the end of 2018 reached JD 1,170.0 million, forming about 21.4% of the total credit facilities extended to real estate sector, which is 4.7% higher than the level attained at the end of 2017 that approximated to JD 1,118.0 million. The period that preceded the global financial crisis (2005-2008) witnessed a significant growth in commercial real estate loans, as they rose during this period from about JD 400.0 million to JD 1,300.0 million, at an average annual growth rate of 49.0%. These loans declined significantly during 2009 to reach about JD 1,089.0 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) but resumed to increase during 2017. Albeit the commercial real credit facilities continued to increase in 2018 also, their percentage increase from 2017 was lower than the percentage increase of 2017 over 2016 (Figure 5-9 and Figure 5-10).

Figure 5-9. Commercial Real Estate Credit Facilities Growth Rate (2006-2018)(%)




Source: CBJ.

Figure 5-10. Commercial Real Estate Credit Facilities and Their Share of Total Real Estate Credit Facilities (2005-2018)



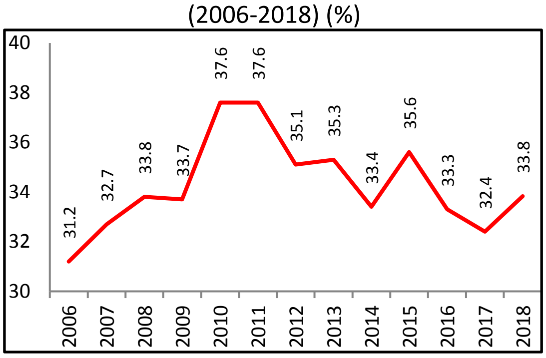

Source: CBJ.

## 5.3 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 JD 3,153.0 million at the end of 2018, compared to JD 2,646.0 million at the end of 2017.

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 JD 8,552.0 million at the end of 2018, composing about 33.8% of total credit facilities compared to 32.4% at the end of 2017. (Figure 5-11).

Figure 5-11. Bank Direct Credit Facilities Guaranteed by Real Estate Collaterals to Total Credit Facilities (2006-2018) (%)




Source: CBJ.

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

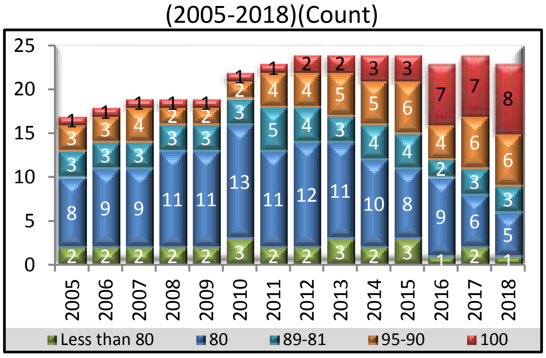
The ratio of loan to the value of the mortgaged real estate (LTV) is one of the most important ratios and indicators that must be monitored to evaluate the degree of exposure of banks to the real estate market risks. The relatively high ratio might make the banks exposed to high risks in case the prices 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 5-12 shows the upper limit for the LTV ratio for housing loans granted to individuals. As it appears from the figure, the LTV for six banks (composing 26.1% of banks that grant loans to individuals) did not exceed 80.0%, whereas it ranged from 81.0% to 89.0% for three banks, and ranged between 90.0% and 95.0% for six banks and 100.0% for eight banks.

Figure 5-12. Distribution of Banks by Maximum LTV Ratio for Housing Loans Granted to Individuals (2005-2018)(Count)

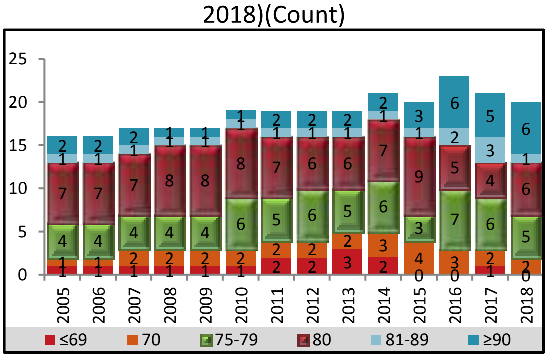



Source: CBJ.

As it appears from Figure 5-12, the number of banks whose LTV was 100.0% increased from three banks in 2015 to eight banks in 2018. 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 65.0% of banks that extend commercial real estate loans have an LTV ratio that does not exceed 80.0% (Figure 5-13).

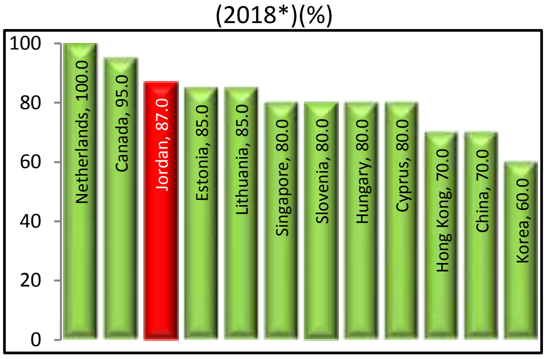
Figure 5-13. Distribution of Banks by Maximum LTV Ratio for Commercial Real Estate Loans (2005-2018)(Count)




Source: CBJ.

The average of LTV ratio limit varied amongst some countries and ranged between 60.0% and 100.0%. In the banks in Jordan, this limit averaged 87.0%. In this context, Jordan had the third highest LTV ratio among 12 countries on which data were available (Figure 5-14).

Figure 5-14. Maximum LTV Ratio for Residential and Commercial Real Estate Loans for Selected Countries (2018*)(%)

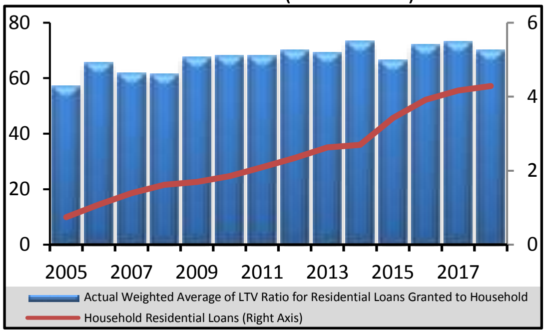



Source: CBJ.
* Data for the comparison countries are for the year 2018.

## 5.5 ACTUAL AVERAGE LTV RATIO 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 and 73.0% at the end of 2017 before declining to 70.0% at the end (Figure 5-15).

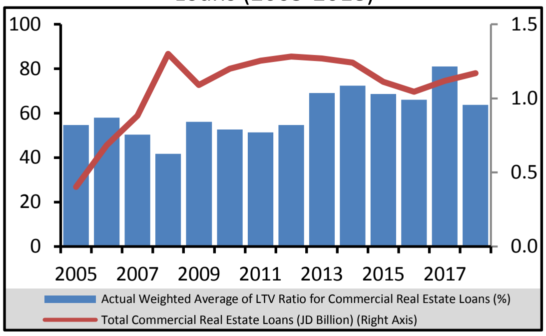
Figure 5-15. Housing Loans and Actual Weighted Average of LTV Ratio for Housing Loans Granted to Individuals (2005-2018)




Source: CBJ.

As for the actual average of the LTV ratio for the commercial real estate loans, it declined to 64.0% in 2018 compared to 81.0% in 2017 (Figure 5-16).

Figure 5-16. Total Volume and Actual Weighted Average of LTV Ratio for Commercial Real Estate Loans (2005-2018)




Source: CBJ.

## 5.6 CBJ MEASURES TO MITIGATE BANKING SECTOR'S EXPOSURE TO REAL ESTATE MARKET RISKS AND TO 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- 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.

2- The issuance of instructions for **the Large Exposure Limits and Credit Controls** No. 2/2019 dated 04-03-2019 that replaced credit concentration instructions No. 9/2019. These instructions continued to a cab of 20.0% of the credit granted for constructing or buying real estate relative to the total customers' deposits in Jordanian Dinar. These instructions came in force as of 30-06-2019.

## 5.7 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 developing 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 5-17 through Figure 5-22 illustrate different aspects related to real estate price index in Jordan and the change in the index during the period (2005-2018). As it appears from these figures, the REPI in Jordan increased from 120.1 points in 2017 to 120.3 points in 2018, growing slightly by 0.2% compared to a contraction by 0.9% in 2017, a growth of 1.8% in 2016 and another growth of 3.4% in 2015 and 9.1% in 2014. This implies that the increase in prices of real estate in Jordan has substantially witnessed a remarkable slowdown in 2015 and 2016 and continued the downward trend to decline in 2017. This decline is attributed mainly to the decrease in the trading volume in the real estate market as an expected result, however, as a consequence of the slowdown in the economic activity in the Kingdom and its repercussions on the real- estate sector. The slight increase in the real estate price index in 2018 resulted from the increase in lands price index by 1.3% and the decline in REPI for the residential and commercial real estate by 1.5% and 0.6%, respectively. In this regard, the index passed different phases that can be summarized in three phases as mentioned in the previous JFSRs:

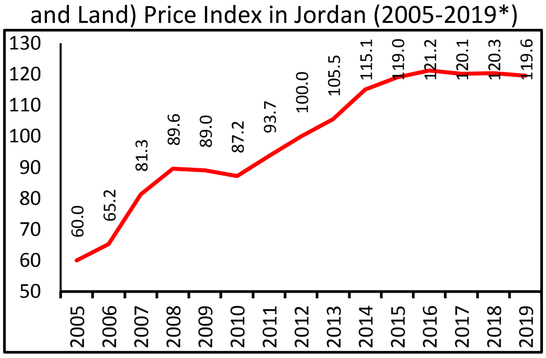
**Phase I: Pre-global financial crisis phase (2005-2008)**. This phase witnessed a significant demand for real estate, especially from non-Jordanians, in addition to the large hikes in the prices of residential and non- residential real estate assets.

**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.

However, the real estate prices declined in the year 2017 due to several factors; the slowdown in the economic activity in Jordan and its consequences on the real estate sector, and the exacerbation of the status of Jordanian workers working in the gulf- who are considered the most common category to buy real estate. The awareness of banks of the risks associated with large expansion of real estate loans along with the increase in interest rates both led to the decline in the growth rate of real estate credit facilities granted by banks. Consequently, the demand for real estate decreased and, hence, their prices decreased. This downward trend of the residential and commercial real estate prices continued in 2018, as their prices decreased against, however, a slight rise in land prices was recorded. Therefore, political conditions in the region, the high uncertainty, and the slowdown in economic activity in the Kingdom all started to affect the real estate sector in the Kingdom, especially the last two years.

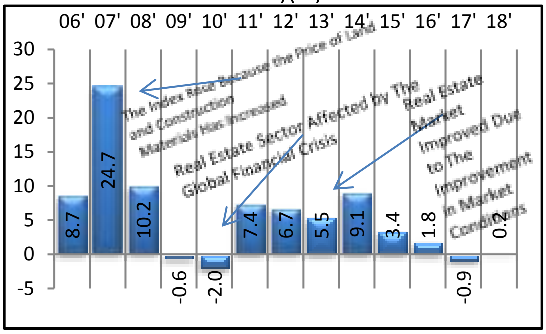
Figure 5-17. Real Estate (Residential, Commercial and Land) Price Index in Jordan (2005-2019*)




Source: CBJ.
* For the first quarter of 2019.

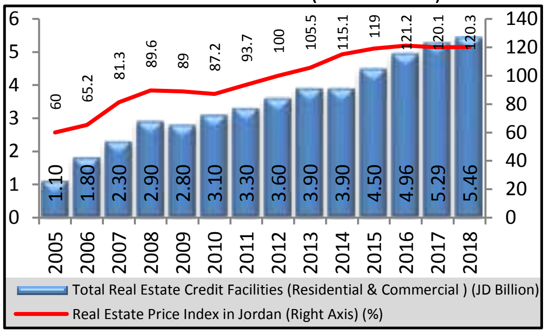
For the first quarter of 2019, the real estate price index went down relative to 2018. It reached 119.6 at the end of the first quarter of 2019, compared to 120.3 at the end of 2018. It also declined compared to its counterpart in the first quarter of 2018 that reached 120.1.

Figure 5-18. Changes in Real Estate (Residential, Commercial and Land) Price Index in Jordan (2006-2018)(%)



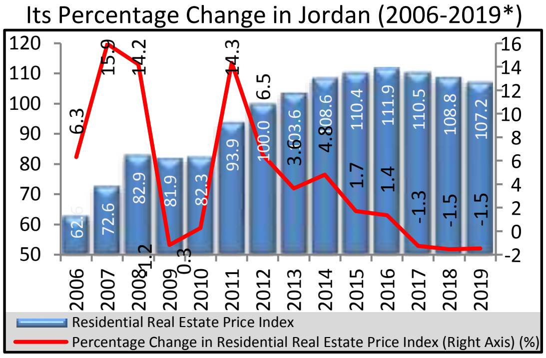

Source: CBJ.

Figure 5-19. Real Estate Price Index (Residential, Commercial and Land) & Total Real Estate Credit Facilities in Jordan (2005-2018)




Source: CBJ.

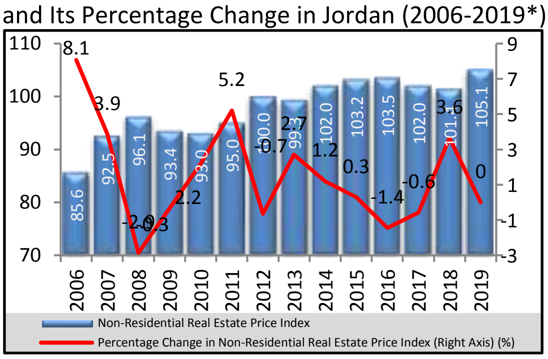
Figure 5-20. Residential Real Estate Price Index and Its Percentage Change in Jordan (2006-2019*)




Source: CBJ.
* For the first quarter of 2019.

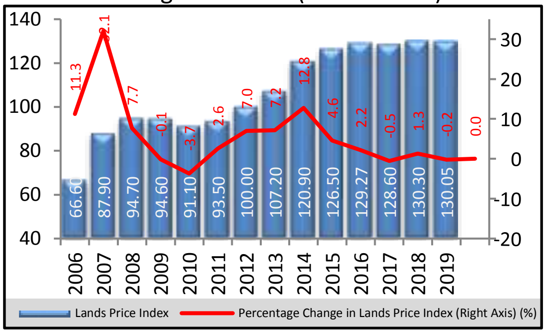
Regarding the REPI for the major governorates in Jordan, the index for the Capital witnessed a slight increase in 2018 relative to 2017, increasing from 119.1 points in 2017 to 119.6 points in 2018, or by 0.4%. Regarding the other major governorates, the index declined for Irbid from 130.1 points in 2017 to 129.3 points in 2018, or a contraction by 0.6%. In contrast, for Balqa, the REPI increased from 122.3 points in 2017 to 122.9 points in 2018, a rise of 0.5%. Finally, for Zarqa, the REPI maintained a value of 123.7 points for both of the years 2017 and 2018.

Figure 5-21. Non-residential Real Estate Price Index and Its Percentage Change in Jordan (2006-2019*)




Source: CBJ.
* For the first quarter of 2019.

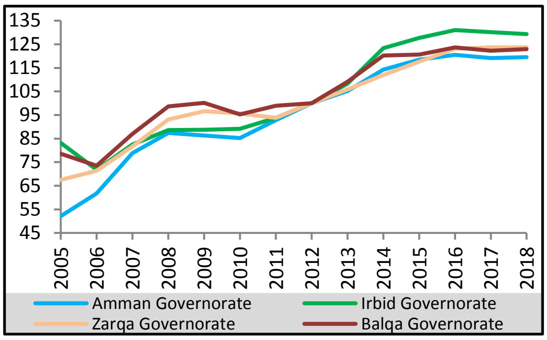
Figure 5-22. Lands Price Index and Its Percentage Change in Jordan (2006-2019*)




Source: CBJ.
* For the first quarter of 2019.

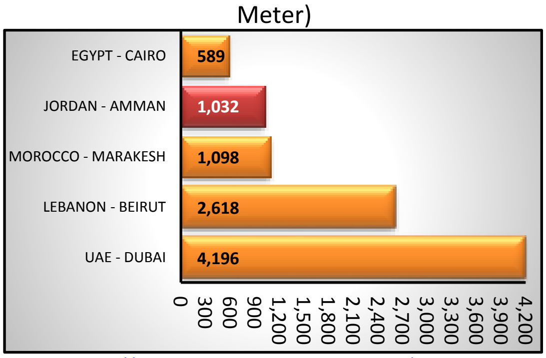
Regarding the historical development of the REPI for the Capital Amman and other governorates, the REPI for the Capital witnessed a growth during the years (2005-2018), excluding 2017, when the index witnessed a decline compared to 2016. The value of the REPI was 52.1 points in 2005 and rose to 119.6 points in 2018, a growth by a rate of 129.6%. For the rest of the governorates, the REPI witnessed an increase as well, but at lower rates than the Capital. For Zarqa, the REPI increased from 67.5 points in 2005 to 123.7 points in 2018, increasing by 83.3%. For Balqa, the REPI increased from 78.6 points in 2005 to 122.9 points in 2018, or by 56.4%. Similarly, for Irbid, the REPI increased from 83.2 points in 2005 to 129.3 points in 2018, or by 55.4%. These figures say that the highest increase in REPI during the last thirteen years has been in the Capital Amman, followed by Zarqa, Balqa and Irbid in a descending order (Figure 5-23).

Figure 5-23. Distribution of Real Estate Price Index by the Major Governorates in Jordan (2005-2018)



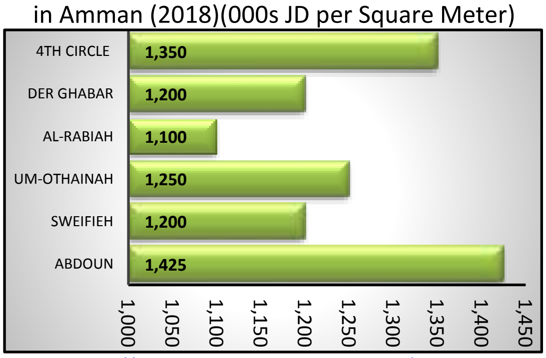

Concerning average price per residential square meter in Amman as per the available information on Western Amman region (the most investment-attracting area), the average residential real estate price per square meter was JD 1,032.0 in 2017. It is worth mentioning that the price per square meter in several Arab cities like Marrakesh, Beirut, and Dubai is higher than its counterpart in Amman. (Figure 5-24 and Figure 5-25).

Figure 5-24. Real estate Prices for Amman and Selected Arab Cities (2017)(000s JD per Square Meter)




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

Figure 5-25.Real estate Prices for Selected Locations in Amman (2018)(000s JD per Square Meter)

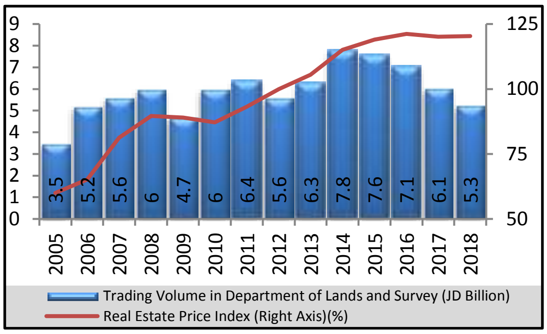



Source: http://www.globalpropertyguide.com/.

### 5.7.1 TRADING VOLUME IN THE REAL ESTATE MARKET IN JORDAN

The report published by the Department of Land and Survey for 2018 stated that the trading volume in the real estate market declined by 13.1% in 2018 compared to 2017 to reach JD 5,265.0 million during 2018 compared to JD 6,062.0 million in 2017. Figure 5-26 illustrates the development in the real estate trading volume and REPI during the period (2005-2018).

Figure 5-26: Real Estate Trading Volume and Real Estate Price Index (2005-2018)(JD Billions)



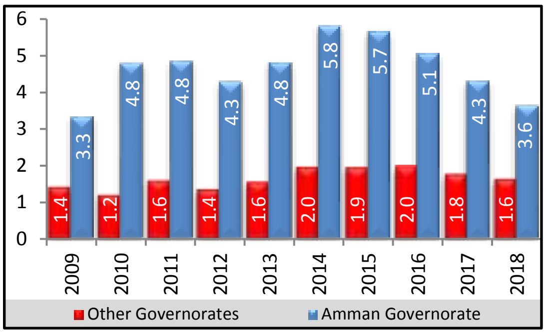

Regarding the real estate sales to non-Jordanians, they reached JD 284.4 million at the end of 2018, composing only 5.4% of total real estate trading volume. Iraqis accounted for the highest share of this part of the market, in which their investments reached JD 111.5 million and composed 39.2% of the total estimated value of sales to non- Jordanians during 2018 (Table 5-1). By comparing the trading volumes in 2018 for selected governorates, it is evident that the Capital Governorate had the highest trading volume of JD 3,629.0 million, composing 68.9% of total trading volume in the real estate market, while it was JD 1,636.0 million in the other governorates, composing 31.1% of the total trading volume (Figure 5-27).

Table 5-1. Real Estate Sales to Non-Jordanians (2012-2018) (JD million)

| Nationality | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Iraqi | 224.7 | 205.0 | 266.3 | 215.1 | 168.4 | 157.2 | 111.5 |
| Saudi | 51.6 | 58.6 | 64.1 | 66.4 | 50.2 | 63.4 | 44.0 |
| Syrian | 17.0 | 23.7 | 28.6 | 17.5 | 19.4 | 18.1 | 17.5 |
| American | 13.8 | 22.0 | NA | NA | 21.5 | NA | NA |
| Emirati | NA | NA | 17.4 | NA | NA | NA | NA |
| Kuwaiti | NA | NA | NA | 22.9 | NA | NA | NA |
| Yemeni | NA | NA | NA | 17.3 | 18 | NA | NA |
| Other | 121.9 | 97.0 | 115.6 | 93.0 | 97.6 | 83.1 | 111.4 |
| Total | 429.0 | 406.5 | 492.0 | 432.2 | 115.6 | 321.8 | 284.4 |

*Source: Department of Land and Survey.

Figure 5-27. Real Estate Trading Volume in Amman and Other Governorates (2009-2018)(JD Billions)

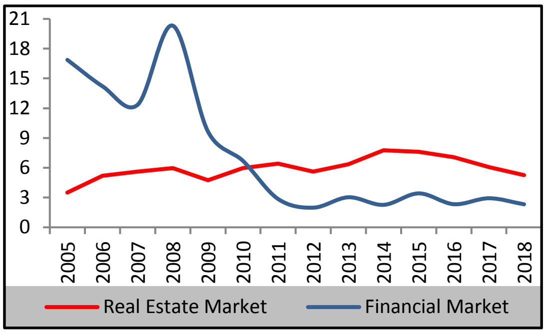



As for comparing the trading volume in real estate market with that in the ASE, it is noted that it was much larger in the financial market than the real estate market during the period (2005-2009) due to the boom that prevailed in the financial market during this period and the associated large inflow 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 5-28).

To continue its policy of supporting the real estate market, advancing the sector and enabling citizens to own proper place to live, the cabinet decided on 10-12-2018 to extend the exemption of apartments and individual houses from the registration fees until 31-12-2019.

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. These subsidies are granted to the Jordanian citizen only. Given that the citizen can benefit from this subsidy for one time only.

Figure 5-28. Real Estate and Amman Stock Exchange Trading Volume (2005-2018)(JD Billions)




## 5.8 CONCLUSION

**The analysis of the trading volume in the real estate market and the real estate price index in Jordan revealed that the real estate market in Jordan has been impacted by the repercussions of the slowdown in economic activity in the Kingdom and by the political and economic developments in the region since 2017 more clearly than the preceding years. The real estate trading volume decreased by 14.1% in 2017, whereas the real estate price index decreased by 0.9% in the same year. In 2018, even though the real estate price index increased very slightly by 0.2%, this slight increase was an outcome of the increase in the land price index by 1.3% and the decrease in the residential real estate price index and the commercial real estate price index by 1.5% and 0.6%, respectively. Real estate trading volume decreased by 13.1% in 2018. This noticeable slowdown in the real estate sector requires some banks to reconsider the maximum of the ratio of loan-to-value of the mortgaged real estate, especially for banks whose ratio exceeds 80.0%, to avoid any potential risks that may result from the possible decrease in real estate prices.**

# Chapter Six

# 6 Stress Testing

## 6.1 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 that 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.

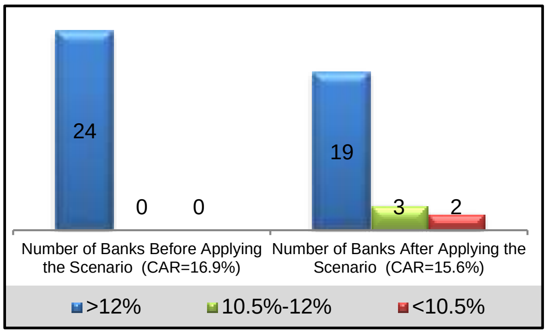
## 6.2 Stress Testing of the Banking Sector

### 6.2.1 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.

#### 6.2.1.1 Sensitivity Analysis of Credit Risk

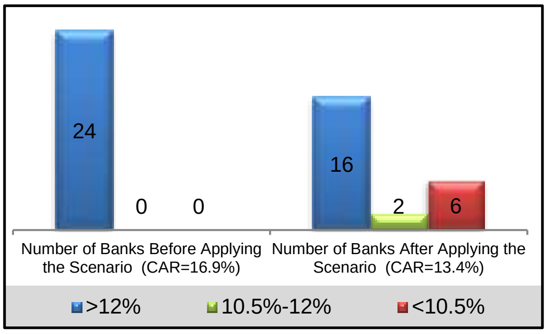
Figure 6-1. Capital Adequacy Ratio Before and After Applying the Doubling of Credit Losses Scenario (2018)




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 16.9% to 15.6%. 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 limited impact of such a shock is attributed to the following reasons:

1- The high capital adequacy ratio for the banks operating in Jordan is one of the highest in the region despite its decline from its levels in 2017 that came as a result of the introduction and the implementation of International Financial Reporting Standard (IFRS) Number 9 to the 2018 financial statements. This application of the IFSR 9 standard has resulted in the transfer of additional amounts to the credit loss provision. These amounts have been deducted from equity and specifically from retained earnings. The decline of CAR is

Figure 6-2. Capital Adequacy Ratio Before and After Applying the Default of the Largest Three Borrowers Scenario (2018)




normal as a result of implementing IFRS 9 at the beginning of 2018. However, the application of IFRS 9 should enhance the soundness and resilience of banks over the medium and long terms through improving transparency and timely recognition of credit losses compared to the International Accounting Standard (IAS) 39.

2- The high level of profits for the banks operating in Jordan which enables these banks to enhance their capacity to increase provisions and absorb the additional losses that might take effect in case the shock materialized without impacting capital level at the banks, which, in turn, protects their capital.

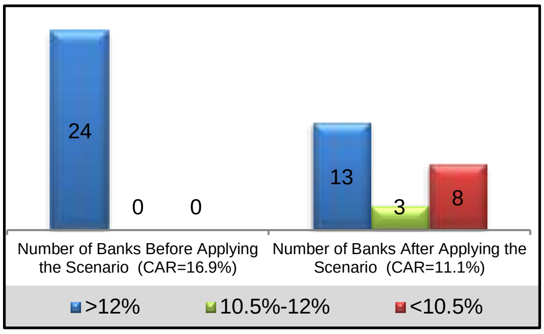
On the individual bank level, CAR will remain above 12.0% for 19 banks. In addition, it will be below 12.0% for five banks, in three of which the CAR will remain at a higher figure than the internationally accepted one of 10.5%. This implies that most banks in Jordan are able to withstand this shock (Figure 6-1).

### 6.2.1.2 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 16 banks. It will drop below 12.0% in eight banks, two of which will continue to have CAR that remains higher than internationally accepted minimum level of 10.5%. On the aggregate banking sector level, the CAR will decline from 16.9% to 13.4% under this stress (Figure 6-2).

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 go below 12.0% on the aggregate banking sector level. It will decline from 16.9% to 11.1%. At individual bank level, the CAR will be above the minimum limit applied in Jordan of 12.0% for 13 banks out of 25 banks. It will drop below 12.0% for 11 banks, where it will be above the minimum international number of 10.5% for three of these 11 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 6-3).

Figure 6-3. Capital Adequacy Ratio Before and After Applying the Default of the Largest Six Borrowers Scenario (2018)



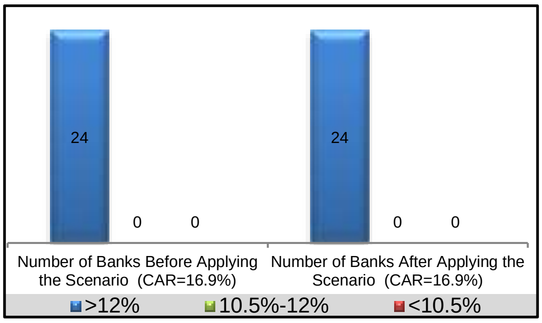

### 6.2.1.3 SENSITIVITY ANALYSIS OF MARKET RISKS

A set of tests were conducted to assess the sensitivity of banks 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.

#### 6.2.1.4 INTEREST RATE SHOCK

Assuming that interest rates increase by 200 basis points, the CAR at the banking sector in Jordan will not be affected and will maintain its value of 16.9%.[1] This implies that there is no material effect for such a shock on the banking sector as a whole. 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 6-4).

Figure 6-4. Capital Adequacy Ratio Before and After Applying the Interest Rate Shock Scenario (2018)



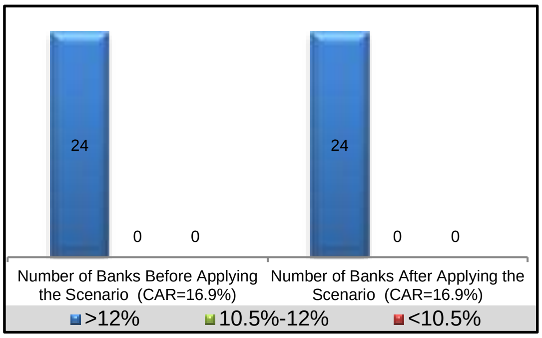

#### 6.2.1.5 FOREIGN EXCHANGE RATE SHOCK

Under the scenario where the exchange rate of the JD against foreign currencies depreciates by 25.0%,[2] the CAR at the banking sector in Jordan will not be affected and will maintain its value of 16.9%.[3] 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, which implies 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 6-5).

#### 6.2.1.6 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 not be affected and will maintain its value before the shock of 16.9%. This implies that there is no material effect of this shock on the banking sector in general. 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 6-5. Capital Adequacy Ratio Before and After Applying the Exchange Rate Shock Scenario (2018)




### 6.2.2 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 (2019-2021), 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.

This scenario was built based on the assumptions of further exacerbation of regional geopolitical situation surrounding the Kingdom, a decline in

[1] The effect of interest rate shock was calculated using the gap analysis test that determines the position of banks with regards to the balance of assets and liabilities which are sensitive to interest rate risks.

[2] This is a hypothetical scenario that aims at studying the extent to which banks are mainly exposed to exchange rates risks. The foreign stock reserves of the Central Bank of Jordan at the end of May 2019 amounted to USD 13.3 billion and they cover the imports for more than seven months, which is indeed a very comfortable level and largely enhances the stability of the Jordanian Dinar exchange rate.

[3] This analysis does not take into consideration the indirect impacts of the decline of the Jordanian Dinar exchange rate on economy and, hence, on the non- performing loans at banks.

grants and aid extended to Jordan, a decline of capital inflow from tourism and direct investment, a decline in national exports, and a rise in the inflation indicator, that all in turn lead to a notable decrease in economic growth rates relative to expectations, in addition to an increase in unemployment rates and a contraction of the financial market. It was also assumed that interest rates on the US dollar continue to increase (contrary to expectations as they are expected to fall) and that the Central Bank of Jordan will raise the interest rates on the JD to maintain the attractiveness of the dinar as a savings currency.

To measure the impact of these hypothetical scenarios on banks, the GDP growth rate (economic growth rate) has been used as 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.[4] 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, interest rates, equity prices, 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:[5]

$$NPL_t = C + B_1\, NPL_{(t-1)} + B_2\, \Delta RGDP_{(t-1)} + B_3 UNEMP_{(t-1)} + B_4\, RIR_t$$

Where:

| | |
|---|---|
| NPL: | Expected non- performing loans ratio for 2019. |
| C: | Constant |
| $NPL_{t-1}$: | Previous year's non- performing loans ratio. |
| $\Delta RGDP_{t-1}$: | Growth rate of real gross domestic product (Economic Growth Rate). |
| $UNEMPL_{t-1}$: | Unemployment rate. |
| $RIR_t$: | Actual Interest rate. |

Based on the econometric analysis of the multiple-regression model, there was a significant negative effect of GDP and SPI on NPLs and a significant positive effect of unemployment rate on NPLs as well as a significant positive effect of interest rates on NPLs at banks as shown in the following estimated model:

| | |
|---|---|
| $NPL_t=$ | $-5.8 + 0.57\ NPL_{(t-1)} - 0.54\Delta RGDP_{(t-1)} + 0.51\ UNEMP_{(t-1)} + 0.34\ RIR_t$ |

Table 6-1 shows the results of the econometric analysis of the above model:

Table 6-1. Econometric Analysis Results

| Variable | Coefficient | t-statistics |
|---|---|---|
| C | -5.8 | -1.2 |
| NPL(-1) | 0.57* | 5.1 |
| RGDP(-1) | -0.54* | 2.0- |
| UNEMP(-1) | 0.51** | 1.6 |
| RIR | 0.34* | 2.9 |
| $R^2$ | 87.7% | |
| $Adjusted\ \overline{R^2}$ | 83.0% | |

* Statistically significant at 95.0% level of confidence.
** Statistically significant at 90.0% level of confidence.

### 6.2.3 MODEL ASSUMPTIONS USED

After developing of multiple- period stress tests by the CBJ, 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 the

[4] As defined in Basel III.
[5] This model was estimated using the Fully Modified Ordinary Least Squares (FMOLS) method that provides optimal estimation for co-integrated regressions through modifying the Ordinary Least Squares Method to take into account the effect of autocorrelation and homoscedasticity in the dependent variables that result from the existence of a correlated relation between the dependent variable and the independent variables.

period (2019-2021) were forecasted based on the assumed changes in the economic growth rate (GDP), unemployment rate, and interest rates. The scenarios shown in Table 6-2 were assumed.

Figure 6-6. CAR and NPLs Ratios After the Application of All Scenarios (2019) (%)

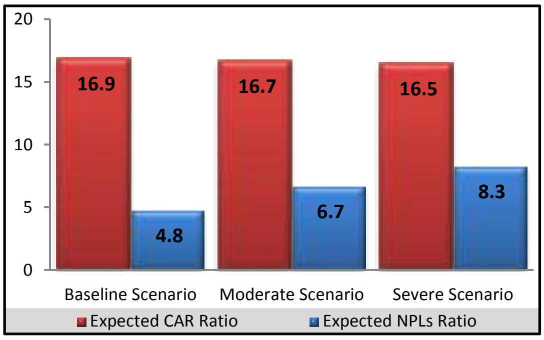



Table 6-2. Macro Stress Testing Assumed Scenarios (2019-2021)

| Year | Variable | GDP | Unemployment | RIR* |
|---|---|---|---|---|
| 2019 | Baseline Scenario | 2.20 | 18.60 | 4.20 |
| | Medium Macro Stress Scenario | -0.03 | 20.28 | 5.70 |
| | Severe Macro Stress Scenario | -2.26 | 21.95 | 6.20 |
| 2020 | Baseline Scenario | 2.40 | 18.00 | 6.20 |
| | Medium Macro Stress Scenario | 0.17 | 19.68 | 7.70 |
| | Severe Macro Stress Scenario | -2.06 | 21.35 | 8.20 |
| 2021 | Baseline Scenario | 2.60 | 18.00 | 8.20 |
| | Medium Macro Stress Scenario | 0.37 | 19.68 | 9.70 |
| | Severe Macro Stress Scenario | -1.86 | 21.35 | 10.20 |

The shock scenarios were assumed based on the following methodology:

- Medium Macro Stress Scenario: The GDP growth rate expected for 2019 minus one standard deviation of economic growth rate data for the period (1994- 2018), the 2019 expected unemployment rate to which one standard deviation of the unemployment rate data for the period (1994-2018) is added.
- Severe Macro Stress Scenario: The GDP growth rate (economic growth rate) expected for 2019 minus two standard deviations of economic growth rate data for the period (1994-2018), the 2019 expected unemployment rate to which two standard deviations of the unemployment rate data for the period (1994-2018) are added.

For actual interest rates, they 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.

*Represents the weighted average of interest rates on credit facilities/ loans and advancements minus inflation rate.

### 6.2.4 EMPIRICAL RESULTS

Table 6-3 and Figure 6-6 show the estimated NPL ratio and CAR ratio for the year 2019 assuming the occurrence of the mentioned scenarios. In this regard, the NPL ratio is expected to increase from 4.9% in 2018 to 8.3% in 2019 assuming the severe macro stress scenario, consequently, CAR will drop from 16.9% to 16.5% in 2019.

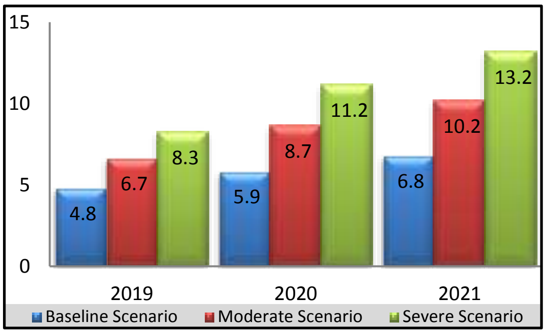
Table 6-3. Macro Stress Testing Results for 2019

| Scenarios | NPLs (2019)* | CAR (2019)* |
|---|---|---|
| Baseline Scenario | 4.8% | 16.9% |
| Medium Macro Stress Scenario | 6.7% | 16.7% |
| Severe Macro Stress Scenario | 8.3% | 16.5% |

* The values of NPL and CAR at the end of 2018 are 4.9% and 16.9%, respectively.

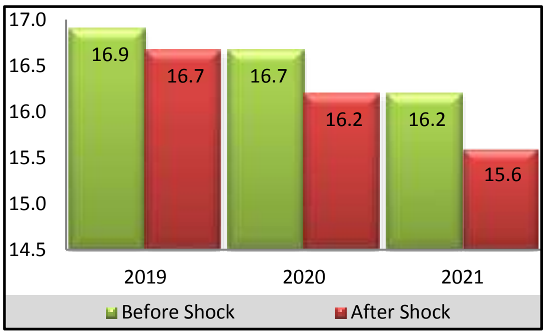
Assuming that the scenarios shown in Table 6-2 will materialize, the expected NPLs for years 2019, 2020, and 2021 under the 3 scenarios will be as shown in Figure 6-7.

Figure 6-7. NPL Ratio After the Application of the Scenarios in Table (6-2) (2019-2021) (%)



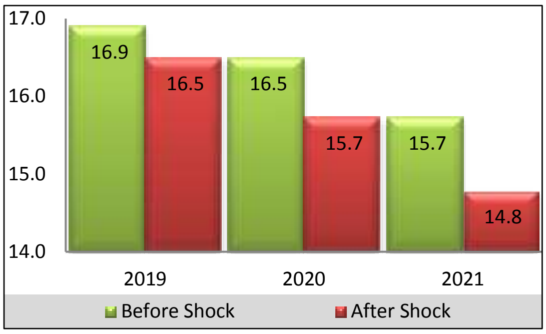

Therefore, the CAR, based on the medium scenario, will decrease to 15.6% in 2021, and will be above 12.0% for the three years (2019-2021) by a comfortable margin. This means that the banking sector is capable of withstanding this shock (Figure 6-8).

Figure 6-8.CAR Ratio After the Application of the Moderate Scenario (2019-2021)(%)




For the severe scenario, CAR will decrease to 14.8% in 2021, and will be above 12.0% for the three years (2019-2021). This implies that the banking sector has satisfactory CARs and is capable of withstanding this shock (Figure 6-9).

Figure 6-9.CAR Ratio After the Application of the Severe Scenario (2019-2021)(%)




## 6.3 CONCLUSION

**Based on the results of various stress tests conducted in this chapter for the years (2019-2021), 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 2021. The capital adequacy ratios for the years 2019, 2020, and 2021 are expected to be 16.5, 15.7%, and 14.8%, 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 SEVEN

# 7 CENTRAL BANKS AND DIGITAL CURRENCIES

## 7.1 INTRODUCTION

The last few years witnessed a technological shift in the financial transaction represented by the so-called digital currencies. The trading of these currencies has spread widely in the financial sector in a very short period of time through accepting them in various payment systems, especially the e-commerce. These developments in currency trading results in significant changes in the financial institutions and markets in various world countries and across the global economy as a whole.

Despite the many advantages of digital currencies that make them more attractive to users and investors, like their low cost, ease of use, and widespread, they could output several threats and dangers. Especially because most of these digital currencies in the present time are not issued by a centralized monetary authority and are not supported by any international body or organization and, hence, they are not subjected to formal supervisory entities. This could lead to abusing these technologies in laundering money, financing terrorist and tax evasion crimes.

These currencies in fact do not have intrinsic value as they derive their values from the "belief" that they can be traded or exchanged against goods or services without needing a medium or intermediary like banks. However, the high volatility of their prices might make the users of digital currencies suffer from huge losses. What has raised the issue of digital currencies is the widespread of bitcoin as a decentralized currency. The total number of units traded reached 17.74 million units that valued approximately $ 154.69 billion at the end of 2018. Although it is not the only digital currency in the market, Bitcoin constitutes approximately 68.9% of the assets of digital currencies in the market.

In addition to not being subject to any supervision, it may be difficult to avoid the spread of these new financial technologies in anywhere in the world, regardless of their acceptance or rejection.

International financial institutions such as the International Monetary Fund (IMF), the Financial Stability Board (FSB), and the world's major central banks emphasize the importance of monitoring the circulation of these currencies by creating the legislative and regulatory frameworks that ensure their compliance with the laws and regulations in force. Including anti-money laundering and terrorist financing laws, while at the same time ensuring that the risks of trading with these currencies are properly managed. This balanced approach could help enhance financial stability.

The issue of trading digital currencies remains controversial, especially in light of developments in the context of the adoption of some countries to issue digital currencies that avoid some of the drawbacks of the first issues; perhaps the most prominent being not subjecting the issuance of the currency to the centralized control of the relevant monetary authorities.

For example, the United States accepted Bitcoin as a legal currency and a financial service regulated by law, with all of its transactions traced and subjected to tax law as a property rather than a currency. Canada also considers this currency a financial service and commodity. Consequently, the transactions conducted through this currency are made in the form of barter and are treated as taxable property. Australia considers it a currency that can be used in buying and selling and is subject to foreign exchange laws. The European Union has not developed a unified approach to deal with digital currencies and has left each member country in the Union the freedom to adopt the policy it deems appropriate according to its own economic data. However, digital currency trading has been banned by some leading economies such as China and Russia.

In line with its follow up of the continuous developments in the financial technologies and in light of its awareness of the high risk potentials that might stem from trading with encrypted digital currencies and of their potential ambiguous impact on the stability of the financial sector in specific and the stability of the economy in general, the Central Bank of Jordan banned dealing with digital currencies through a circulating to the banks and financial institutions that are under its official mandatory supervision. The CBJ issued Circular No. 1/1/5/2451 on 20-02-2014 and Circular No. 10/3/3777 on 14-03-2018.

The goal of this chapter is explaining the concept of digital currencies and its technicalities for various types of digital currencies, besides its main characteristics, advantages and potential risks, as well as their impact on monetary policy and financial stability. The experiences of some Arab and foreign countries were also discussed. Finally, the regulatory framework and the opinion of the Central Bank of Jordan in this regard were clarified.

## 7.2 WHAT ARE DIGITAL CURRENCIES

### 7.2.1 DEFINITION OF DIGITAL CURRENCIES

Digital currency is a payment method that exists only in electronic form and is not tangible. Digital currency can be transferred between entities or users with the help of technology like computers, smartphones, and the internet. Although it is similar to physical currencies, digital money allows borderless transfer of ownership of funds as well as instantaneous transactions. Digital currencies can be used to purchase goods and services but can also be restricted to certain online communities such as gaming or social networks.[1] Even though there is no conceptual agreement among countries concerning digital currencies, they generally indicate monetary assets that take the digital form without having the characteristics of the legal tender currency.

There are two types of digital currencies: centralized digital currencies and decentralized digital currencies (cryptocurrencies or virtual currencies). Both are considered of the most prominent financial innovations that the globe witnessed during the last few years.

The digital decentralized currencies have particular characteristics that distinguish them from centralized digital currencies. They are assets with their value determined by supply and demand similar in concept to commodities, and they are subject to high price volatility. They have no intrinsic value and there is no authority responsible for managing the supply of their value units. Instead, this is often determined by an algorithm subject to different predetermined rules for the creation and issuance of these currencies in their market.

Moreover, the procedures and arrangements of trading with decentralized currencies are not limited to certain geographical areas or subjected to the supervision of a financial or governmental institution specialized in payment, clearing, or settlement systems.

[1] As defined by The Financial Stability Board definition “A digital representation of value issued by certain program developers. It is usually registered in their account unit, so that it exists only electronically. Thus, it has no banknote counterpart and is not available in the form of a banking or governmental bond.”

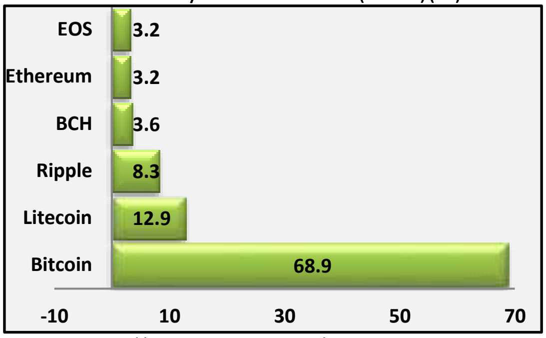
Transacting (trading) such currencies includes a peer-to-peer transfer of a specific amount of value using a technological innovation called distributed ledger technology with no need for a third party (Blockchain). The payment mechanism is based on a digital wallet in which the payer stores in a digital wallet his/ her cryptographic keys that give him/ her access to the value. The payer then uses these keys to initiate a transaction that transfers a specific amount of value to the payee. That transaction then goes through a confirmation process that validates the transaction and adds it to a unified ledger of which many copies are distributed across the peer-to-peer decentralized network.

### 7.2.2 EVOLUTION AND DEVELOPMENT OF DIGITAL CURRENCIES

The idea of digital currencies came into existence for the first time in 2008, in the aftermath of the global financial crisis that invited for the need to establish innovative systems and solutions targeting to improve the global economy. Since then, these types of currencies began to spread and grow remarkably. The idea of Bitcoin refers basically to Satoshi Nakamoto who published a paper in which he presented the idea of establishing a new system for electronic payment through which digital currencies are traded without a need for an intermediary or for the supervision by a local or international monetary body. He also suggested the trading mechanism.

Bitcoin is the first virtual currency issued in 2009 and is the most actively traded digital currency. Other currencies appeared on the market after Bitcoin, most of which are based on the principle of Bitcoin and copied from it, while some few others have their own system. In 2011 Litecoin was issued, then the Ripple in 2013. In 2014, Bitcoin Dash was issued. Finally, Ethereum and EOS were issued in 2015 and 2017, respectively. Figure 7-1 shows the most important digital currencies ranked by market share for 2019.[2]

Figure 7-1. Most Important Digital Currencies Ranked by Market Share (2019)(%)




Source :https://www.coinbase.com/price.

Decentralized digital currencies (virtual or cryptocurrency) are characterized by price volatility that is the inherent and common characteristic of the nature of trading with these currencies. This could have negative economic repercussions that could threaten the global financial stability. At the end of 2017, the value of the widespread digital currency Bitcoin achieved a peak market value, after which it lost more than 80.0% of its value in 2018. However, the Bitcoin was better off position compared to the rest of virtual currencies that lost at least 90% of their value.

## 7.3 CENTRALIZED DIGITAL CURRENCIES

Many central banks around the world have been considering issuing their own centralized digital currency, with the desire of many of these banks to be up-to-date with the financial innovations, especially in light of the efforts to move towards the digital economy.

In its paper of March 2018 about “Central Bank Digital Currencies”, the Bank for International

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[2] The market size numbers for these currencies were computed based on the numbers in the figure source. They are calculated by multiplying the continuously changing currency exchange rate by the quantity supplied in the market. The figure numbers were taken from the source on 01-04-2019 at 3:47 pm.

Settlements (BIS) pointed out that an important part of recent innovations in payment activities does exist in central banks that provide the necessary systems that help accelerating financial services. Therefore, the issuance of a digital currency by central banks will have an impact on the payment system, monetary policy, and financial stability. In this context, the Committee defined the digital currencies issued by the Central Bank (CBDC) as “a potentially new form of digital central bank money that can be distinguished from reserves or settlement balances held by commercial banks at central bank.” The paper identified four types of centralized digital currency. They are:

1- The wholesale centralized digital currency: Is a digital currency that the central bank can issue and allow for all exchange privileges with predetermined set of currencies. It is considered the third component in the monetary base besides reserves and cash money. Therefore, it is not a competing or special currency, but rather a substitute currency for the legal currency. Consequently, its supply in the market is dependent on the desire and conviction of individuals to possess it. An example is the Fedcoin, which is a general-purpose digital currency circulated in the USA. However, it is still in its experimental stages as its trading has not been banned, but has not been formally adopted by the Federal Reserve as well.
2- Centralized Digital Currency for Specific Purpose: A digital currency that can be introduced by the central bank. It is considered a representation of its funds under payment systems based on blockchain technology for the purposes of transactions and trading between the central bank and a number of banks and specific payment companies. An example of this is CADcoin, a centralized digital currency introduced by Bank of Canada in June 2016 in collaboration with a number of the largest banks in Canada and a company specialized in financial technologies.
3- CB General Purpose Deposits: General-purpose digital accounts that the central bank may allow the public to open and use for general purposes in local or foreign currency.
4- CB Reserves and Settlement Accounts: Are mandatory digital accounts at the central bank in local currency for building cash reserves and performing settlements among banks.

The issuance of centralized digital currencies for wholesale or general purpose could have favorable effects on the payment, clearance and settlement systems. They, on the other hand, could pose several risks and challenges. Therefore, central banks should compare these innovations with the developed solutions or the existing payment systems. They should also examine their effects on the other dimensions within its jurisdiction, especially on monetary policy and financial stability.

### 7.3.1 MOTIVATIONS OF CENTRAL BANKS FOR ISSUING CENTRALIZED CBDCS

The BIS conducted a survey on the motivations of central banks to issue centralized digital currencies for both types of general-purpose CBDCs and wholesale CBDCs. The sample size was 63 central banks distributed across developed and emerging countries. The study included a predetermined set of factors and motives that were differentiated by degree of importance from one to four, where the number 4 indicates the most important. The results of the study indicated that the main motivations for issuing digital currencies were, in order of importance, as follows:

1. Safe Payment Tool
2. Payment Efficiency (Domestic)
3. Enhancing Financial Stability
4. Monetary Policy Implementation
5. Payment Efficiency (Cross-Border)
6. Financial Inclusion

### 7.3.2 PREREQUISITES AND CHALLENGES IN ISSUING CENTRALIZED DIGITAL CURRENCIES

Several requirements and challenges must be taken into account by central banks and the relevant authorities when considering issuing centralized digital currency and using it publicly. These include:

**Legislative Structure**. The issuance of digital currencies by central banks will most likely require legislative changes in the existing laws. The important issue is related to what extent the centralized digital currency is legal and obliging, and to what extent it can be considered as a tool to fulfil financial obligations.

**Compliance with Anti-Money Laundering and Combating the Financing of Terrorism Laws Requirements**. The issuance of digital currencies by central banks requires these banks to comply with the relevant Anti-Money Laundering and Combating the Financing of Terrorism laws as well as Tax Laws. In fact, the mechanism of implementing these requirements in the financial transactions in which digital currencies are used is not clear.

**Reputational Risk**. The issuance of digital currencies by central banks requires these banks to take into consideration the reputational risks, especially those resulting from the general purpose CBDCs.

**Cyber-Security Requirements**. Central banks should consider avoiding the risks of cyberattacks by providing robust mitigation methods of cyber-risks before issuing their digital currency. The format of the general-purpose digital currency is the most open to a large number of online callers. Therefore, there is a high potential for exposure to the risks of piracy and cyber fraud.

**Rigorous Operational Requirements**. Central banks should consider providing a rigorous and robust operational environment before considering issuing their digital currency, especially since the technologies available for the issuance and management of digital currency are still unreliable and since the private sector is still in the early stages of developing and implementing the Distributed Ledger Technology for commercial purposes (Blockchain).

## 7.4 DECENTRALIZED DIGITAL CURRENCIES

Decentralized digital currencies are based on a cryptographic system. They are a valuable asset that is used in trading goods and services. They are not issued by a government or a central bank and are dealt with without the need for a financial intermediary or the control of local or international bodies that control all procedures, transactions, and their relevant transfers. These currencies have no association with the legal tender currency, and work through the Blockchain technology or the Distributed Ledger Technology where all transactions are recorded and verified. Examples of this type of digital currencies are the well-known digital decentralized currencies Bitcoin and Ripple. Types of decentralized digital currencies include:

- Private Digital Tokens (general purpose). A decentralized digital currency issued by a private source for trading online through the internet. They are subject to the supply rules in the market (like the Bitcoin).

- Private Digital Tokens (wholesale). A decentralized digital currency issued by a group of commercial banks across borders for trading on a distributed ledger platform (Blockchain). The value of this digital currency is covered through an equivalent value in the local currency and can be deposited at the central bank (an example is the Utility Settlement Coin (USC)).
- Virtual Currency. Is a digital currency issued by a private source used for trading a certain value that is determined by the issuer in limited scope in a virtual world (like PokéCoin)

### 7.4.1 Characteristics of Decentralized Digital Currencies

**Ease of Access**. The operation of decentralized digital currencies is not confined to a certain geographical location and could be accessed from anywhere in the globe.

**Data Privacy and Confidentiality**. Dealing with decentralized digital currencies is conducted with strict privacy, as the buying and selling operations using them cannot be monitored. In addition, they are not subject to any governmental or banking supervision, as they do not pass through any supervisory body or bank. The trading can be done without revealing the identity and personal details of the users or the transaction documents.

**Low Cost**. Contrary to banks and credit card companies, traders in the deals that are performed using the digital currencies do not pay any additional fees to complete the deals.

**Processing Speed**. The deals conducted on the decentralized digital currencies that are based in their mechanism on the distributed ledger technology (Blockchain) could be settled and cleared anytime and anywhere in the world at a much faster pace than the traditional payment systems.

- **Ease of Use**. The decentralized digital currencies are simple to deal with and trade when considering the number of procedures required for finalizing the transaction compared to the traditional methods.

### 7.4.2 Risks of Decentralized Digital Currencies

The November 2015 report on digital currencies issued by the Committee of Payments and Market Infrastructures at the Bank of International Settlements pointed to a number of factors affecting their development and that could be considered as risks to the decentralized digital currencies. The most important of which are:

**Price Volatility**. The dealers trading with these currencies are exposed to the risks of high price volatility, in addition to the market and liquidity risk that could add additional burdens and losses to users.

**Insecurity**: The confidentiality and encryption of information may ease executing suspicious and illegal operations such as security breaches, hacking and embezzlement, as well as the operational risk where the information on ownership of users may be lost in the distributed ledger technology. Consequently, this may affect confidence in the decentralized digital currencies negatively and lead to a decline in demand (number of users).

**Violation of international laws**. Debate has recently risen regarding whether the decentralized digital currencies could be used as a path for money laundering and terrorist financing. A number of international bodies discussed the risks associated with digital currencies, of which is The Financial Action Task Force (FATF) that released a report recently about managing the risks of crypto currencies related to money laundering and terrorist financing.

**Tax Evasion**. Due to its confidentiality, it is difficult for the specialized government bodies to collect taxes on the deals performed using the decentralized digital currencies.

## 7.5 EXPERIENCES OF ARAB AND FOREIGN COUNTRIES

The perspectives of central banks in Arab and foreign countries regarding dealing with digital currencies do vary according to their objectives and policies. In general, the world countries could be divided according to their response to this subject into groups, especially with the spread of electronic payment methods and international trade and the interdependence of international financial markets:

• Some countries have allowed trading with this new technology because of its positive advantages on the payment systems.

• Other countries have banned their use to protect the legal currency and economy as well. These countries in this group did agree with the international concerns about hacking money laundering and terrorist financing to ban trading digital currencies.

• Several countries have conducted research and studies on the impact of trading digital currencies on their different policies of, especially on monetary and financial stability, No final official decision on whether or not to approve their use.

### 7.5.1 EXPERIENCES OF ARAB COUNTRIES

A report issued by Bank Al-Maghrib in February 2019 on the risks and repercussions of virtual currencies on the financial sector indicated that many Arab countries have considered trading in digital currencies as illegal. These include Morocco, Lebanon, Egypt, Qatar, and Jordan. As for the Kingdom of Bahrain, it has recognized virtual currencies as a commodity that can be traded on exchanges, but did not consider it a legal currency.

The UAE and Saudi Arabia launched the 'Aber' currency project to issue a digital currency in November 2019 with the aim of reducing the cost of transfers and accelerating financial settlements between the markets in the two countries. Therefore, it is a centralized digital currency for a specific purpose. The UAE Central Bank and the Saudi Arabian Monetary Agency (SAMA) stated that the objective of the project is to understand and study the implications of modern financial technologies and their feasibility through the real application. They aim also at knowing the scope of their influence on improving and reducing the costs of transfers, besides assessing and addressing the technical risks. The Central Banks in the two countries will build a reserve of digital currency (or balance) in each of them for use in withdrawals and deposits when the transfers are executed.

### 7.5.2 EXPERIENCES OF FOREIGN COUNTRIES

According to several resources, the prospective of various world countries and their central banks towards this new financial technology varied. Some foreign countries conducted research and analytical studies about the advantages and potential risks of digital currencies and their impact on the local currency and financial stability.

The IMF published a report in March 2019 that discusses using cash across countries and the demand for central bank digital currency. According to the report, a number of countries such as Canada, China, Norway, Denmark, Singapore, Sweden, and the UK have conducted analytical studies and published regulatory frameworks to spread the understanding of the mechanism of this currency in an attempt to explore the economic effects of the issuance of such digital currencies on the local currency and financial stability.

Moreover, the financial stability report issued by the Central Bank of Turkey in November 2018 listed the experiences of several world countries in this regard as follows:

• Several central banks; including these in Russia, Estonia, Italy, the Netherlands, Iran, and Malaysia; announced that they are conducting continuing studies on issuing their own centralized digital currencies.

- **China**. The People's Bank of China indicated that the development of a digital currency as a future form of money has become inevitable. It pointed out through its research laboratory that it has expanded its activities to prevent this innovation from causing any substantial severe damages that cannot be fixed to the economy.
- **Ecuador**. The Central Bank of Ecuador was the first central bank to identify a type of centralized digital currency by opening accounts for individuals in 2015 and allowing for transfers via phone applications using digital currency. However, this technology has not been heavily supported by individuals in payment processes. It was officially canceled in December 2017 due to its failure to comply completely with current payment systems.
- **Venezuela**. The government announced in 2018 that it plans to issue a digital currency supported by precious mineral reserves in the country, especially oil.
- **Switzerland**. The Swiss National Bank stated that distributed ledger technology (Blockchain) is neither adequate nor sufficient to support digital currency and is no better than the infrastructure of traditional payment systems.
- **Hong Kong**. The Monetary Authority has indicated that Blockchain is not superior to the traditional payment systems infrastructure. Existing systems were efficient and effective. Therefore, the Monetary Authority will not consider issuing digital currencies in the near future.
- **The European Central Bank (ECB)**. The ECB stated that there is no urgent need for the issuance of the central digital currency in the present time. It also stated that the demand for money is continuously growing. Therefore, there are no plans to issue a digital currency in the near future. However, it is analyzing the possible consequences of issuing such currencies as an integral part of money.
- The Central banks in Canada, England, Japan, and Australia stated that there are not enough reasons to issue centralized digital currencies now. Despite their advantages, they might have adverse effects on the legal currency and the financial and banking stability.
- **Turkey.** This country has decided to issue its own digital currency and to be known as Turk Coin, and which does not violate the teachings of Islamic sharia.
- **Sweden**. Due to declining use of banknotes, a pilot project was conducted to issue a centralized digital currency, e-krona. It is a complementary to the current currency and electronic payment systems. The Riksbank (Central Bank of Sweden) has indicated that the distributed ledger technology (blockchain) is unreliable. Consequently, the Riksbank has created a platform that enables the providers of payment services using this currency to meet and distribute currency. This platform is considered as the preliminary stage of the project. This platform can later use Blockchain technology.

- **Uruguay**. The Central Bank of Uruguay has launched a pilot project for digital currencies. They are issued by the Central Bank for general purposes. The bank considered this project as a part of the financial inclusion program of the Government that began in 2011. The project was successful in the beginning but was closed in April 2018. In the present time, however, the experiment is at the evaluation stage before deciding on any further experiments and possible issuance of a digital currency.

## 7.6 Impact of Decentralized Cryptocurrencies on Financial Stability

In a study on decentralized digital currencies (cryptocurrencies) in November 2018, the Financial Stability Board assessed the effects of these currencies on financial stability and concluded that they do not pose any potential risks to global financial stability in the present time. This was attributed to the strict and prudent follow-up and policies issued to deal with them by the monetary authorities in light of the rapid development in the global markets. However, the increasing circulation of decentralized digital currencies has many long-term risks, including drop in liquidity levels and price fluctuations, as well as technical and operational risks in addition to financial crime risks.

The study also pointed out that if they become an important part of the financial system and commonly traded outside the control of the regulatory authorities, this may lead to a loss of confidence in these authorities. In addition to direct and indirect exposure of financial institutions to the risks of these currencies and risks stemming from the impact of market size and wealth inflation.

## 7.7 Regulatory Framework for Trading Digital Currencies: the Role of the Central Bank of Jordan

The Central Bank of Jordan continues to support innovations and initiatives that use the latest financial technologies, while giving priority to applications that could improve the access to digital financial services efficiently and securely, taking into account the requirements to enhance cybersecurity for financial services in general.

In its concern about the integrity of the financial and banking systems and the national economy, the Central Bank of Jordan has issued two circulars regarding the prohibition of the trading decentralized cryptocurrencies due to the high risk of fluctuation in their value. In addition to the risks posed by financial crimes and piracy that affect the financial institutions and financial and economic stability negatively. The Central Bank of Jordan issued the first circular No. 1/1/5/2451 dated 20-02-2014. The circular was addressed to the banks, the financial institutions that are under its supervision, exchange companies, and payment card companies regarding the prohibition of trading or exchanging the digital currencies for any other currency or opening accounts to deal with, send, or receive remittances against them or for the purpose of buying or selling them.

The Central Bank of Jordan issued the second circular No. 10/3/3777 dated 14-03-2018 confirming the continued prohibition of trading with the Bitcoin and all other virtual currencies including, but not limited to, the Ripple and Ethereum. In addition, the circular stressed the banning of all forms of trading with these currencies, whether directly or indirectly. This includes buying, selling, exchanging, dealing in future contracts, or investing in Investment funds or index funds with these currencies, whether for the benefit of the bank, partners, or customers.

## 7.8 CONCLUSION

**The central banks and the relevant parties must continue to follow up and monitor the digital innovations, as well as to review their businesses and impacts. This includes innovations related to decentralized digital currencies that are issued by the private sector and do not belong to any supervisory authority. In the present time, the high fluctuations in the values of cryptocurrencies; the absence of protection of the dealers; the risks of financial crimes, money laundry and terrorism financing; and tax evasion all make these currencies unsecure and unreliable to depend on as a medium of payment, store of value, or unit of account. Regarding the centralized digital currencies that are issued by the central banks, there are no enough justifications for issuing such currencies in the present time. However, the central banks and supervisory authorities should continue to track developments in this field and conduct further research and studies to help understanding these FinTech and their impact on monetary, financial, and economic stability.**

# Chapter Eight

# 8 Credit Concentration in the Banking Sector and Financial Sector Stability in Jordan

## 8.1 Introduction

The banking sector is considered one of the most important economic sectors, the most developed, and the most resilient. The continuity and success of the banking sector do contribute significantly to achieving the sustainable economic development and enhancing financial stability in Jordan. The global financial crisis, in this context, has revitalized the interest of academics and policy makers in investigating the relationship between the concentration in the banking sector and financial stability due to the important role that concentration might play in building a financial crisis, especially when it trends up, creating fears about the stability of the financial system. Examining the relationship between the concentration in the banking sector and financial stability helps setting effective policies to deal with any vulnerabilities in the financial system stability (threats to financial stability). This chapter aims at studying the impact of concentration in the banking sector on financial stability in Jordan.

## 8.2 Relationship between Credit Concentration in the Banking Sector and Financial Stability

Theoretical and empirical studies did not get to clear-cut evidences about the relationship between concentration in the banking sector and financial stability.

The disagreement among studies that analyzed the relationship of the effect of concentration in the banking sector and financial stability invites for further research and analysis, especially in the emerging markets where this relationship might be different from the advanced economies. The investigation of this relationship will inevitably help supervisory authorities and policy makers to put in structural policies for the banking sector's concentration and stability.

In sum, studies ended with opposing hypotheses that explain the relationship between concentration in the banking sector and its stability. Hence, there is no clear evidence preferring one hypothesis to another.

### 8.2.1 First Hypothesis: Concentration-Stability Hypothesis

This hypothesis suggests that the existence of high concentration in the banking sectors accompanied by the existence of small number of large banks helps enhance financial stability and make it less vulnerable to financial crises compared to a large banking sector with large number of small banks and lower concentration levels. The large banks usually have highly diversified investment portfolio that strengthens its capacity to withstand financial and economic shocks due to their high profits besides their low risk appetite as regards achieving profits (more risk-averse).

### 8.2.2 SECOND HYPOTHESIS: CONCENTRATION-FRAGILITY HYPOTHESIS

This hypothesis assumes that the banking sector that has a few number of large banks and, hence, higher concentration (lower competition) levels might be less stable and more vulnerable and subject to the occurrence of financial crises. There is, per this hypothesis, a negative relationship between the size of the bank and bank failures. This is because of the difficulty that is likely to be present in monitoring these banks and the domination of these banks over the market. That could lead to increases in the cost of credit on borrowers, and hence raise the probability of default, and, eventually, lead to negative consequences on financial stability.

### 8.2.3 CONCENTRATION-STABILITY (FRAGILITY) NO RELATIONSHIP

A number of researchers have put in another hypothesis of "Concentration-stability (fragility) no relationship". It suggests that there is no relationship between concentration and stability. Proponents of this line of thought claim that the relationship between concentration and stability is rather sophisticated. Therefore, it is not a straightforward task to specify a negative or positive relationship between these two variables. This is because the analysis of such a relationship is influenced by several other factors related to macro economy and the regulatory and institutional framework of the country, besides the research hypothesis and the data used.

In this regard, researchers indicated that the empirical investigations about the relationship between concentration in the banking sector and financial stability that have been applied and tested on the emerging market economies are limited. Conversely, there was a mass of studies that have investigated the relationship between financial stability and the concentration in the banking sector in the advanced economies empirically. Therefore, this research gap about the relationship between financial stability and the concentration in the banking sector needs to be filled (due to the different fundamentals of both economies).

Table 8-1 summarizes some studies about the relationship between concentration in the banking sector and financial stability in some countries.

| Table 8-1. Summary of Studies About the Relationship between Concentration in the Banking sector and Financial Stability | |
|---|---|
| Studies Supporting the Hypothesis that Higher Concentration in the Banking Sector Has Positive Effect on Financial Stability | |
| Researcher | Research Scope |
| Keeley (1990) | Relationship between banking stability and competition for 150 of the largest banks in the USA during the period (1970-1986) |
| (Allen and Gale, 2000, 2004). | Relationship between competition and banking stability (a theoretical framework) |
| Fungáčová et al., (2010) | Analysis of the competition levels in the banking sector in Russia during the period (2001-2007) |
| Deltuvaitė (2010) | The relationship between concentration and stability for Lithuania banking system between 1987-2007 |
| Jimenez et al., (2010) | Relationship between competition and bank risks for Spanish banks for the period (1988-2003) |
| Beck *et al.*, 2004.2005.2010 | Investigating the effect of concentration on financial stability for 69 countries during the period (1980-1997) |
| Studies Supporting the Hypothesis that Higher Concentration in the Banking Sector Has Unfavorable Effect on Financial Stability | |
| Claessens and Laeven (2004) | Investigation of competitiveness for banks in 50 countries for the period (1994-2001) |
| Boyd et al., (2006) | A study conducted on about 2,500 banks in the USA in 2003 and 134 banks in non-industrial countries during the period (1993-2004) |
| Uhde and Heimeshoff (2009) | The effect of concentration on financial stability for the European Union countries for the period (1997-2005) |
| Studies Supporting the Hypothesis that Higher Concentration in the Banking Sector Has No Effect on Financial Stability | |
| Boyd & Runkle, 1993 | |
| Demirgüç-Kunt & Levine, 2000 | |
| Ruiz- Porras, 2007 | |

## 8.3 PRIMARY FACTORS AFFECTING THE RELATIONSHIP BETWEEN CONCENTRATION IN THE BANKING SECTOR AND FINANCIAL STABILITY

It is worth mentioning that the effect of concentration in the banking sector on financial stability depends, theoretically, on several variables that have varying effects that go in opposite directions, and, hence, make their overall impact unclear. The effect of the variables on financial stability varies by the level of concentration and net impact of the relevant variables as follows:

**Profitability**. The concentration in the banking sector enables the larger banks to obtain more profits relatively. Consequently, this positively affects the value of the banks and helps make the banking sector more stable and less vulnerable to crises. This goes in line with the first hypothesis (concentration-stability).

**Cost of credit**. The higher concentrations enable the large banks to possess higher market power that enables them to manipulate interest rate by raising interest rates on borrowers. In turn, this leads to in the risks that the borrowers might be subject to and hence makes the financial system less stable and more exposed to an occurrence of a financial crisis. This goes in line with the second hypothesis (concentration-fragility).

**Diversification**. The relationship of this variable with financial stability is unclear. On one hand, the higher concentration means larger banks with more diversified investment portfolios that lead to gains from their size and, therefore, increase financial stability, which supports the first hypothesis of (concentration- stability) (economies of scale). On another hand, the larger banks usually become less risk-averse (more risk appetite), causing higher fragility in the banking sector. Moreover, the larger the bank size is, the more challenging its supervision and monitoring become; and the higher the control of few number of banks on the market is, the higher the contagion risk and its impact on the banking sector will be, all of which will lead to higher instability in the financial system. This goes in line with the second hypothesis (concentration-fragility).

**Ease of monitoring and supervision**. The relationship of this variable with financial stability in also unclear. If the financial system is more concentrated and is composed of a small number of large banks, this will lessen the supervision burden and facilitate the process of tracing and monitoring few banks, and, hence, enhance financial stability. This goes in line with the first hypothesis (concentration- stability). However, the large and the highly interconnected bank makes this bank's supervision a challenging task, and, hence exacerbates the fragility of the banking sector. Therefore, this agrees with the second hypothesis (concentration- fragility).

A study prepared by the World Bank (in October 2018) entitled "Concentration in the Banking Sector and Financial Stability: New Evidence" indicates that the magnitude and net effect of the variables depend on the level of concentration. At higher levels of concentration, increasing concentration makes the banking system more fragile (negative relationship with financial stability). At lower levels of concentration, increasing concentration improves financial system stability (positive relationship with financial stability). For intermediate levels, concentration has no significant effect on financial stability, as the competing moderators cancel each other out. The results suggest that an intermediate level of concentration may be the optimal.

## 8.4 RESEARCH METHODOLOGY

The study of the relationship between concentration in the banking sector and financial stability in Jordan was based on a set of variables that are divided into the following:

- A dependent variable representing financial stability measured using the Z-Score that quantifies the probability of bank failures. This score is often used in most studies to assess the stability of a particular bank as well as the banking sector as a whole. It is noteworthy here to indicate that there exists a clear negative relationship between Z-Score and the likelihood of bank insolvency. The higher the value of Z-Score is, the less likely the bank insolvency and thus the higher the financial stability will be.

Z-Score is calculated as follows:

$\text{Z-Score}_i = (ROA_i + (E/TA_i))/\sigma(ROA_i)$

Where,

ROA: Return on Assets.

E/TA: Equity-to-asset Ratio.

σ(ROA): Standard deviation of the Return on Assets.

i: A subscript representing individual bank.

- An independent variable that reflects the concentration in the banking sector. The Herfindahl-Hirschman Index was used to as a proxy for concentration in the banking sector. It is computed as the squared market share of the bank from the total assets of all banks according to the following formula:

$$H = \sum_{i=1}^{n} \left( \frac{Xi}{\sum_{i=1}^{n}(Xi)} \right)^2$$

Where,

H: The Herfindahl-Hirschman Index.

n: Number of banks.

X: Total assets of the banking system.

i: A subscript representing individual bank.

- Independent variables that are considered as determinants of the performance of banks. This study used the return on assets of the bank (ROA), the ratio of non-performing debt of the bank (NPL), the total assets of the bank (TA), real GDP.

The relationship between the concentration in the banking sector and the stability of the banking sector in Jordan was analyzed using panel data of 275 observations that were collected from Jordanian banks for the years (2006-2016) using Panel EGLS (Cross-section weights), using E-views version 8, and according to the following regression equation:

$\text{Z-score}_{it} = \alpha + \beta 1(HHI_{it}) + \beta 2\,(ROA_{it}) + \beta 3(NPL_{it}) + \beta 4 \log(TA_{it}) + \beta 5(RGDP_t) + \varepsilon_{it}$

Where,

Z-score: The indicator used to measure the stability of the banking sector.

HHI: The Herfindahl-Hirschman Index to measure the concentration of the banking sector.

ROA: Return on Assets.

NPL: The ratio of non-performing loans of the Bank.

RGDP: The real Gross Domestic Product.

TA: Total assets of the bank.

α: The intercept of the model.

β1, β2, β3, β4, β5: Regression coefficients.

ε: The random error.

i: A subscript representing individual bank.

t: A subscript representing one year.

## 8.5 STUDY RESULTS

Based on the statistical tests conducted, this empirical investigation found that there is a statistically significant negative relationship between the concentration of the banking sector measured by the variable HHI and the stability of the banking sector as measured by the Z-score variable. This implies that the increase in the concentration ratio in the banking sector in Jordan leads to a decrease in Z-score – signaling lower financial stability. Therefore, the banking sector in Jordan follows the second hypothesis that supports the existence of negative effect of higher concentration in the banking sector on the financial stability (concentration-fragility).

The relationship between the stability of the banking sector in Jordan and the other variables used in the study was as hypothesized. The relationship was statistically significant negative with the ratio of non-performing loans as the higher the ratio of non-performing loans is the lower the financial stability will be. For the real GDP, the relationship was statistically significant positive, the higher the real GDP is, and the higher the financial stability will be.

The relationship of the Z-score with the return on assets and total assets was statistically significant positive. These relationships are shown in the following estimated equation:

Z-score *it* = 0.24 -2.12(HHI*it*)+ 3.12(ROA *it)*-0.003(NPL *it*) + 0.04 log (TA *it*)+ 1.03(RGDP *t*) + ε *it*

Table 8-2 shows the results of econometric analysis of the above model.

Table 8-2. Results of Econometric Analysis

| Variable | Coefficient | T-Statistic |
|---|---|---|
| C | *0.24 | 4.8 |
| HHI | -2.12* | -1.8 |
| ROA | 3.12* | 4.8 |
| NPL | -0.003* | -2.3 |
| log (TA) | 0.046* | 2.12 |
| RGDP | 1.03 | 1.2 |
| $R^2$ | 93.8% | |
| Adjusted $R^2$ | 93.1% | |

*: Statistically significant at 95.0% level of confidence.

It is worth mentioning that the level of concentration in the Jordanian banking sector is following a downward trend, as the assets of the five largest banks reached 53.6% of the total assets of the banking sector as at the end of 2018, lower than in previous years - as was detailed in Chapter Three of this report. Moreover, the value of Herfendel-Hirschmann amounted to 8.9% at the end of 2018, which indicates a relatively low to moderate concentration that indicates that the competitive situation in the banking sector in Jordan is constantly improving. This in turn, had a positive impact on financial stability in the Kingdom. It is also worth mentioning that the banks in Jordan are relatively conservative in accepting high risks. Therefore, the increase in competition is not expected to lead to an increase in risk appetite, especially with the presence of a prudent and effective regulatory and supervisory framework in Jordan. Therefore, the decline in concentration and the increase of competition in the banking sector had a positive impact on the financial stability in the Kingdom.

The results of this study in the case of Jordan complies with the studies that found that high levels of concentration in the banking sector might have negative impact on competitive conditions and, hence, exacerbate the fragility of the financial system and the instability in the financial system, if any. An example study in this regard is the one conducted by Uhde and Heimeshoff (2009) about the “Consolidation in banking and financial stability in Europe: empirical evidence.” The study investigated the relationship between concentration in the banking sector and financial stability in the European Union and found that higher concentration in the banking sector had an adverse effect on the financial soundness of the European banks.

Moreover, several studies have shown that the appropriate and effective regulatory and supervisory framework helps mitigate the potential negative effects and risks of competition on financial stability. Therefore, the decline in the concentration in the banking sector, or, put alternatively, the increase in the competitiveness among banks with the presence of an appropriate and effective regulatory and supervisory framework that enhance financial stability.

## 8.6 CONCLUSION

**The results of the investigation of the effect of banking sector concentration on financial stability in Jordan revealed that the decrease in concentration or, alternatively, the increase in competitiveness in the Jordanian banking sector enhances the financial stability in the Kingdom. Moreover, since the concentration ratios in Jordan are following a downward moving trend, this decrease and the increase in the competition are expected to have a favorable effect on financial stability. However, a prudent supervisory policy should be adopted so as not to allow for the increase in competition to affect the desire of the banking sector to bear more risks adversely. The CBJ will continue to conduct further research and studies about the relationship between concentration (competition) and financial stability.**

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