FINANCIAL STABILITY REPORT 2017

FINANCIAL STABILITY DEPARTMENT

PREFACE

The Financial Stability Report for 2017 (JFSR2017) is issued in light of the continuous efforts of the Central Bank of Jordan (CBJ) to enhance the stability of the financial and banking sector in the Kingdom and to provide sufficient data on all aspects of the economy and the financial sector in Jordan. Pursuant to the amended CBJ Law for the year 2016, the mandate of the CBJ has been expanded explicitly stating that maintaining financial stability is one of the CBJ's objectives along with monetary stability. Financial stability enhances the ability of banks and other financial institutions to withstand risks and reduce any structural imbalances.

During the year 2017 the Jordanian economy continued to face several challenges and risks caused by the turbulent political situations in the neighboring countries, which results in achieving a modest real growth rate, reaching only 2.0% in 2017. As for future outlook, preliminary estimates indicate the possibility of a slight improvement in the economic growth rate to reach 2.3% and 2.5% in 2018 and 2019, respectively.

With regard to the financial sector stability, the year 2017 witnessed constancy in the level of financial stability in the Kingdom, despite the challenges and risks resulting from the political and economic conditions in neighboring countries and their impact on the economic and financial situation in Jordan, due to government policies and policies of the CBJ which helped to reduce the severity of the impacts of these challenges. Jordan enjoys a sound and solid banking sector that is generally able to withstand the shocks and high risks since banks operating in Jordan have the advantage of high levels of capital in addition to comfortable levels of liquidity and profitability.

The CBJ will continue developing this report, taking into consideration the developments of the risks at the local, regional and international levels, with the aim of strengthening the financial stability pillars in the Kingdom, noting that the JFSR2017 is published on the website of the CBJ (www.cbj.gov.jo).

Governor

Dr. Ziad Fariz

EXECUTIVE SUMMARY

GLOBAL FINANCIAL STABILITY

The global economic upturn that began around mid-2016 has become broader and stronger. In its *World Economic Outlook* (WEO) report published in April 2018, the International Monetary Fund (IMF) projected that advanced economies will continue to expand above their potential economic growth rates this year and the next, supported by a higher growth in the Euro area, Japan, China, and the United States, alongside a modest economic recovery in the primary commodities exporting countries. However, risks threatening the economic growth over the medium term arising from accommodative financial conditions loom large and remain highly above their historical records. In addition, the government debt and deficits are cause for concern, as countries with elevated public debt and high deficits are vulnerable to a sudden tightening of international financing, which may disrupt their ability to access markets and jeopardize the economic activity. According to the WEO report of April 2018, the IMF projected the world economic growth in 2018 to pick up from 3.6% to 3.9%.

Further, a report issued by Bloomberg indicated four major risks of a tremendous concern to the global economy, which may increase its vulnerability even higher than it was before global financial crisis; when Leman brothers collapsed ten years ago.

First: a record level of global debt (including public debt and non-financial private debt) which surged to USD 237 trillion by the end of 2017, compared to pre-crisis level of USD 116 trillion in 2007.

Second: There is limited room for a sound monetary policy response to another financial crisis, due to massive quantitative easing which left central banks having a record of USD 15 trillion of assets on their balance sheets, and interest rates still close to record lows.

Third: the political center has frayed in almost all major economies and populism is rising. Large political parties in most European economies have fragmented with an increase of small political parties, as governing majorities become ever harder to cobble together. In addition, the electorate are more dissatisfied with economic instability.

Fourth: deterioration of trust and weakening in international order in light of international conflicts.

Moreover, trade protectionism adopted by major countries may cost the global output by around USD 470 billion, according to Bloomberg Economics, with escalating international reactions and warnings of higher tariffs and punitive tariffs. This will adversely impact global output in the long term, and weaken trade competition, which hampers the exchange of technology and ideas, discourages productivity and dampens sustainable growth of global economy.

Jordanian Economy:

With respect to Jordanian economy, it faced and still facing several challenges and risks, namely; the political turbulences in neighboring countries. This resulted in a modest growth of the real GDP by 2% in 2017. However, preliminary projections suggest that the real GDP growth rate will improve to 2.3% and 2.5% in 2018, and 2019 respectively.

FINANCIAL SOUNDNESS INDICATORS OF THE BANKING SECTOR

The financial soundness indicators of the banking sector in Jordan remained stable. Following are some indicators that show the resilience and the soundness of the banking sector and its capability to withstand shocks and high risks.

- **CAPITAL ADEQUACY:**

The Capital Adequacy Ratio (CAR) of the banking sector in Jordan is high; as it ranged between 18%-21% during the period (2007-2017) which is amongst the highest five in MENA countries. It is generally well above the threshold set by the CBJ of 12% and the limit specified by Basel III of 10.5%. However, the CAR ratio slightly decreased to 17.8% at the end of 2017, compared to 18.5% in 2016.

It is worth mentioning that capital adequacy ratio and the tier I core capital ratio are very close. The tier I core capital reached 17.4% at the end of 2017. This implies that in Jordan most of banks' capital is composed of tier I core capital which is the highest quality component of the capital and the most capable to absorb losses.

- **QUALITY OF ASSETS**

Non-performing loans (NPLs) to total loans declined further in 2017 to reach 4.2% compared to 4.3%, 4.9%, 5.6%, and 6.8%, for the years 2016, 2015, 2014, and 2013, respectively. This downward trend is due to the increase in credit facilities (the denominator) more than the increase of NPLs (the numerator). Moreover, Jordan is the fifth lowest ratio amongst 13 selected Arab countries, improving from the ranking of 2016. The provisions' coverage ratio for NPLs reached 75.4% at the end of 2017; the banking sector in Jordan is ranked sixth among 13 Arab countries in terms of the NPLs coverage ratio.

- **LIQUIDITY**

The Jordanian banking sector enjoys safe liquidity position as highly liquid assets formed around 45.8% of total assets at the end of 2017 compared to 48.9% at the end of 2016. This decline is influenced by improving growth rates of credit extended by banks, which started in 2015, and continued in 2016, and 2017 which led credit facilities to grow at higher rates compared to deposits.

- **PROFITABILITY**

The profitability rates of the banking system improved in 2017. The return on assets (ROA) of the banking sector in Jordan reached 1.2% in 2017, compared to 1.1% in 2016, while the return on equity (ROE) recorded 9.1% in 2017 compared to 8.9% in 2016. However, Jordan's rates of returns are considered low relative to several Arab countries, due to banks' conservatism and risk aversion, in addition to the high levels of capital held by banks as well as the relatively high rates of income tax paid by banks in Jordan.

- **CONCENTRATION IN THE BANKING SECTOR**

The downward trend of concentration and high level of competitiveness in the banking sector continued in 2017. The assets of the largest five banks (out of 25 banks) captured 53.7% of licensed banks' total assets at the end of 2017 compared to 60% ten years ago. This resulted from banks being developing their businesses and products to increase their competitiveness, as well as the entry of three new banks in 2009.

- **CREDIT GROWTH**

In 2017, credit extended by banks maintained its upward trending which started markedly in 2015. The credit facilities grew by 9.6%, 8.9%, and 8% in 2015, 2016, and 2017, respectively, compared to 6.3% and 5.2% in 2013 and 2014 respectively.

- **STRESS TESTING**

The stress testing results used to measure banks' ability to withstand shocks revealed that the banking system in Jordan is generally able to withstand shocks and high risks. A hypothetical scenario was constructed representing the deterioration of regional conditions surrounding the kingdom, a reduction in the aid from the Gulf countries, the decline in tourism income and direct investment, the drop in national exports, and a rise in the inflation indicator, which could lead to a marked slowdown in economic growth rates compared to expectations, rising unemployment and a contraction in the financial market. It was also assumed that interest rates on the US dollar will rise higher and faster than expected, in case economic conditions in the United States continue to improve and the CBJ continues raising interest rates on the Jordanian dinar to preserve its' attractiveness as a savings currency. The results of the tests revealed that the capital adequacy ratio for the banking sector in Jordan, assuming the aforementioned scenario, will reach 17.5%, 16.9% and 16.3% for the years 2018,2019, and 2020 respectively, indicating that assuming worst scenarios, the capital adequacy ratio will remain higher than the minimum applied in Jordan of at least 12%, and the minimum level of 10.5% determined by Basel committee.

- **JORDAN FINANCIAL STABILITY INDEX (JFSI)**

Jordan financial stability index (JFSI) in 2017 fell slightly to 0.46 versus 0.49 in 2016. This decline was influenced by the decline of sub-indicators of the macro-economy and capital market indices; however, the banking sector index was almost stable at the same level of 2016. The JFSI values ranges from zero to one, as the index approached zero, it indicates a weakness in the financial system, and the closer it approaches one, indicates increased stability in the financial system. The JFSI was developed in 2016, taking into consideration the best practices of several countries. The JFSI reveals that the stability of the financial system in Jordan is reasonable amid the political and economic developments in the region and their impact on financial stability in the Kingdom. Moreover, the banking sector index in particular shows that Jordan has a sound, robust and stable banking sector. In addition, Jordan ranked third, compared to 19 European countries, which developed similar financial stability index using the same methodology.

OPERATIONAL EFFICIENCY

The average Cost to Income Ratio (CIR) for the banking sector in Jordan increased from 55.7% at the end of 2016 to 56.2% at the end of 2017. Despite this increase, the CIR average is barely close to the international upper bound of 55%. However, this entails that several banks in Jordan should work on rationing and cutting down their operational expenses more efficiently.

The Household Sector:

Household debt to income ratio declined in 2017, reaching 67.4% compared to 69.3% in 2016, which is a positive indicator implying a reduction of household debt risks on the individuals themselves and the banking sector. Nevertheless, this ratio is still relatively high, which indicates that the banks should continue to be cautious to the risk of lending to this sector and while examining its expansion, take into consideration the development of these risks. Noting that this ratio doesn’t measure the level of debt burden on the borrower, and doesn’t mean that all Jordanians have a debt to income ratio of 67.4%, whereas it means that the total debt balance of borrowers accounts for 67.4% of their disposable income. Meanwhile, the monthly burden on the borrower, represented by the monthly installments and interests accounted (on average) for 40% of the regular monthly income of the borrower.

The Corporate Sector:

The results of stress testing conducted on the corporate sector revealed that 95% of the companies are able to withstand the two assumed shocks, represented by the rise in interest rates or the drop in companies’ profits. However, the real estate companies sector is the most affected by these shocks.

The Real Estate Sector:

The real estate credit facilities or facilities guaranteed by real estate collaterals accounted for 32.4% of total facilities extended by banks at the end of 2017 compared to 33.3% and 35.6% at the end of 2016 and 2015, respectively, indicating a decline in banks’ exposure to real estate risks. Credit facilities extended for the real estate sector, for residential and commercial purposes, reached JD 5.29 billion (21.6% of total facilities extended by banks) at the end of 2017, in comparison with JD 4.96 billion at the end of 2016, growing by around 6.5%, which is lower than the growth ratio of total facilities in general standing at around 8% in 2017. From another side, following up on the trading volume in the real estate market and the real estate price index in Jordan, the real estate market has been affected since 2017 by the repercussions of the slowdown of economic activity in the kingdom, and the political and economic developments in the region, more markedly than during the previous years, as the real estate trading volume decreased by 14.1% in 2017, and the real estate price index also dropped by 0.9%. However, the drop in the price index is still insignificant and not a concern at the current time, especially with the banks' recognition of these risks, reflected in the decrease in banks' exposure to the risks of real estate loans and real estate guarantees.

Financial Inclusion:

After the CBJ has announced to the public and all key stakeholders from public and private sectors in 2016, regarding the vision of the National Financial Inclusion Strategy, which aims at enhancing the access of all segments of the society to the financial services provided by the formal financial sector in a fair, transparent, and responsible manner, in line with the pillars of the National Agenda and the strategic directions in the kingdom striving towards an inclusive and sustainable financial system. On December 4th, 2017 the National Financial Inclusion Strategy (2018-2020) was launched under the patronage of His Majesty King Abdullah II bin Al-Hussein, and in the presence of His Excellency the Prime Minister. Five pillar were specified in this strategy, which are: financial literacy, financial consumer protection, small and medium-sized enterprises (SMEs), microfinance services, and digital payments, through creating a database that supports the five aforementioned pillars, in order to ensure the accuracy and implementation of the objectives and the clear vision for each pillar. The report tackled the most important achievements and the steps taken for each of the pillars of this strategy. The National Financial Inclusion Strategy aims to accomplish two major goals; (1) raising the financial inclusion level from 33.1% in 2017, measured by the number of adults who own accounts in financial institutions to 41.5% by the year 2020, and (2) reducing the gender gap in access to finance from 53% to 35%.

LEGISLATIVE FRAMEWORK

In 2017, the CBJ continued to conduct a comprehensive review of the legislative framework governing the practices of the banking and financial institutions under its supervision. Chapter (2) of the report highlights main amendments in the CBJ's supervisory legislations during the period (2016-2018), in particular the amended Central Bank of Jordan Law No (24) of 2016 and the draft Law of organizing insurance business, in addition to several significant banking regulations that were issued to reflect the latest developments and international best practices and experiences regarding the role of central banks in maintaining monetary and financial stability. For example, the CBJ issued on 6/6/2018 the Instructions of International Financial Reporting Standard 9 (IFRS 9) No. (13/2018) which apply to all banks operating in the Kingdom and at all levels. The IFRS (9) is a fundamental amendment to banks' business models and a major reform for hedge accounting, in addition to improving the disclosures on risk management activity. The new IFRS represents a significant alignment between accounting standards and risk management activities.

Chapter (8) of this report details the underlying implications of applying IFRS9 on financial stability, including (improving transparency and comparability, enhancing customers' confidence in the banking sector, reducing Pro-cyclicality and its impact on the financial system, and the effects of IFRS implementation on provisions and capital adequacy). The chapter also addressed the impact of IFRS9 implementation by banks operating in the Kingdom, as the capital adequacy ratio will decrease slightly in Jordanian banks from 17.8% to 16.4%. This is due to the increase of the provisions at the beginning of the implementation and its impact on profits. However, in the medium and long term the resilience and soundness of banks will be enhanced through improving the transparency and recognition for credit losses as compared with IAS 39, in addition to reducing the impact of pro-cyclical fluctuations on the financial system. The new IFRS9 also contributes to the introduction of broader and more comprehensive risk management concepts, which in turn requires a sound governance structure and measures as well as introducing accounting technology systems at banks to ensure proper implementation of the concepts covered in IFRS9.

FINANCIAL TECHNOLOGY (FINTECH) AND ITS IMPLICATIONS ON FINANCIAL STABILITY:

Over the last few years; the financial technology sector (Fintech) has grown markedly. Several financial and banking services are currently carried out using Fintech, which contributed to improved access to financial services and increased the competition in the financial system; thus fostering economic growth and financial inclusion, which in turn contribute to strengthening financial stability. Jordan is experiencing tremendous development in Fintech and innovation, as Jordan has an investment environment that supports innovation, besides the increased demand for Fintech in the Jordanian market. The CBJ is keen on supporting initiatives and innovations that use latest international technology, in particular those intended to enhance the ease, efficiency, and security of accessing digital financial services, taking into consideration the need to enhance cybersecurity of financial services in general. In this context, the CBJ issued on 6/2/2018 instructions of cybersecurity risks resilience which aim to enable banks and financial institutions to respond to cyber-attacks with high technical capability, and enable them to proceed with providing their services and conduct their operations securely, and encourage them to invest in cyber security given its role in promoting technology boost that serves the national economy.

The benefits and risks of Fintech and their implications on the banking and financial sector are discussed in chapter (7) of this report, in addition to the legislative framework of Fintech in Jordan, and the role of the CBJ in supporting new Fintech. The report indicated that the effects of Fintech on financial stability are currently minor, because the size of Fintech companies operating in Jordan is small, and their interdependence with financial institutions is limited. In addition, it is quite early to provide a definitive assessment of the overall risks or benefits associated with Fintech at this stage. Despite Fintech being crucial for strengthening financial stability and financial inclusion in Jordan, it could introduce new risks to the financial system, and weigh on financial stability especially if it continues to grow at a fast pace. Therefore, Central banks and regulatory bodies need to closely monitor developments in Fintech industry to develop and improve the regulatory, supervisory, and legislative framework of Fintech to reduce potential risks.

The CBJ launched the Fintech Regulatory Sandbox guide in the beginning of 2018, aiming at providing innovators with an appropriate incubator to support and encourage Fintech innovation and development, which enhance competitiveness of digital financial services, ensures the efficiency, effectiveness, and security of money transfers, and increases the accessibility to official financial services, while maintaining the integrity and stability of the financial sector and protection of financial consumers' rights and data. The guide stated the definition, objectives, and scope of Fintech regulatory sandbox, as well as targeted groups, associated risks, the working mechanism, and the stages of work at the Fintech regulatory sandbox. The first application to enter the Fintech regulatory sandbox has been already accepted; the project involves the development of a mobile payment product. In addition, a technical and legal test environment is currently being developed to test the project according to the frameworks stipulated in the guide.

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1-1 INTRODUCTION

The global economic upturn that began around mid-2016 has become broader and stronger. In its *World Economic Outlook* (WEO) report published in April 2018, the International Monetary Fund (IMF) projected that advanced economies will continue to expand above their potential economic growth rates this year and the next supported by a higher growth in the Euro area, Japan, China, and the United States, alongside a modest economic recovery in the primary commodities exporting countries. However, risks threatening the economic growth over the medium term arising from accommodative financial conditions loom large and remain highly above their historical records. In addition, the government debt and deficits are cause for concern, as countries with elevated public debt and high deficits are vulnerable to a sudden tightening of international financing, which may disrupt their ability to access markets and jeopardize the economic activity. According to the WEO report of April 2018, the IMF projected the world economic growth in 2018 to pick up from 3.6% to 3.9%.

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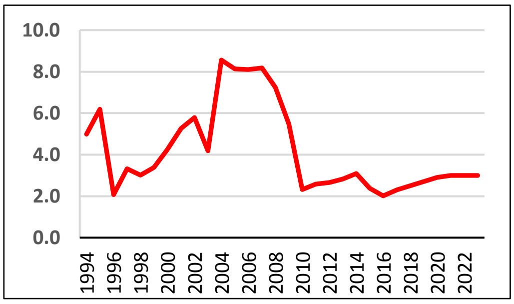
With respect to Jordanian economy, it faced and is still facing several challenges and risks namely; the political turbulences in neighboring countries. This resulted in a modest growth of the real GDP by 2% in 2017. However, preliminary projections suggest that the real GDP growth rate will improve to 2.3% and 2.5% in 2018, and 2019 respectively (Figure 1-1).

FIGURE (1-1): JORDAN'S REAL GDP GROWTH TREND & PROSPECTS (1994-2023) (%)



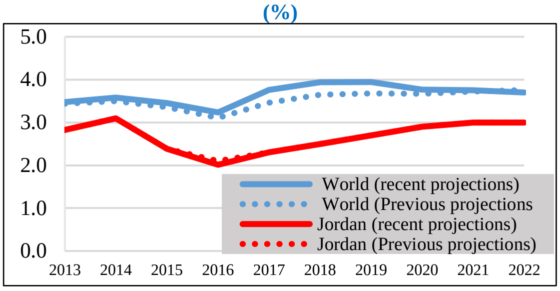
Source: IMF, World Economic Outlook Database, April 2018.

1-2 GLOBAL ECONOMIC DEVELOPMENTS

1-2-1 ECONOMIC GROWTH DEVELOPMENTS AND PROSPECTS

The global economy has improved remarkably in 2017 compared to 2016, as the real GDP grew by 3.8% in 2017 compared to 3.2% in 2016; which is the highest since 2011. According to latest IMF's forecasts, the global real GDP is anticipated to grow by 3.9% both in 2018 and 2019, supported by favorable financial conditions. (Figure 1-2).

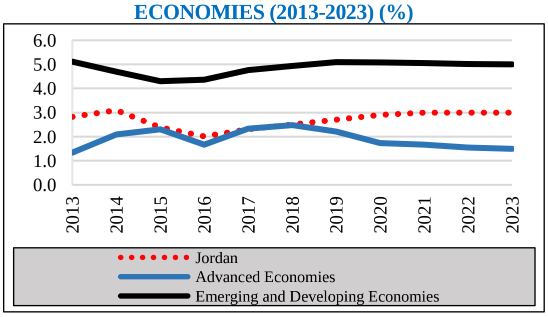
FIGURE (1-2): REAL GDP GROWTH TRENDS AND PROSPECTS FOR JORDAN & THE WORLD (2013-2022) (%)



Source: IMF World Economic Outlook Database, April 2018.

While global economic outlook in the short term tends to be highly balanced, risks are notably significant. The global economy aftermath a decade of quantitative easing, is expected to grow at rates far below pre-crisis levels restricted by aging population and weak productivity, especially that advanced economies are barely closing their output gaps measured by the difference between the actual output and the potential output at maximum capacity. The growth also is projected to remain weak in many emerging and developing economies, including number of primary commodities exporting countries which require financial consolidation. (Figure 1-3).

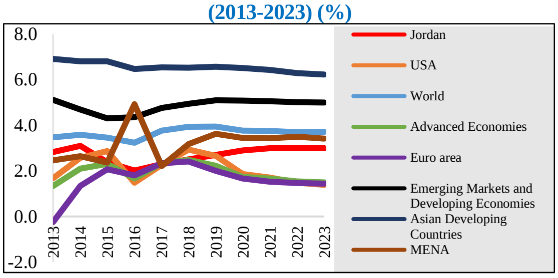
FIGURE (1-3): REAL GDP GROWTH TREND & PROSPECTS FOR DEVELOPING & ADVANCED ECONOMIES (2013-2023) (%)



Source: IMF World Economic Outlook Database, April 2018.

Figure (1-4) indicates the growth trends and prospects for Jordan and seven major economic groups including; the world economy, advanced economies, Euro area, emerging markets and developing economies, MENA countries, USA, and Asian developing countries.

FIGURE (1-4): REAL GDP GROWTH TREND & PROSPECTS FOR JORDAN AND MAJOR ECONOMIES (2013-2023) (%)

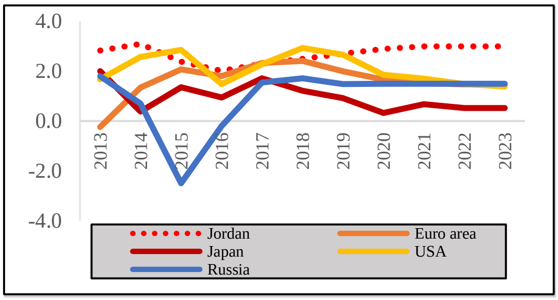


Source: IMF World Economic Outlook Database, April 2018.

As illustrated in the above figure, Asian developing countries outperform other economic groups in achieving higher growth rates both historically and prospectively exceeding 6.5%, followed by emerging markets and developing economies with an average growth rate of around 5.0% during the period (2013- 2023). As indicated in the figure, Jordan is expected to occupy a middle position among these groups in terms of projected economic growth rates.

The hike in commodity prices during the second half of 2017 created a room for oil exporters to gradually boost their financial balances. However, political conflicts weigh on economic activity in many oil-exporting countries. (Figure 1-5).

FIGURE (1-5): TRENDS & PROSPECTS OF REAL GDP GROWTH FOR THE COUNTRIES MOST AFFECTED BY EXCHANGE RATES & OIL PRICES MOVEMENTS (2013-2023) (%)



Source: IMF World Economic Outlook Database, April 2018.

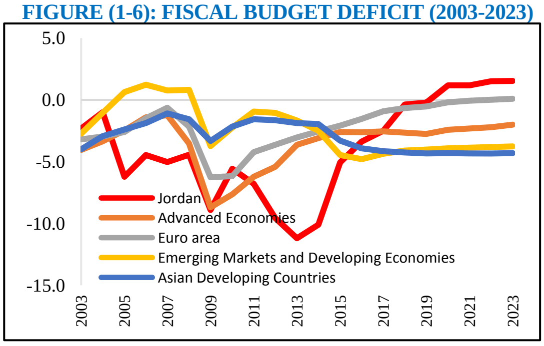
1-2-2 PUBLIC FINANCE DEVELOPMENTS

The Fiscal Monitor report of April 2018 indicated that global debt is at historic highs, reaching to the record peak of USD 164 trillion in 2016, which is equivalent to 225% of the world GDP, compared to USD 116 trillion in 2007 (pre-crisis level), increasing by 41% driven mainly by China's debt. Meanwhile, the latest report of Bloomberg discussed that global debt has continued to increase in 2017 to reach around USD 237 trillion.

The report also stressed out that countries should deploy policies directed towards enhancing growth prospects in the medium term and allow for automatic stabilizers (namely; tax and spending that move in sync with output and employment) to operate in full capacity. Advanced economies shall focus on seeking to increase spending efficiency and rationalizing entitlements to make room for more public investments, increase incentives for labor market participation, and achieve improvements in the quality of education and health services. As for emerging markets and developing economies, the priority is to raise revenues to finance necessary spending on physical and human capital as well as social spending. (Figure 1-6).

In addition, the report addressed the topic of digital government, as greater availability and access to timely and reliable information can transform how governments operate; digitalization can reduce the private and public costs arising from tax compliance and can improve spending efficiency. Governments shall mitigate risks associated with new digital technology, and budget adequate resources to finance investments in digital infrastructure and cybersecurity; as digitalization may allow for fraud using digital means to evade taxes and conduct illicit activities.

FIGURE (1-6): FISCAL BUDGET DEFICIT (2003-2023)



Source: IMF World Economic Outlook Database, April 2018.

1-3 GLOBAL FINANCIAL SYSTEM STABILITY

1-3-1 GLOBAL FINANCIAL STABILITY

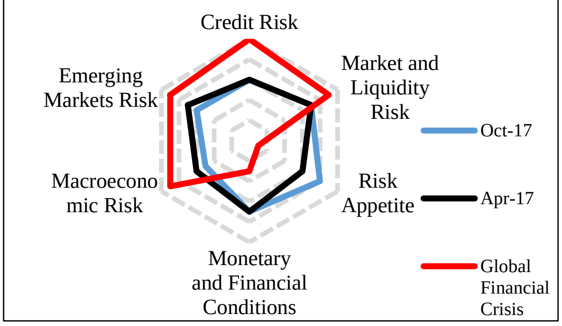
The global financial stability continued to improve in 2017 according to IMF's Financial Stability report of April 2018. The momentum of economic activity has been enhanced and it is more synchronized among countries all over the world. Despite these positive developments, accumulated financial vulnerabilities could put growth at risk, as risks in the medium term remain critical. In advanced economies, increased growth momentum and higher inflation have reduced the monetary easing necessary to support economic recovery. In addition, Central Banks may respond to high inflation more forcefully than currently anticipated and could tighten monetary policy more sharply, which could spill over into banking and financial markets, as well as to emerging markets and low-income economies. The report also highlighted that investors and policymakers shall remain vigilant to risks associated with rising interest rates and increased volatility, and policymakers should address financial vulnerabilities through using available micro and macro-prudential tools.

According to the global financial stability map (Figure 1-7); developments of risks and financial and monetary conditions in October 2017 compared to April 2017 were as follows:

Credit risk, and market and liquidity risk remained stable at (0.6) and (0.7) respectively. Similarly, the monetary and financial conditions settled at 0.7. Nevertheless, the risk appetite improved by 33% from 0.6 in April 2017 to 0.8 in October 2017.

Emerging markets risks declined by 14%, whereas macroeconomic risks decreased from 0.6 in April 2017 to 0.5 in October 2017.

FIGURE (1-7): GLOBAL FINANCIAL STABILITY MAP FOR OCT-2017, AND APR-2017/ A COMPARISON WITH THE MAP DURING THE GLOBAL FINANCIAL CRISIS



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

Table (1-1) illustrates recent developments of risks and financial and monetary conditions compared to their levels during the global financial crisis. The overall risks average declined from 0.93 during the global financial crisis to 0.6, and the average of monetary and financial conditions and risk appetite improved from 0.2 during the crisis to 0.75 in October 2017.

TABLE (1-1): A COMPARISON OF RISKS DEVELOPMENTS AND MONETARY AND FINANCIAL CONDITIONS TO THEIR LEVELS DURING THE GLOBAL FINANCIAL CRISIS

	Global Financial Crisis	April 2017	October 2017
Credit Risk	1.0	0.6	0.6
Emerging Markets Risks	0.9	0.7	0.6
Macroeconomic Risks	0.9	0.6	0.5
Monetary and Financial Conditions	0.3	0.7	0.7
Risk Appetite	0.1	0.6	0.8
Market and Liquidity Risk	0.9	0.7	0.7
Overall Risks Average	0.93	0.65	0.60
Average of Monetary and Financial Conditions and Risk Appetite	0.20	0.65	0.75

1-3-2 FINANCIAL STABILITY IN JORDAN

The banking and financial sectors in Jordan are generally stable as will be discussed later in this report. The banking system in Jordan is sound and resilient with a high capability to withstand shocks and significant risks owing to adequate capital levels, as well as comfortable levels of liquidity and profitability.

1-4 DOMESTIC ECONOMIC AND FINANCIAL DEVELOPMENTS AND PROSPECTS

1-4-1 DOMESTIC ECONOMY STATE AND PROSPECTS

Jordan is still challenged by external environment. In addition, the repercussions of the political situation in the region, particularly in Syria and Iraq, and their consequences, are impacting the Jordanian economy as a small, open, emerging, and oil importing economy. Jordan's economy registered high growth rates during the period (2000-2009) with an average of 6.5%. However, aftermath the crisis; the growth slashed remarkably, influenced by the uprising of security, economic, and political turmoil in the region; the growth rate fell sharply to reach a maximum of 3.1% at its best in 2014. In this context, international reports projected that Jordan's economy will continue to grow modestly. According to IMF's projections, Jordanian economy is supposed to grow during the period (2017-2019) at approximately 2.5% on average, however, based on the World Bank projections it is expected to grow by 2.3% during the same period. Notwithstanding prolonged implications of regional conflicts on Jordan's key sectors in particular tourism, exports, and investment, Jordan's economy maintains a relatively positive performance due to sound fiscal and monetary measures and policies that helped to mitigate the negative impact of these challenges, maintains a reasonable economic stability and a high monetary stability, and stimulated positive economic growth rates and high levels of foreign reserves despite the continuous hiking in prices that is driven by the increase in world oil prices. Main economic indicators for 2017 compared to 2016 are listed below:

1- The real GDP grew by 2.0% in 2017 which is the same rate recorded in 2016.
2- The budget deficit as percent of GDP declined from 3.2% in 2016 to 2.6% in 2017.

3- The current account deficit as percent of GDP widened from 9.5% in 2016 to 10.6% in 2017.
4- Total domestic exports as percent of GDP were down from 16% in 2016 to 15.7% in 2017.
5- Imports as percent of GDP increased from 50% in 2016 to 50.9% in 2017.
6- Unlike the trend in 2016; inflation rate (measured by the consumer price index CPI) was up in 2017 and reached to 3.3%, driven mainly by higher oil prices in international markets which spilled over to domestic markets, alongside government measures concerning the abolishing of certain tax exemptions and subsidies on numerous commodities and services.

Table (1-2) and Figure (1-8) display the developments of major economic indicators of Jordan's economy and their prospects for the period (2005-2022). Based on the projections for the period 2018-2022; the medium term seems more optimistic with regards to improvements in economic growth rates, the stability of inflation rates, and shrinking of public debt and current account deficit.

FIGURE (1-8): MAIN ECONOMIC INDICATORS FOR JORDAN TRENDS AND PROSPECTS

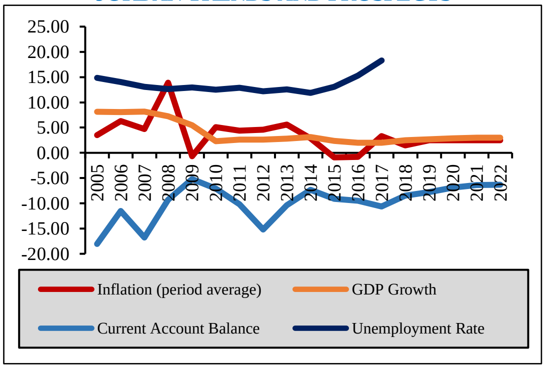


TABLE (1-2): JORDAN'S MAIN ECONOMIC INDICATORS AND PROSPECTS FOR THE PERIOD (2005-2022)

Year	GDP Growth (%)	Inflation Rate (Period average) (%)	Unemployment Rate (% of Labor Force)	Population (growth rate)	Gross Public Debt (% of GDP)	Current Account (% of GDP)
2005	8.15	3.50	14.80	2.80	84.3	-18.05
2006	8.09	6.30	14.00	2.90	76.3	-11.50
2007	8.17	4.70	13.10	3.00	73.8	-16.80
2008	7.23	13.90	12.70	3.00	60.2	-9.30
2009	5.47	-0.70	12.90	3.10	64.8	-5.22
2010	2.31	5.10	12.50	3.20	67.1	-7.11
2011	2.59	4.40	12.90	4.30	70.7	-10.20
2012	2.65	4.60	12.20	6.00	80.2	-15.20
2013	2.83	5.60	12.60	8.80	86.7	-10.4
2014	3.10	2.90	11.90	8.20	89.0	-7.28
2015	2.39	-0.90	13.00	7.90	93.4	-9.08
2016	2.00	-0.80	15.30	2.47***	95.1	-9.54
2017	**2.00**	**3.3**	**18.30****	**2.50*****	**95.3**	**-10.6**
2018	2.50*	1.45	-	2.50	93.5	-8.52
2019	2.70 *	2.47	-	2.50	90.8	-7.89
2020	2.90	2.47	-	2.50	86.4	-6.98
2021	3.00	2.50	-	2.50	82.0	-6.45
2022	3.00	2.52	-	2.50	77.5	-6.35

Source: Actual numbers (2005-2017): CBJ/ monthly statistical bulletin, April 2018.
Projections for the years (2018-2022): IMF World Economic Outlook Database, April 2018.
Unemployment rates: The Department of Statistics, no projections for (2018-2022).
Population numbers and estimates (growth rates): The Department of statistics Database.
* According to preliminary estimates the growth rate is to decline to reach 2.3% and 2.5% for the years 2018 and 2019 respectively.
**Estimated using the new approach to calculate unemployment rates based on new international principles of the International Labor Organization.
*** Calculated after estimating non Jordanian population for the years 2016 and 2017 according to data of refugees at the Ministry of Interior and Civil Status and Passport Department.

1-5 CHALLENGES TO STABILITY

1-5-1 ECONOMIC ACTIVITY DOWNTURN

The political and economic adverse repercussions of uncertainty in the region continue to prevail Jordanian economy. The most prominent features are high number of refugees, and the increase of related costs, declining of aids and grants to Jordan, and the decline in domestic exports which resulted in modest performance of economic activity, increase of the fiscal budget deficit, surging of public debt as percent to GDP to high records, and raising the unemployment rate, imposing considerable pressure on Jordanian economy in all aspects.

1-5-2 THE EXACERBATION OF REGIONAL CONFLICT

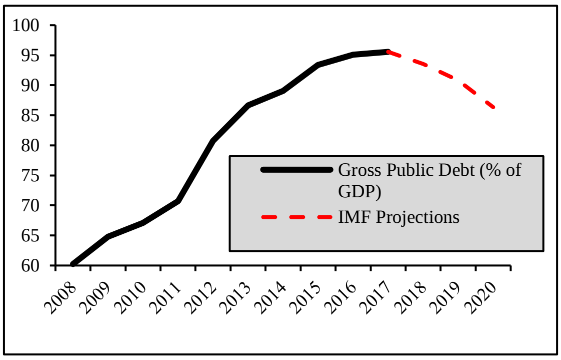
The Middle East is a focal point of tension and uncertainty given the adverse regional repercussions which are reflected in unbalanced tracks that impacted stability in the whole region. It also led to increase the economic, social and security burdens which added up to the refugee crises. Jordan has been affected and continues to be affected by the repercussions of the Arab Spring, most notably the refugees' crisis. Jordan is the largest host country for refugees and displaced persons of different nationalities around the world, according to the Amnesty International's October 2016 report. Further, Jordan is the second largest host country for Syrian refugees in the world relative to the size of population, according to the United Nations High Commissioner for Refugees (UNHCR) report of March 2017. Therefore, Jordanian economy endures high direct and indirect costs, adding further economic and social burdens on fiscal budget, as well as huge stress on the infrastructure and services particularly on education, health and water sectors.

1-5-3 HIGH PUBLIC DEBT TO GDP RATIO

The public debt to GDP ratio increased continuously over the past decade to reach 95.3% at the end of 2017, which is the highest in the last 14 years. This increase is steered mainly by the slowdown of economic activity in the Kingdom and high fiscal budget deficit -as mentioned earlier- arising from worsening regional conditions, and the volatility of energy global prices. This ratio was much higher during the 1980s and 1990s, especially at the end of the 1980s during the Jordanian dinar crisis, exceeding 200% of GDP.

Figure (1-9) illustrates the evolution of gross public debt to GDP ratio during the period (2008-2017) and the IMF's projections for the period (2018-2020). The figure indicates that despite the continuous rise in this ratio over the past years, it is proposed to decline during the next three years, which is a promising indicator.

FIGURE (1-9): GROSS PUBLIC DEBT AS PERCENT OF GDP (2008-2020)



Source: CBJ/ monthly statistical bulletin, April 2018.
IMF database, April 2018.

1-5-4 A REALISTIC OUTLOOK

Regardless of the developments mentioned previously, there is a strong evidence that the performance of Jordanian economy in terms of productivity and per capita income growth rate was lower than its counterparties in other emerging markets even prior to those severe shocks which started since the onset of the global financial crisis. These challenges imply the need to further improving economic policies and embarking reforms to promote entrepreneurship, investment and production, as well as aligning the public debt to a downward trend towards more sustainable levels.

1-6 OTHER INDICATORS

1-6-1 TRANSPARENCY AND ANTI-CORRUPTION INDEX

Transparency International is the organization responsible for issuing annual transparency and anti-corruption indicators; the Corruption Perceptions Index (CPI) which launched first in 1995, which classifies countries and regions worldwide based on the degree of corruption in the public sector based on assessments of business experts. The organization's report of 2017 indicates that the majority of countries around the world show either no progress in anti-corruption policies or these policies are nonexistent. The index also revealed that more than two-thirds of countries were ranked below 50 with a score averaged to 43. In addition, among the 180 countries listed in the 2017 index, Jordan ranked 59th with a score of

48, followed by Hungary, Bulgaria, Turkey, Lebanon and Yemen. Tables (1-3) and (1-4), and Figure (1-10).

TABLE (1-3): JORDAN RANKING IN TRANSPARENCY AND ANTI-CORRUPTION INDEX (2017)

Rank*			Score**					
2015	2016	2017	2012	2013	2014	2015	2016	2017
45	57	59	48	45	49	53	48	48

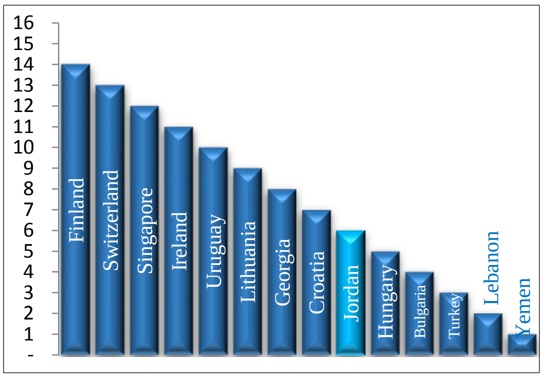
Source: http://www.transparency.org/research/cpi/overview.
*Ranks close to 1 are better, indicating the country is free of corruption.
**Scores are between 1 and 100, the closest to 100 is better, indicating the public sector is sound and free of corruption.

TABLE (1-4): JORDAN RANKING IN TRANSPARENCY AND ANTI-CORRUPTION INDEX OF 2017 COMPARED TO SELECTED COUNTRIES

Country	Rank 2017	Order 2017	Score 2017	Rank 2016	Order 2016	Score 2016
Finland	3	14	85	3	14	89
Switzerland	3	13	85	5	13	86
Singapore	6	12	84	7	12	84
Ireland	19	11	74	19	11	73
Uruguay	23	10	70	21	10	71
Lithuania	38	9	59	38	9	59
Georgia	46	8	56	44	8	57
Croatia	57	7	49	55	7	49
Jordan	**59**	**6**	**48**	**57**	**6**	**48**
Hungry	66	5	45	57	5	48
Bulgaria	71	4	43	75	4	41
Turkey	81	3	40	75	3	41
Lebanon	143	2	28	136	2	28
Yemen	175	1	16	170	1	14

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

FIGURE (1-10): JORDAN RANKING IN TRANSPARENCY AND ANTI-CORRUPTION INDEX OF 2017 COMPARED TO SELECTED COUNTRIES

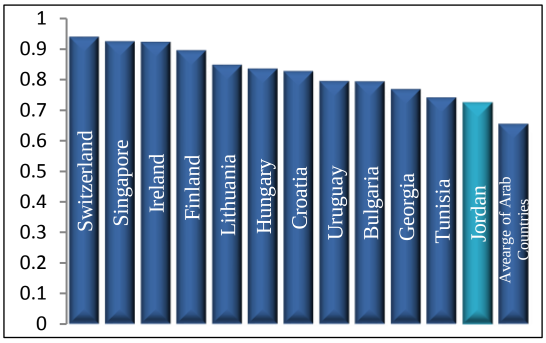


Source: http://www.transparency.org/research/cpi/overview

1-6-2 HUMAN DEVELOPMENT INDEX

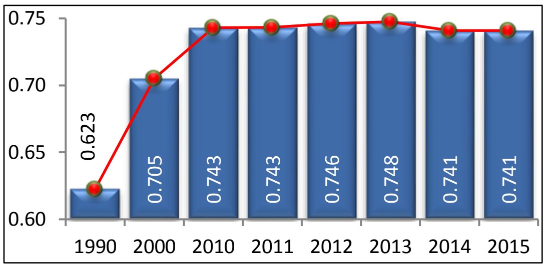
The United Nations Development Program (UNDP) regularly issues an annual report that provide a brief of achievements related to human resources developments in respect to three key dimensions, namely; enjoying a healthy life and high life expectancy rate; being knowledgeable, educated, and literate; as well as having a decent standard of living. The report also includes many sub-indicators related to human resources development. Jordan holds a relatively low rank compared with other countries under comparison (Figure 1-11).

FIGURE (1-11): RANKING OF JORDAN IN HUMAN DEVELOPMENT INDEX (HDI) COMPARED TO SELECTED COUNTRIES (1990-2015)



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

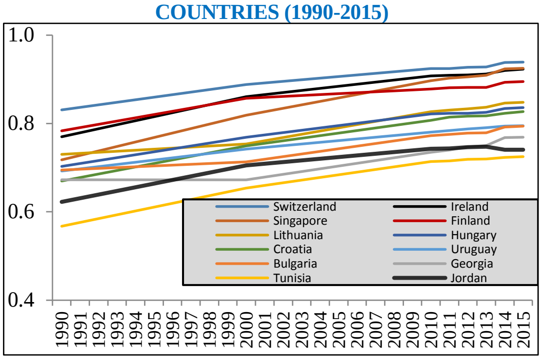
FIGURE (1-12): HUMAN RESOURCES DEVELOPMENT INDEX FOR JORDAN (1990-2015)



Source : HTTP://HDR.UNDP.ORG/EN/COMPOSITE/TRENDS

Nevertheless, Jordan's figures exceed the average of Arab countries as it appears in Figure (1-11) and follow a relatively stable upward trend as indicated by historical data illustrated in Figure (1-12). Moreover, Jordan is well aligned with the general trend of selected countries (Figure 1-13).

FIGURE (1-13): HUMAN RESOURCES DEVELOPMENT INDEX FOR JORDAN AND SELECTED COUNTRIES (1990-2015)



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

1-6-3 COMPETITIVENESS INDEX

Competitiveness indices are published by the World Economic Forum (WEF). The degree of competitiveness for each economy is assessed taking into consideration several aspects and measures that collectively produce one figure indicating the competitiveness status of the country. In 2017, Jordan ranked 65 out of 137 countries, which is 2 scores below the rank recorded in 2016. The indices and sub-indicators for Jordan as indicated in 2017 report are shown in Table (1-5).

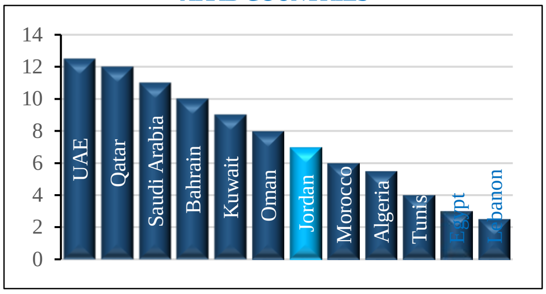
TABLE (1-5): INDICATORS OF INTERNATIONAL COMPETITIVENESS INDEX FOR JORDAN 2017

No	Index	Rank	Score*
	Sub index I: Basic Requirements		
1	Institutions	36	4.5
2	Infrastructure	58	4.3
3	Economic environment	115	3.8
4	Health and education	80	5.6
	Sub index II: Efficiency enhancers		
5	High education and training	63	4.5
6	Market efficiency	51	4.5
7	Labor market efficiency	90	4.0
8	Financial market development	70	4.0
9	Technological Viability	67	4.3
10	Market size	76	3.6
	Sub index III: Innovation and sophistication factors		
11	Business sophistication	48	4.3
12	Innovation	46	3.6
	General Index	**65**	**4.3**

Source: http://reports.weforum.org/global-competitiveness-index-2017-2018/#topic=data
* Scores range is 1-7, The higher the score, the better.
137 countries were classified in 2017.

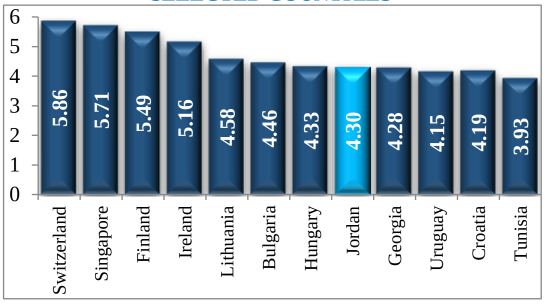
With respect to the average score of sub-indicators in 2017, Jordan has a sort of good ranking among these countries as it ranked 7th among Arab countries with available data which is a good position as it outperforms Morocco, Algeria, Tunisia, Egypt, and Lebanon, yet; Jordan ranked below Gulf countries (Figure 1-14). As for Jordan's position in the World it was ranked 8th.

FIGURE (1-14): JORDAN RANKING IN THE COMPETITIVENESS INDEX OF 2017 COMPARED TO ARAB COUNTRIES



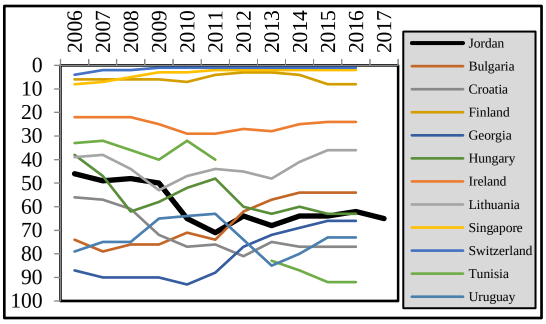
Source: http://reports.weforum.org/global-competitiveness-index-2017-2018/at-a-glance-global-competitiveness-index-2017-2018-rankings/

FIGURE (1-15): JORDAN RANKING IN THE COMPETITIVENESS INDEX OF 2017 COMPARED TO SELECTED COUNTRIES



Source:http://reports.weforum.org/global-competitiveness-index-2017-2018/#topic=data

FIGURE (1-16): RANKING OF JORDAN IN COMPETITIVENESS INDEX COMPARED TO SELECTED COUNTRIES (2006-2017)



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

1-6-4 DOING BUSINESS INDEX

The World Bank has been issuing the Doing Business Index annually since 2004, which mainly assesses the impact of government policies on doing business, and examines laws, regulations, and instructions that improve business practices and those that hinder them. The report provides a set of quantitative indicators covering 11 aspects of business environment in 190 economies worldwide. In 2017, Jordan ranked 103 out of 190 countries with a total score of 60.6 out of 100; enhancing by 15 points in the ranking compared to the previous year. (Table 1-6).

TABLE (1-6): RANKING OF JORDAN IN EASE OF DOING BUSINESS INDEX OF 2017

Rank of 2017: (103)				Score: (60.6)				Change: (+3.3)	
Starting a Business		Dealing with construction permits		Getting Electricity		Registering Property		Getting Credit	
Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
105	84.4	110	65.7	40	83.3	72	66.4	159	25.0
Protecting Minority Investors		Paying Taxes		Trading Across borders		Enforcing Contracts		Resolving Insolvency	
Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
146	40.0	97	70.7	53	85.9	118	53.7	146	30.5

Source:http://www.doingbusiness.org/~/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB2018-Full-Report.pdf

*The closer the country to 1 is the better, indicating that the country has a convenient regulatory environment to start businesses and operating domestic business companies.

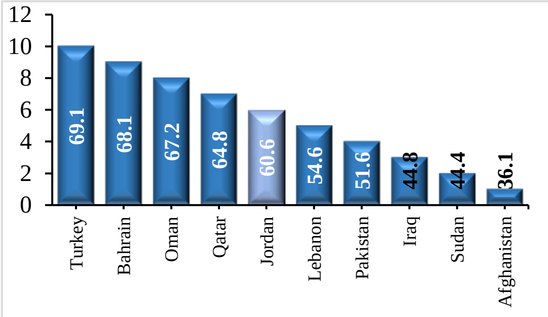
** The ranking is determined based on the scores of 10 indicators, as each indicator has several sub-indicators which are equally weighted.

TABLE (1-7): RANKING OF JORDAN COMPARED TO SELECTED COUNTRIES IN EASE OF DOING BUSINESS INDEX OF 2017

	Country	Ranking of 2017	Score of 2017
1	Turkey	60	69.1
2	Bahrain	66	68.1
3	Oman	71	67.2
4	Qatar	83	64.8
5	**Jordan**	**103**	**60.5**
6	Lebanon	133	54.6
7	Pakistan	147	51.6
8	Iraq	168	44.8
9	Sudan	170	44.4
10	Afghanistan	183	36.1

Source:http://www.doingbusiness.org/~/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB2018-Full-Report.pdf

FIGURE (1-17): RANKING AND SCORE OF JORDAN COMPARED TO SELECTED COUNTRIES IN EASE OF DOING BUSINESS INDEX OF 2017



Source:http://www.doingbusiness.org/~/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB2018-Full-Report.pdf

As displayed in (Table 1-7) and (Figure 1-17), Jordan ranks fifth amongst selected countries under comparison, which is considered reasonable, particularly after the remarkable progress in Jordan's ranking in 2017 compared to 2016. This improvement is attributed mainly to enhanced access to credit information owing to the establishment of a Credit Bureau, as well as the set of reforms undertaken by the Jordanian government to boost the regulatory environment and improve infrastructure, including but not limited to, facilitating trading across borders, facilitating Customs clearance, developing the investment window, improving the infrastructure of port of Aqaba, and launching the National Strategy for Financial Inclusion in 2017.

1-7 CONCLUSION

Despite the developments that affected the region in particular and the world in general in latest years, which severely impacted the economic, political, and social conditions in different countries worldwide, particularly MENA countries which also reflected on increasing the challenges confronting Jordan. However, the prudent policies and measures of the government and the CBJ have helped to face the effects of these challenges, and, hence, helped to maintain economic, monetary, and financial stability in Jordan.

CHAPTER TWO: THE INFRASTRUCTURE AND LEGISLATIVE STRUCTURES OF THE FINANCIAL SYSTEM

2-1 INTRODUCTION

The appropriate infrastructure and legislative structures are considered as key elements and factors for achieving financial stability. The CBJ continued its efforts in developing the financial system infrastructure and related financial legislations throughout the previous period, as these CBJ's efforts focused on two major aspects, specifically: enhancing financial inclusion in a prudent and deliberate manner as well as strengthening the legislative framework of the financial system.

2-2 ENHANCING FINANCIAL INCLUSION

2-2-1 THE CONCEPT OF FINANCIAL INCLUSION

Financial inclusion is perceived as "the state through which individuals and businesses are able to properly access various financial products and services (payment operations, saving, credit, financial transfer, insurance) at a reasonable cost and in a way that fulfils their needs and helps them to improve their living standards in a safe and sustainable manner". In this context, monetary and fiscal policy makers in the developing and emerging markets countries have adopted the financial inclusion issue as a priority within their policies and objectives for achieving inclusive and sustainable growth.

Jordan realises that financial inclusion became a fundamental pillar for achieving inclusive and sustainable growth in the Kingdom. The Jordanian government plunged into building a robust and solid financial infrastructure in addition to putting in place the legal and legislative frameworks necessary for reaching an inclusive financial system. Furthermore, the CBJ took a leading role in this process supported by several public and private sectors stakeholders while ensuring coordination and cooperation in designing and implementing many major initiatives in this regard.

Since 2012, the CBJ has focused on promoting financial inclusion in the Kingdom through following up with main regional and global developments and updates in the field of enhancing financial inclusion policies. Later, in 2015, the CBJ started guiding and supervising the National Financial Inclusion Strategy formulation in the Kingdom, that is after the Prime Minister's initiative to form the National Committee for setting a financial inclusion strategy headed by the CBJ Governor. The Strategy mainly targets achieving financial inclusion for low-income citizens, women, refugees, the youth as well as micro, small, and medium – sized enterprises (MSMEs).

Under the National Financial Inclusion Strategy (2018-2020), the CBJ along with key stakeholders commit to promoting financial inclusion for individuals and corporates in the Kingdom, built on scientific grounds based on evidences and studies. It also relies on the importance of achieving sustainable economic and social development compatible with United Nations' sustainable development objectives.

By the end of September 2016, the cornerstone was set to start working on the National Financial Inclusion Strategy, through creating six working groups emerging from the national committee to cover several major pillars, which are the following:

- Small and medium-sized enterprises (SMEs).
- Microfinance.
- Financial capabilities and financial literacy.
- Financial consumer protection.
- Digital financial services.
- Data and research.

The National Financial Inclusion Strategy (2018-2020) was launched under the patronage of His Majesty King Abdullah II bin Al-Hussein, and in the presence of His Excellency the Prime Minister Dr. Hani Mulki on December 4th, 2017.

2-2-2 RATIONALE FOR THE NATIONAL FINANCIAL INCLUSION STRATEGY

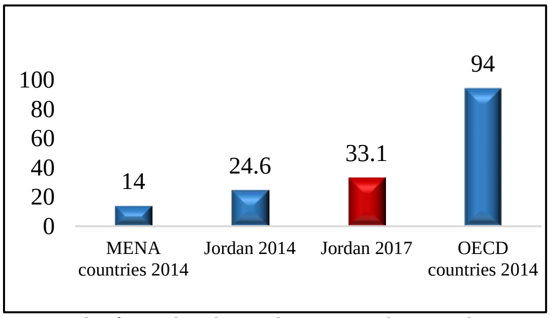
The following reasons revealed the need for adopting a national financial inclusion strategy in Jordan:

1- High percentage of financially excluded people:

Based on the diagnostic study conducted in 2017, 67% of Jordanians above 15 years old cannot access formal financial services according to accounts ownership indicator. Moreover, 38% of adults are excluded from any formal financial services, and 24.8% of adults are completely excluded from any formal and informal financial services. In addition, most of the small and medium enterprises are financially restrained.

Figure (2-1) shows the percentage of people who own accounts in official financial institutions as a percentage of adults, which was concluded by the financial inclusion diagnostic study in Jordan 2017.

FIGURE (2-1): THE PERCENTAGE OF PEOPLE WHO OWN ACCOUNTS IN AN OFFICIAL FINANCIAL INSTITUTION (% OF ADULTS)



Source: The financial inclusion diagnostic study in Jordan 2017 (prepared by the CBJ in cooperation with GIZ)

2- Contributing to achieving sustainable development objectives:

The national financial inclusion strategy is expected to contribute to curbing social and economic disparities in the Kingdom in line with "Jordan's Vision 2025". Moreover, the expected positive impacts on equality and overall prosperity in the kingdom are derived from the following:

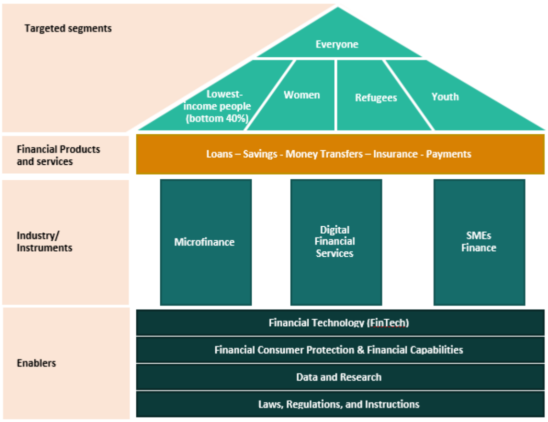
- Providing new and sufficient sources of financing as well as diversifying other financial services provided to small and medium enterprises which suffer from big hurdles in obtaining financing will lead to creating more job opportunities specially for low income people, and reducing unemployment rates.
- The national financial inclusion strategy supports gender equality, as it reduces the gender gap in the field of access to finance, which will largely contribute to women empowerment and developing pilot projects for women.
- Increasing refugees' opportunities to obtain financial services and using them will reduce social and economic disparities in the Kingdom, as it will lead to supporting their self-reliance and enabling them to effectively contribute to the economic activity.
- Outreaching financial services to all areas in the Kingdom including remote areas will contribute to reducing social and economic disparities throughout the kingdom.

2-2-3 VISION AND GENERAL FRAMEWORK OF FINANCIAL INCLUSION IN JORDAN

The national financial inclusion strategy highlights priority sectors, three of which are key pillars of financial inclusion, namely; microfinance, digital financial services, financing small and medium-sized enterprises. From another side, the following four pillars are considered the basic requirements for the success of the national financial inclusion strategy, which overlap with the three main aspects and contribute to achieving the desired results. These requirements include: using financial technology, protecting the financial consumer and raising financial capabilities for all segments of the society, data and research, as well as, laws and legislations.

Although the national financial inclusion strategy targets all segments of society, along with micro, small, and medium- sized enterprises, its focus specifically targets enabling those segments who are marginalized and excluded from financial services, specifically vulnerable segments of low-income people within the 40% lowest income segment in the kingdom, women, youth (especially those of 15-18 years old age category), and refugees.

FIGURE (2-2): GENERAL FRAMEWORK FOR NATIONAL FINANCIAL INCLUSION STRATEGY



Source: National Financial Inclusion Strategy in Jordan 2018-2020.

The national financial inclusion strategy aims at achieving two main goals; which are:

1- Raising the financial inclusion level from 33.1% in 2017, measured by the number of adults who own accounts in financial institutions to 41.5% by the year 2020.
2- Reducing the gender gap from 53% to 35%.

2-2-3-1 SMALL AND MEDIUM- SIZED ENTERPRISES (SMES)

SMEs represent one of the most important pillars of the economy in most countries, and one of the main areas for creating job opportunities, as SMEs account for 95% of all companies in the vast majority of countries, providing between 40%-60% of total job opportunities. A recent study issued by the International Finance Corporation (IFC) indicates that small and medium “official” projects contribute to 33% of the developing economies’ gross domestic product (GDP), they also contribute to almost 45% of job opportunities. These figures increase significantly when including unofficial SMEs. Whereas in high income countries, SMEs contribute to about 64% of GDP, and provide 62% of job opportunities.

The CBJ continued its role in supporting and promoting micro, small and medium enterprises (MSMEs). During the past five years, the CBJ cooperated with the Ministry of Planning and International Cooperation (MoPIC) as well as regional and international financing institutions to raise funding for SMEs sector reaching USD 320 million at competitive interest rates and suitable maturities, of which an amount of USD 190 million was received, and around USD 134 million were used to finance SMEs until December 31st, 2017, which were lent to over 15 thousand of micro, small and medium projects, 60% of them were located outside the capital. This funding generated around 4,500 new job opportunities. The remaining amount of USD 130 million will be disbursed by the CBJ during the years 2018 and 2019. This is in addition to the credit line provided by the European Bank for Reconstruction and Development (EBRD) directly to the banks amounting to USD 120 million for the same purpose, for which the CBJ provided the necessary support and relaxations to facilitate the banks’ benefit of it. Noting that the EBRD signed agreements with three banks in the amount of USD 60 million.

As we mentioned in previous reports, the CBJ has financing programs targeting industrial, tourism, renewable energy, agriculture, and information technology sectors (including SMEs) at an interest rate currently reaching 1% for financing projects located in governorates outside Amman, and 1.75% for financing projects located in the capital, in the total amount of around JD 1.1 billion. About 740 projects benefited from these programs until May 24th, 2018 in the total amount of about JD 513 million, distributed on industrial, renewable energy, tourism, agriculture, and information technology sectors in the value of JD 263 million, JD 155.7 million, JD 54.3 million, JD 32.3 million, and JD 7.5 million, respectively. In addition, engineering consultation sector has been added into the program for the first time in 2017. The CBJ has also developed lending terms sine 2015 within this program to fit with the financing programs provided by Islamic banks.

As for providing the guarantees necessary for financing SMEs, the activities of the Jordan Loan Guarantee Corporation (JLGC) were restructured, its capital was raised, its work procedures and scope were developed to enable it to provide the necessary guarantees for financing SMEs, which resulted in doubling the number and value of projects guaranteed by the corporation. Moreover, a fund for supporting emerging companies, in the amount of JD 50 million, was established by providing the guarantees necessary for these companies to obtain financing through the JLGC. The CBJ also provided an amount of JD 100 million for the JLGC for the establishment of the Export Credit Guarantee Fund to provide the required guarantees for exporting sector facilities.

It is noteworthy that a special fund was established, in the amount of USD 100 million, with the cooperation of MoPIC, World Bank (WB) and JLGC, to invest in pioneering start-ups capital.

2-2-3-2 MICROFINANCE

A study issued by the WB titled "Impact of Government Regulation on Microfinance" confirmed that the regulatory reform for microfinance companies contributes to enhancing the soundness of the financial system, and facilitates the expansion of microfinance and integration with the official financial sector. The CBJ also made a strategic decision to expand its regulatory umbrella to include microfinance, as the cabinet approved the microfinance bylaw No (5) for the year 2015 on December 14th, 2014, effective since June 1st, 2015 to become a legal reference for licensing microfinance companies and their supervision and oversight by the CBJ. The CBJ also issued instructions on licensing and existence of microfinance companies in April 2016, and will further continue issuing detailed instructions necessary for starting the actual supervision and oversight on this sector.

It is worth mentioning, that until now, four microfinance companies have been licensed by the CBJ.

2-2-3-3 FINANCIAL CAPABILITIES AND FINANCIAL LITERACY

Disseminating financial and banking literacy is considered one of the main factors which lead to increasing financial inclusion and enhancing clients' protection. Many studies indicated that raising financial literacy for individuals is a key factor for raising their savings level, which promotes economic growth through providing the liquidity necessary for investing, thus strengthening the countries' capabilities to cope with financial and economic crises. In Jordan, the CBJ gives special attention to the financial literacy issue due to its importance in enhancing financial, economic and social stability in the Kingdom, specially that statistics and studies indicate that Jordan occupies a modest position in the level of financial literacy among countries.

The CBJ believes in the importance of the financial literacy issue in the Kingdom, thus it initiated the launching of a project to disseminate and enhance financial literacy in the Kingdom, with the aim to enable the Jordanian citizen to:

- Understand basic principles and concepts in the financial and banking filed.
- Manage his/ her savings and personal belongings and invest them optimally.
- Increase the opportunities of benefiting from the resources, services, and financial facilities offered by the banks and financial institutions.
- Raise financial inclusion and enhance financial, economic and social stability in the Kingdom.

Accordingly, the project targets many key sectors in the society through several programs. The main program, which is financial education at schools, was started with the cooperation of the Ministry of Education (MoE) and INJAZ (a non-profit Jordanian organization). The teaching of seventh grade curriculum has been started since 2015/2016, teaching eighth and eleventh grades curriculum started since 2016/2017, while ninth and twelfth grades curriculum started in 2017/2018.

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

A. Financial education in higher education institutions.

B. Disseminating financial awareness through media.
C. Financial literacy for business development.
D. Financial education at the workplace.
E. Financial education for women and rural communities.
F. Electronic financial education.

2-2-3-4 FINANCIAL CONSUMER PROTECTION

Several studies issued by international bodies focused on the importance of financial consumer protection and its positive impact on financial inclusion. Furthermore, the global financial crisis revealed the importance of enhancing financial consumer protection for achieving financial stability over the long term. Moreover, the G20 leaders, during the summit held in Toronto 2010, have specified financial consumer protection and financial education among their nine principles for financial inclusion based on creativity and innovation.

After the CBJ issued "Instructions on Dealing with Customers Fairly and Transparently" No. (56/2012) on October 31st,2012, effective since May 2013; it established on December 19th, 2016 an independent financial consumer protection department to include the protection of the clients of banks and all financial institutions subject to the supervision of CBJ. On August 28th, 2017 the "Instructions of Internal Procedures for Handling Consumers' Complaints of Financial and Banking Services Providers" No. (1/2017) were issued.

It is noteworthy that in 2016, the CBJ's Law was amended to expand its mandate to include:

- Setting the rules and standards that govern treating consumers fairly and transparently by banks and financial institutions.
- Raising public awareness on banking and financial activities.

2-2-3-5 PROVIDING THE INFRASTRUCTURE NECESSARY FOR ENHANCING FINANCIAL INCLUSION

1- Digital Financial services

The CBJ started the process of developing and restructuring payment and settlements systems in the Kingdom with the cooperation of the banks operating in Jordan and relevant stakeholders. The process aims at maintaining the soundness and efficiency of the national payments system through interoperability of payment systems and setting the comprehensive legal frameworks for enhancing financial inclusion and promoting increased acceptance of modern payment tools, reducing systemic and credit risks, and facilitating money circulation in the economy to enhance economic efficiency. The CBJ took a leading role for this process, supported by commercial banks, represented by the national payments council. In this respect, the CBJ carried out the following:

- Regarding payment and settlements systems, the CBJ continued operating the Real-Time Gross Settlement System (RTGS) in accordance with the new messages standard (ISO 20022), and implementing transfer orders among member banks' accounts in Jordanian dinar, U.S. dollar, Euro, and Pound Sterling currencies in addition to secondary market operations. Transfer orders executed in the system in 2017 reached around 305.7 thousand orders, in the value of JD 99.2 billion, against 627.4 thousand orders, in the value of JD 107.6 billion in 2016. The decline in executed transactions on the system was driven by the launching of the Automated Clearing House (ACH) system. The number of secondary market transactions executed during the current year through the system reached 8,005 operations in the amount of JD 5.439 million.
- During the year 2017, the CBJ continued operating the ACH system launched on October 30th, 2016 in accordance with the new messages standard (ISO 20022). The ACH is a payment, transfer, and automatic delegation system which provides a safe infrastructure to

execute retail payments between member banks and their clients including the CBJ. The system includes debit and credit transfers as well as managing credit delegations, government, financial institutions and other private sector institutions' payments. The number of transfer orders executed in the system during 2017 reached 1.2 million order, in the value of JD 2 billion against 120.395 thousand order amounting to JD 117.371 million during 2016.

- The CBJ continued operating the government securities deposit and settlement (DEPO/X) system launched on February 7th, 2016, which is a system for managing government debt and auctions in an automated, integrated and concentrated manner to deposit and settle government securities, as it enables safe access to government auctions systems for government issuances of securities for the CBJ, banks, insurance companies, and the investment unit of the social security and related parties. It also enables the CBJ and banking sector to deal with all monetary policy instruments in accordance with the Islamic Law (Sharia).
- The CBJ continued operating the national switch system for mobile payments (JoMoPay) in 2017. The number of participants in the system reached five banks (Bank of Jordan, Jordan Commercial Bank, Housing Bank for Trade & Finance, Arab Bank, and Cairo Amman Bank) and five financial companies (Al-Mutamayiza Company for Electronic Payment Services through the Mobile Phone, Al-Hulool financial Company for Mobile Payment Services, Aya Company for mobile Payment services, Al-Mutakamilah company for Payments Services via Mobile Phone "Dinarak", and Middle East for Payment Services company (MEPS)). Payment transactions conducted through the system in 2017 reached 157,529 transactions in the total value of JD 6.4 million, against 8,898 transactions, in the total value of JD 198.9 thousand in 2016.
- The CBJ continued providing the service of presenting and collecting bills electronically via eFAWATEERcom system, operated by Madfooatcom for Electronic Payments company. This system is connected to all banks operating in the Kingdom except two banks to provide the service through various banking channels. Furthermore, the Military Credit Fund (MCF), Cities and Villages Development Bank (CVDB), Standard Chartered for companies, Arab Jordan Investment Bank (AJIB), Jordan Post Company offices, Emerging Markets Payments (EMP) company, Trust eservices company, Al Rajhi Bank, and Middle East for Payment Services and mobile payment system company were also connected as providers of payment services to target citizens who don't own bank accounts and enable them to enquire and pay invoices, thus enhancing financial inclusion in the Kingdom. Billers participating in the system reached 111 billers in 2017 compared to 75 billers in 2016. Moreover, the number of payment transactions carried out through the system reached 4.67 million transactions, in the value of JD 3.3 billion during 2017 against 1.837 million transfers in the total value of JD 560.8 thousand in 2016.
- The CBJ persisted on providing presentation and collection of bills electronically services (eFAWATEERcom) through the electronic payment portal, with the aim of enabling all Jordanian citizens, who are residents inside the Kingdom or anywhere in the world to inquire about and pay their bills and other payments using credit payment cards issued by different banks around the world easily and safely. The operator and administrator of the system is Madfooatcom for Electronic Payments company, which operates the electronic payment portal on behalf of the CBJ through one of the payment services providers connected to eFAWATEEERCOM system.
- The CBJ in cooperation with the GIZ and with the support and financing from the German Federal Ministry of Economic Cooperation and Development (BMZ) amounting to EUR 2.3 million, launched a project called "Digi#ances - Digital Remittances" which was extended till the end of 2018. This project aims at improving

access to transfer services and other financial services electronically to target segments who are less fortunate and excluded from the official financial system such as women, refugees and others.

- The CBJ started establishing a Fintech Regulatory Sandbox in 2017 with the aim to creating an incubator for business pioneers to support and promote innovation and development in the Financial Technology Sector, which will in turn enhance competitiveness in the field of digital financial services, efficiency, effectiveness and safety at money transfers, and promote 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 Regulatory Sandbox is considered a safe, governed, and supervised environment allowing business companies or pioneers, to examine and conduct tests on innovative financial technology products and services developed by them without being directly subject to regulatory and supervisory requirements, and bearing legal costs in the beginning of their journey or it could help them access local market in order to contribute to accelerating their businesses.

  The regulatory sandbox also provides the guidance needed to reach various creative technological channels and incubators in Jordan to be able to get the necessary support and financing.

  It is noteworthy that the first application to use the regulatory sandbox was accepted in May 2018, which was submitted by a group of young Jordanians, and is based on using the Blockchain technology to computerize the laws, regulations and consumer's compliance and authentication, in addition to small financial transfers between bank accounts and the electronic wallet.

2- Credit Information Company

The CBJ worked on establishing the legislative and legal framework needed for the companies concerned with credit information exchange, as the temporary "Credit Information Law" No. 15 for the year 2010, and the "Credit Information Companies Bylaw" No. 36 for the year 2011, were issued. According to these legal references, the CBJ was given the responsibility of licensing such companies besides carrying out supervision and oversight on them and regulating their activities. On December 15th, 2015, the approval has been granted to license the first credit information company in the Kingdom. On April 6th, 2016 it was approved that the licensed banks will provide CRIF – Jordan (Jordan Credit Bureau) with the information regarding their clients' credit without gaining previous approval from those clients "viewing Permit" in addition to providing the company with this information for three previous years. The company also launched the credit inquiry service in October 2016, as this company provides a comprehensive credit database about the clients of banks and other financial institutions providing credit, which in turn will help these parties to rationalize credit decisions, in a way that enables them to make the sound credit decision based on a detailed evaluation of the clients' ability to repay and pricing the banking products according to clients' risks, which enhances the effectiveness of risk management at the banks and other financial institutions and improves clients' opportunities, specially SMEs, to access to finance. Thus, and until May 30th, 2018 "CRIF – Jordan" has signed agreements with 46 institutions, including: 25 banks, 21 financial institutions (6 financial leasing companies, 2 microfinance companies, 10 other financial companies, and an insurance company, in addition to other companies). Pursuant to the credit information law, every client has the right to know the contents of his own credit report and its impact on his ability to borrow, and carry out commercial activities. Accordingly, the company provides this service, at no charges, to each Jordanian citizen once a year. It is expected that the establishment of this company will reflect positively on enhancing financial inclusion, and enhance financial stability in the Kingdom

2-3 LEGISLATIVE INFRASTRUCTURE OF THE FINANCIAL SYSTEM

It is undoubtable that the existence of proper legislative infrastructure for the financial system enhances financial stability. Experiences have proved that if the supervisory and regulatory legislations on the financial system were inappropriate, they will clearly lead to deepening systemic financial crises when they occur[1]. The CBJ continuously verifies the veracity of activities and performance of the banking and financial institutions subject to its supervision and ensures the soundness of their financial positions within the boundaries of the laws, bylaws, and regulations enforce and banking customs reaching to banking safety as well as financial and monetary stability requirements. Based on the CBJ's strategy aiming at following an effective banking supervision in line with best international standards and practices, and proceeding with the efforts for setting sound rules for banking and financial activities, in 2017, the CBJ continued its comprehensive review of the legislative framework controlling the activities of financial and banking institutions subject to its supervision, as follows:

2-3-1 LAWS AND BYLAWS

2-3-1-1 THE CENTRAL BANK OF JORDAN LAW

As we mentioned in the financial stability report for 2016, the amended CBJ law No. 24 for the year 2016 was ratified by a Royal Decree, and it was published in the official gazette on June 16th, 2016.

2-3-1-2 REGULATING INSURANCE ACTIVITIES DRAFT LAW

In a step towards the CBJ's pursuit to execute the Cabinet's decision issued on February 24th, 2016, when the Cabinet directed the CBJ to assume the responsibility of supervision of the insurance sector and regulating its activities, to become 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 REGULATIONS

2-3-2-1 INSTRUCTIONS FOR IMPLEMENTING THE INTERNATIONAL FINANCIAL REPORTING STANDARD (9)

The instructions for implementing the International Financial Reporting Standard (IFRS9) No. (13/2018) were issued on June 6th, 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

[1] Source: a study issued by the International Monetary Fund (IMF); "Regulatory and Supervisory Independence and Financial Stability/2002"

pillars covered by standard 9 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 forward-looking 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, which require effective supervision from the bank's board of directors, its relevant committees, and executive management on the proper implementation of the new standard and working 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 according to Islamic Accounting Standard No. 30 requirements are issued.

2-3-2-2 INSTRUCTIONS FOR AUTOMATED TELLER MACHINES (ATMS)

Automated teller machines instructions No. (6/2018) were issued on April 11th, 2018, targeting companies operating in the Kingdom and licensed by the CBJ to perform the activity of managing cash deposits and withdrawals electronically through ATMs in addition to all banks operating in the Kingdom. These instructions included the terms for installing ATMs in addition to technical and security conditions which must be available in ATMs. They also confirmed that the payment service provider (either a bank or a company) shall commit to providing a specialized unit for managing and monitoring all ATMs and to undertaking the necessary measures for protecting the users.

2-3-2-3 FINTECH REGULATORY SANDBOX GUIDE

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.

2-3-2-4 CLOUD COMPUTING GUIDELINE

The CBJ launched the Cloud Computing[3] Guideline in March 2018. This guideline clarifies the concept of cloud computing technology and its basic characteristics, publication templates, and related service templates, along with some important issues which institutions should carefully consider when using this technology, of which; cloud computing governance, its risk management, its activities continuity, in addition to disciplines and mechanisms used to protect its data for safe and effective usage.

[2] FinTech Regulatory Sandbox: is a safe, controlled, disciplined/ supervised experimental environment that allows businesses and entrepreneurs to test newly developed FinTech products and services without directly being subject to regulatory and supervisory requirements, and without bearing legal costs in the beginning, or supporting 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.

The guideline also included a special annex for regulations 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.

2-3-2-5 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 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 recover from them, in order to achieve an effective and efficient process for cyber governance.

2-3-2-6 INSTRUCTIONS RELATED TO PAYMENT SERVICES AND ELECTRONIC FUNDS TRANSFER ACTIVITIES

The CBJ issued a bundle of instructions related to regulating payment services and electronic funds transfer sector, and they are detailed in chapter seven of the report "Fintech and its impact on financial stability".

2-3-2-7 REGULATORY CAPITAL INSTRUCTIONS FOR ISLAMIC BANKS.

The CBJ issued Regulatory Capital Instructions No. (72/2018) dated February 4th, 2018, according to the amended standard No. (15) issued by the Islamic Financial Services Board (IFSB), which 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 adequacy 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.

2-3-2-8 ANTI-MONEY LAUNDERING AND COUNTER TERRORISM FINANCING INSTRUCTIONS FOR EXCHANGE COMPANIES

The CBJ issued Anti-Money Laundering and Counter Terrorism Financing Instructions for Exchange Companies No. (70/2018) on January 17th, 2018. The instructions determined compulsory care requirements, which exchange companies should consider. They also banned exchange companies from getting involved in currency exchange relations with unidentified persons, or with fake or fictitious names, or fake companies or banks. Furthermore, these instructions require exchange companies to provide control systems and internal supervision for risk management, and documentation of risk evaluation processes, in addition to setting

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

policies and controls, as well as approval of basis to identify money-laundering and terrorism financing risks, evaluating and monitoring them. They also included programs that should be implemented on financial groups and external branches regarding anti-money laundering and counter terrorism financing, and the conditions which should be considered when dealing with all incoming and outgoing transfers, including electronic transfers sent or received by the company subject to these instructions. The instructions also included, the necessity of informing the Anti-Money Laundering and Counter Terrorism Financing Unit (AMLU) of operations suspicious of being related to Money Laundering and Terrorism Financing. as under the provisions of these instructions, the anti-money laundering and counter terrorism financing for Exchange Companies Instructions No. 2/2010 dated December 30th, 2010, were abolished.

2-3-2-9 INSTRUCTIONS OF INTERNAL PROCEDURES FOR HANDLING CONSUMERS' COMPLAINTS OF FINANCIAL AND BANKING SERVICES PROVIDERS

On August 28th, 2017, the CBJ issued Instructions of Internal Procedures for Handling Consumers' Complaints of Financial and Banking Services Providers No. (1/2017), which provisions are compulsory for the banking and financial services providers, who are subject to the supervision and oversight of the CBJ (including banks operating in the Kingdom, and financial institutions regulated by the CBJ).

These instructions aim at setting the general framework for internal policies and procedures which should be available at the banking and financial services provider who is subject to the supervision and oversight of the CBJ to deal with clients' complaints, to ensure their access to various banking and financial services in an integrated framework of transparency and disclosure, while protecting their rights without compromising or harming their interests, consequently enhancing the confidence in the providers of financial and banking services, increasing their competitiveness, and protecting them against reputational risks, which will eventually contribute to achieving the sustainable economic development, financial system stability, and strengthening financial inclusion.

These instructions contained the duties and responsibilities of the service provider, including the adoption of special policies and procedures to deal with clients' complaints, in addition to the establishment of a special organizational unit for handling client's complaints while considering the capital, nature and size of the financial activity of the financial services providers. The instructions also included special procedures for receiving and handling clients' complaints, and the necessity of conducting analysis and evaluation of the complaints by the service provider and preparing reports in this regard. Moreover, these instructions emphasized on client's right to file a complaint, and the exigency for the service provider to inform its clients with their right to lodge a complaint when establishing any banking or financial relation with them.

Furthermore, the instructions provide the procedure of filing a complaint to the CBJ, as the client should file a complaint to the service provider first, then in case the service provider's response was unsatisfying, or the service provider did not respond to the complainant within the deadlines specified in these instructions, or the service provider refuses to accept the complaint, the complainant is entitled to file a complaint to the CBJ.

2-3-2-10 INSTRUCTIONS ON DEALING WITH DOMESTIC SYSTEMICALLY IMPORTANT BANKS (D-SIBS)

The CBJ issued on June 12th, 2017 Instructions on Dealing with Domestic Systemically Important Banks No. (2/2017), with the aim to enhance these banks ability to maintain the soundness and solidity of their financial positions and reduce the negative impacts, which may arise in case they face substantial issues, on financial stability and the economy in general, in line with international practices in this regard, and in the framework of implementing the Basel Committee decisions for banking supervision related to "dealing with domestic systemically important banks framework". The term "systemically important banks" refers to the large-sized banks of high market share and significant interconnections with other banks and financial institutions, and whose weakness or failure leads to considerable adverse implications on the financial system and the economy as a whole.

These instructions were launched after the last global financial crisis, which started in 2007, and revealed that the weakness or failure of big banks had huge negative impacts on the financial system stability and real economy in the country and sometimes the world, due to the size of these banks and their significant interconnections with other banks and financial institutions, as well as the complexity of their operations, and lack of ability to bridge the gap resulted posterior to their default on the financial services, in addition to their large cross- border spread. To tackle these risks, the efforts have been intensified on the international level, to set a framework for dealing with these risks in order to protect financial stability, to include not only the systemically important banks and financial institutions globally, but also systemically important ones on the domestic level.

Furthermore, these instructions identified an objective methodology for determining domestic systemically important banks, depending on the size of the bank, and the extent of its interconnections with other banks and its contribution to the provision of banking services, in addition to the complexity of its operations represented by the magnitude of its presence outside the Kingdom, and the size of its investments in financial markets. These instructions also included imposing additional capital requirements on these banks to strengthen their ability to withstand shocks and high risks, in addition to some other requirements aiming to enhance corporate governance rules at these banks and strengthen their risk managements. These instructions also focused on strengthening the supervisory framework on these banks, through promoting CBJ's communication with their boards of directors, executive managements, and enhancing supervision on them.

Under these instructions, the banks were requested to have recovery plans approved by the board of directors to deal with the risks which the bank might get exposed to when confronting critical and very dangerous situations. Within this plan the bank should include, setting and documenting a list of procedures which could be referred to in such a case.

Domestic systemically important banks were given a period of one and a half year to comply with the requested qualitative requirements regarding corporate governance, risk management and recovery plans. Whereas, additional capital requirements have been started gradually by the end of 2017 and will continue until the end of 2020.

2-3-2-11 EXTERNAL AUDIT INSTRUCTIONS FOR BANKS

External Audit Instructions for banks operating in the Kingdom No. (69/2017) were issued on February 28th, 2017. These instructions included the terms which must be incorporated in the external audit policy, choosing the auditing office and team (the responsible person and members) criteria, the mechanism for nominating and assigning the auditing office, the minimum considerations for the independence and subjectivity of the auditing office and team, the roles and responsibilities of the audit committee emerging from the board of directors of the bank, following up the work of the audit office during the implementation of the audit, the reports which should be provided for the audit committee by the auditing office, and the duties of the auditing office towards the CBJ.

2-3-2-12 INSTRUCTIONS FOR LICENSED EXCHANGE COMPANIES ON KEEPING FOREIGN CURRENCY ACCOUNTS AT EXTERNAL BANKS

The instructions for licensed exchange companies on keeping foreign currency accounts at external banks No. (9/3/17/2821) were issued on February 19th, 2017. These instructions stipulated that the exchange companies intending to keep foreign currency accounts at foreign banks are obliged to get an approval from the CBJ. They included also the terms for the account at which the company intends to keep the foreign currency with foreign banks, in addition to the necessity of providing the CBJ with a quarterly report of its accounts' balances kept at foreign banks. These companies should also enroll detailed clarifications about the accounts' balances at foreign banks within the clarifications related to the closing statements of the company and keep updated information of the external banks which gained an approval by the CBJ for keeping foreign currency accounts at.

2-3-3 SUPERVISORY CIRCULARS

The CBJ issued several supervisory circulars during the year 2017 and the first half of 2018, the most prominent of which are the following:

- Circular regarding deterrence procedures against the attacks on banks No. 10/4/5445 dated April 16th, 2018, which includes the procedures 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 procedures include working on connecting all banks and their branches to 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 the installation of electronic security doors on the branches' entrances, in addition to ensuring guarding all branches operating in the Kingdom throughout their working time.
- Circular No. (10/3/3777) dated March 14th 2018, addressed to all banks operating in the Kingdom in addition to financial companies, exchange companies, payment cards companies, as well as payment and electronic transfer companies regarding the continued prohibition of dealing with Bitcoins and all other cryptocurrencies.
- Circular No.27/3/2502 dated February 15th, 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.
- Circular of nomination to the membership of the boards of directors No.10/3/2503 dated February 15th, 2018 directed to banks operating in the Kingdom regarding the necessity of obtaining a "no objection" certificate from the CBJ for all nominees to the membership of the board of directors prior to their nomination, pursuant to the provisions of institutional governance instructions in-force.
- Stress Testing Circular No.23/2/1614 dated January 31st, 2018 addressed to banks operating in the Kingdom, which includes stress tests that should be performed by banks based on the end of 2017 data, taking into consideration the developments of risks on the local and international levels.
- Circular No. (10/1/16607) dated December 17th, 2017 which was issued in light of implementing the IFRS 9 standard effective as of 2018, and to reduce the direct implication on the financial data of the banks, which may represent an additional burden on the banking sector, it was decided to complete building allocations for real-estate violating the provisions of Article No.48 of the Banks Law No.28 for the year 2000 and its amendments starting from the year 2019 until 2021.
- Circular No. (10/4/9679) dated July 11th, 2017 directed to banks operating in the Kingdom and No. (26/2/1/10136) dated July 20th, 2017 directed to payment services providers in the Kingdom, including the guideline for counter terrorism financing for banks, exchange companies, and payment services providers and emphasising the necessity of including terrorism financing indicators specified in the guideline within the

systems they use, in addition to conducting internal training courses to introduce these indicators to the relevant employees.

- The Circular No.(9/3/14/8978) dated July 2nd, 2017 on the requirements of implementing a risks based approach in the field of anti-money laundering and counter terrorism financing directed to licensed exchange companies within the framework of CBJ's continued efforts to keep up with the best practices and developing the Risk Based Approach (RBA) in the anti-money laundering and counter terrorism financing for the money exchange sector field, with the aim to assist exchange companies to implement this approach. The quantitative statistical template prepared for assessing the risks that the exchange companies get exposed to, as well as the anti-money laundering and counter terrorism financing risk mitigators questionnaire have been attached for the exchange companies to fill out and provide them to the CBJ.

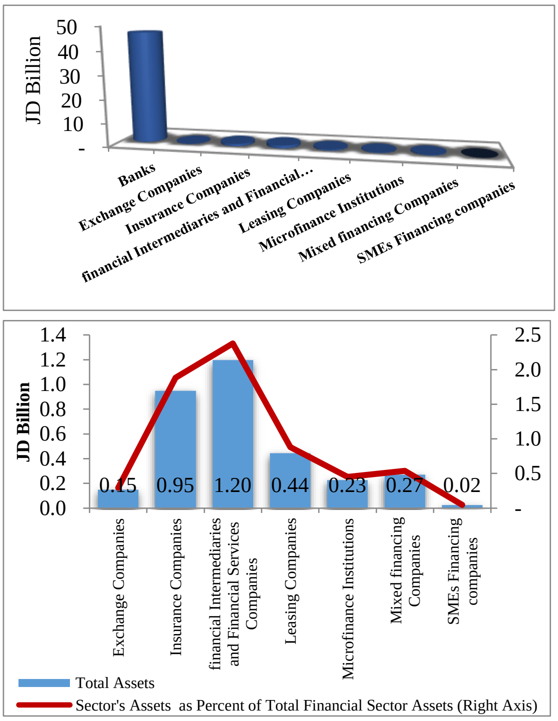
- Circular No. (10/1/2510) dated February 14th, 2017 addressed to licensed banks in the Kingdom, and includes amendments on the instructions of credit facilities classification, calculating impairment provisions, and general banking risks reserve No. (47/2009) dated December 10th, 2009. The circular emphasized on the necessity for the banks to give the utmost priority for considering the clients' financial positions, and the compatibility of their repayment schedules with the expected cash inflows of their activities, while not imposing additional burdens on clients, regarding interests on restructured or rescheduled credit facilities, to help in sustaining their ability to repay.

CHAPTER THREE: FINANCIAL SECTOR DEVELOPMENTS AND RISKS

3-1 INTRODUCTION

The financial sector in Jordan constitutes of banks, insurance companies, financial intermediaries and financial services companies, exchange companies, microfinance institutions, leasing companies, mixed financing companies, in addition to SMEs financing companies. The CBJ assumes the oversight and supervision of the banking sector and exchange companies, as well as microfinance institutions which were subjugated to the CBJ's supervision since 01-06-2015. In addition, the CBJ is heading towards the supervision of insurance companies in Jordan currently regulated by the Ministry of Industry and Trade.[5] The financial sector in Jordan is dominated by banks accounting for 93.5% of the financial sector's assets which totaled JD 49.1 billion by the end of 2017. (Figure 3-1).

FIGURE (3-1): TOTAL ASSETS OF THE FINANCIAL SECTOR IN JORDAN ACCORDING TO SECTOR (2017)

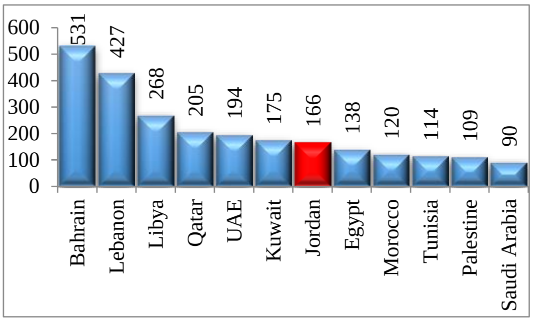


Source: CBJ.

3-2 MAJOR DEVELOPMENTS OF THE BANKING SECTOR IN JORDAN (ASSETS AND LIABILITIES OF BRANCHES OPERATING IN JORDAN)

Licensed banks' assets totaled JD 47.1 billion at the end of 2017, forming 165.5% of GDP against 168.8% at the end of 2016. Jordan is ranked in the middle amongst Arab countries selected for comparison. (Figure 3-2).

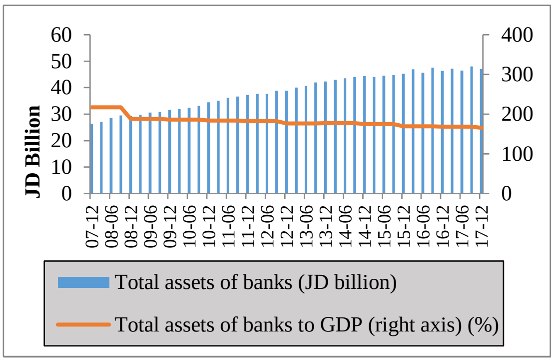
FIGURE (3-2): BANKS' TOTAL ASSETS FOR JORDAN AND SELECTED ARAB COUNTRIES (2017) (% OF GDP)



Source: The Central Bank of each country.

Despite the high ratio of bank's assets to GDP in Jordan, its trend was declining during the last ten years. It decreased from 217.2% at the end of 2007 and to reach 165.5% at the end of 2017, which is explained by the higher pace of GDP growth rates compared to banks' assets growth rates (Figure 3-3).

FIGURE (3-3): TREND OF BANKS' ASSETS OPERATING IN JORDAN, AND THEIR RATIO TO GDP (2007-2017)



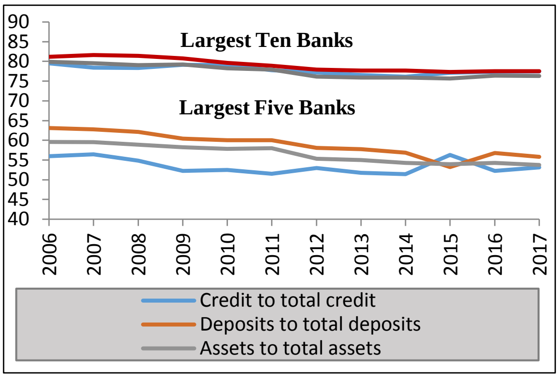
Source: CBJ

With respect to the market share of banks (concentration); the assets of the five largest banks (out of 25 banks) at the end of 2017 accounted for 53.7% of licensed banks' total assets, whereas the assets of the largest ten banks

[5] The Cabinet decided on 24/2/2016 to subjugate the insurance sector to the CBJ's supervision, within two years.

approximated 76.3%. It is noteworthy that the market shares of the largest five and largest ten banks are shrinking, as they were 59.6% and 79.9% respectively in 2006. Therefore, the concentration ratios of licensed banks are on the decline (Figure 3-4). Nevertheless, the concentration in the banking sector in Jordan is still relatively high.

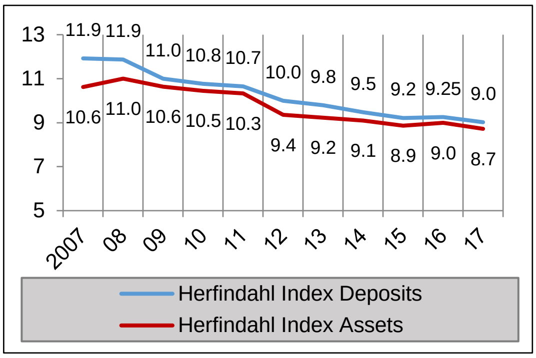
FIGURE (3-4): CONCENTRATION RATIO FOR THE BANKING SECTOR IN JORDAN (2006-2017) (%)



Source: CBJ.

As for competitiveness of the banking sector in Jordan; according to Herfindahl Index (HI) of the banking sector's assets; the competitiveness was improved, as the HI declined from 10.6% at the end of 2007 to 8.7% by the end of 2017. These numbers suggest that competitiveness of the banking sector in Jordan is on an ongoing improvement. This is due to banks being improving their business and products to increase their competitiveness in addition to the increase in number of banks after licensing three new banks in 2009. It is worth indicating that the decline in the concentration ratios and the enhanced competitiveness in the banking sector in Jordan are reflected positively on the financial stability in Jordan (Figure 3-5).

FIGURE (3-5): HERFINDAHL INDEX FOR BANKS' ASSETS AND DEPOSITS IN JORDAN (2007-2017) (%)

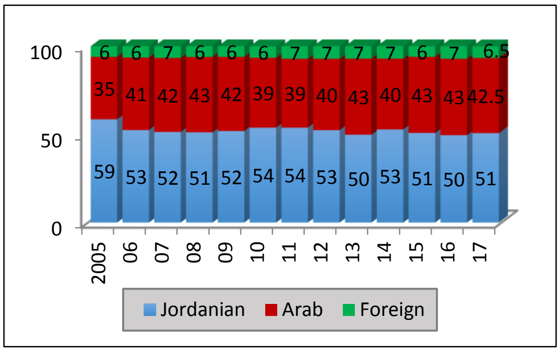


Source: CBJ.

3-2-1 STRUCTURE OF OWNERSHIP AT BANKS

The share of foreigners (Arabs and Non-Arabs) in Jordanian licensed banks' capital totaled 49% at the end of 2017, which is considered amongst the highest in the region as this share is not restricted. It is worth mentioning that this share declined in 2010 and 2011, and increased again, reflecting improvement of investors' confidence in the banking system in Jordan in particular, and in the Jordanian economy in general. Foreigners ownership in capital is mostly stable strategic contributions (Figure 3-6).

FIGURE (3-6): OWNERSHIP STRUCTURE OF BANKING SECTOR OPERATING IN JORDAN (2005-2017) (%)

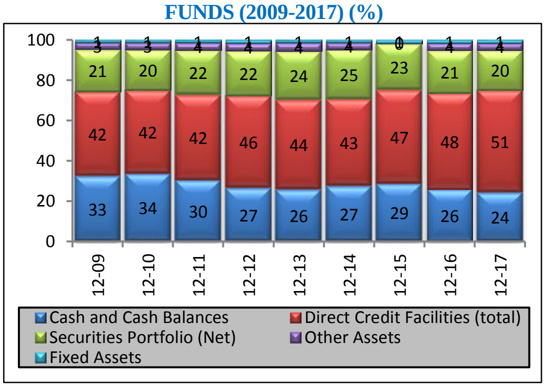


Source: CBJ.

3-2-2 USES OF FUNDS (ASSETS)

As for the assets structure of banks operating in the Kingdom (uses of funds), credit facilities portfolio is still the largest component accounting for around 50.6% of banks' total assets at the end of 2017, compared to 47.6% at the end of 2016. This increase is due to the growth of credit facilities at higher rates than the growth of assets (Figure 3-7).

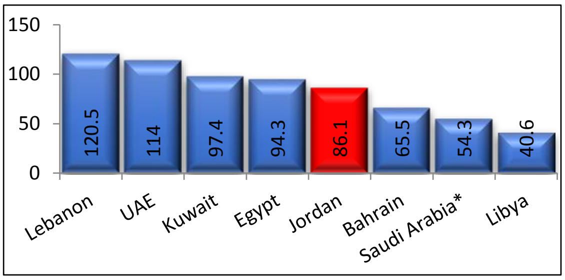
FIGURE (3-7): ASSETS STRUCTURE OF THE BANKING SECTOR OPERATING IN JORDAN - USES OF FUNDS (2009-2017) (%)



Source: CBJ.

In addition, direct credit facilities grew by 8% at the end of 2017 to reach around JD 24.5 billion, compared to 8.9% in 2016. It is worth mentioning that total credit facilities as percent of GDP approximated 86.1% at the end of 2017 compared to 83.6% at the end of 2016. Jordan ranked in the middle compared to selected countries in the region (Figure 3-8).

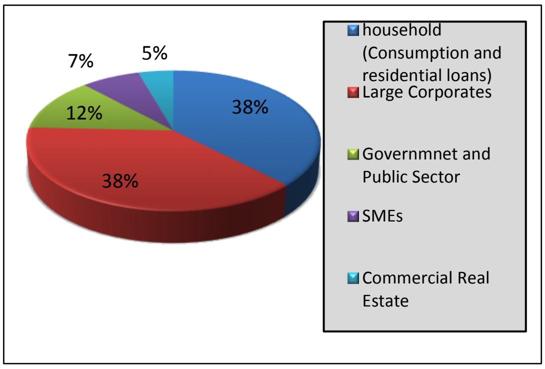
FIGURE (3-8): CREDIT FACILITIES FOR JORDAN AND SELECTED ARAB COUNTRIES IN 2017 (% OF GDP)



Source: The Central Bank of each country.
* 2016 figure.

As for the distribution of direct credit facilities as of end 2017; large corporates accounted for 38.1% of these facilities as compared to 37.7% in 2016, followed by credit facilities to individuals which formed 37.7% of total direct credit facilities compared to 38.5% in 2016. In addition, credit facilities extended to the government and the public sector accounted for approximately 12.4% at the end of 2017 compared to 11.4% at the end of 2016. Moreover, credit facilities extended to SMEs at the end of 2017 almost maintained the same level registered in 2016 of 7.4% of total credit facilities, against an average range of 20%-25% in emerging economies. Credit facilities extended for the purposes of financing commercial real estates accounted for 4.5% which is the lowest share compared to 4.9% at the end of 2016. (Figure 3-9).

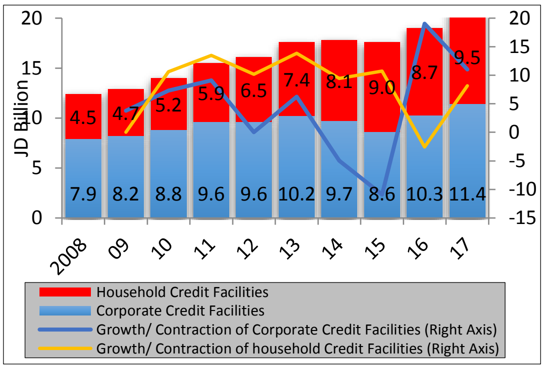
FIGURE (3-9): DISTRIBUTION OF BANKS' CREDIT FACILITIES ACCORDING TO SECTOR (2017) (%)



Source: CBJ.

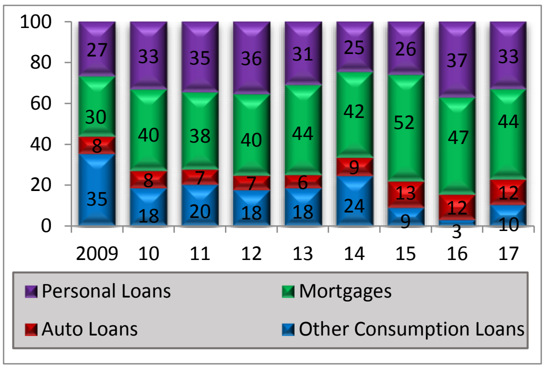
Regarding credit facilities extended to household sector; residential loans accounted for the largest share of around 44.1% at the end 2017, compared to 48% at the end of 2016, followed by personal loans accounting for 33.1% at the end of 2017, compared to 37% at the end of 2016. Furthermore, Auto loans accounted for 12.5% of individuals loans as of end 2017 compared to 12% at the end of 2016. It is noteworthy that changes in the components of credit facilities extended to households are altered incredibly by banks reclassification of their data to improve its accuracy, particularly launching the Aggregate Electronic Banking Supervision Database by the end of 2015. As for credit facilities extended to corporates, and after declining during the period (2014-2015); it grew by 11% at the end of 2017, compared to 19% as of end 2016. (Figures 3-10, 3-11).

FIGURE (3-10): DEVELOPMENTS OF CREDIT FACILITIES EXTENDED TO INDIVIDUALS AND CORPORATES (2008-2017)



Source: CBJ

FIGURE (3-11): CREDIT FACILITIES EXTENDED TO INDIVIDUALS ACCORDING TO TYPE (2009-2017) (%)

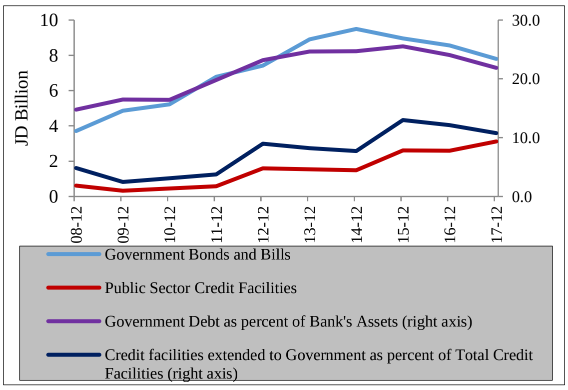


Source: CBJ

In terms of banks' exposure to government debt; the government debt held by banks reached around JD 10.9 billion (accounting for 23.2% of banks' total assets) at the end of 2017 in the form of investments in government bonds or providing government-guaranteed lending to several public institutions, compared to JD 11.1 billion at the end of 2016 (24.0% of banks' total assets), which points to the decrease of crowding out the private sector in light of government tendency towards external borrowing. It is worth indicating that government indebtedness towards banks constitutes of JD 7.8 billion in the form of government bonds, and the remaining JD 3.1 billion in the form of credit facilities.

Banks' exposure to government or government guaranteed debt as percent of banks' assets increased from 14.8% at the end of 2008 to 23.2% at the end of 2017 (Figure 3-12).

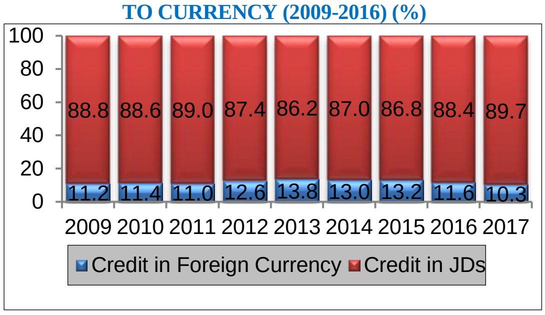
FIGURE (3-12): EXPOSURE OF BANKS TO GOVERNMENT DEBT (2008-2017)



Source: CBJ

As for credit facilities according to currency, they are primarily denominated in JDs constituting about 89.7% of total credit facilities at the end of 2017, up from 88.4% at the end of 2016 (Figure 3-13).

FIGURE (3-13): CREDIT FACILITIES ACCORDING TO CURRENCY (2009-2016) (%)



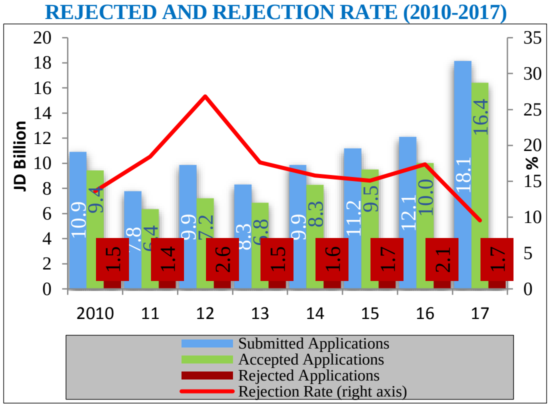
Source: CBJ

3-2-2-1 DEMAND FOR CREDIT AND BANKS' REACTION

To assess the demand for credit and how responsive are banks to this demand, the CBJ updated the survey conducted in 2014 and collected and analyzed responses of banks as of 31/12/2017. Following are the primary results of the survey.

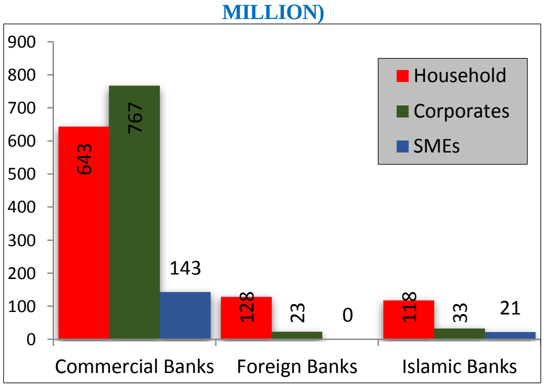
The number of individuals and corporates' applications submitted to banks requesting new credit facilities (applications by new customers in addition to credit facilities top-up) in 2017 totaled around 396.4 thousand applications in the amount of JD 18.1 billion. However, around 14.2% of these applications were rejected, amounting to JD 1.7 billion, or 9.5% of total value of submitted applications, against 17.3% in 2016. Figure (3-14) illustrates that rejection rate has been declining during the period (2013-2017) except for the year 2016, which indicates that banks are better response to demand for credit particularly in 2017 where rejection rates declined considerably.

FIGURE (3-14): TOTAL VALUE OF CREDIT APPLICATIONS SUBMITTED TO BANKS – ACCEPTED, REJECTED AND REJECTION RATE (2010-2017)



Source: CBJ

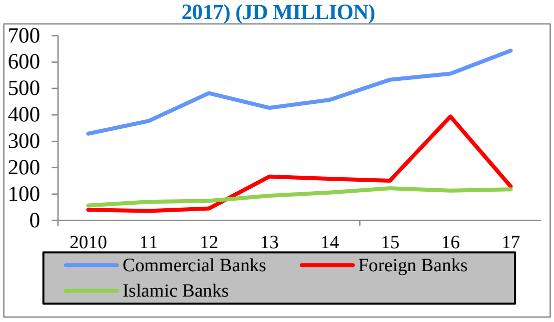
FIGURE (3-15): REJECTED APPLICATIONS ACCORDING TO APPLICANT AND BANK (2017) (JD MILLION)



Source: CBJ

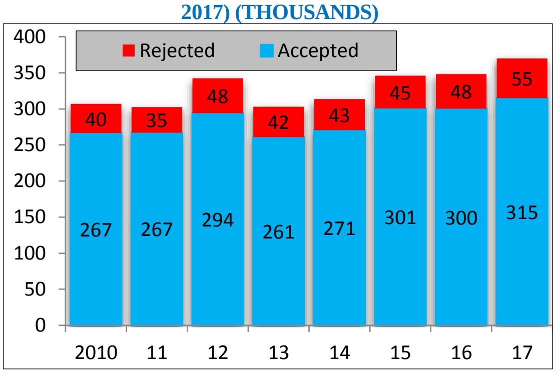
As for individuals' demand for credit facilities, applications submitted for new credit facilities in 2017 were around 370 thousand applications amounting to JD 4,321 million, of which 14.9% with a total value of JD 889 million were rejected, which is equivalent to 20.6% of the total value of submitted applications in 2017, compared to 19% in 2016. In respect of value, the highest rejection ratio was for applications submitted to foreign banks which approached 31.4%, compared to 23.9% for commercial banks and 9.6% for Islamic banks (Figure 3-16).

FIGURE (3-16): VALUE OF RETAIL CREDIT APPLICATIONS REJECTED PER BANK TYPE (2010-2017) (JD MILLION)



Source: CBJ

FIGURE (3-17): NUMBER OF ACCEPTED/REJECTED RETAIL APPLICATIONS SUBMITTED TO BANKS (2010-2017) (THOUSANDS)

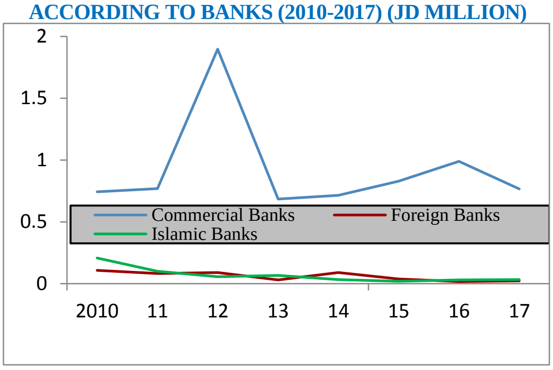


Source: CBJ

On the front of credit facilities requested by corporates (large, medium, and small), the number of applications for new credit facilities in 2017 totaled about 12.5 thousand applications with a total value of JD 5,705 million, of which 9.5% approximately were rejected, with a total value of JD 823 million composing 14.4% of the total value of applications submitted in 2017, compared to 15.9% in 2016. The highest rejection rate, in terms of value, was for applications submitted to commercial banks which reached 16.6%, compared to 7.8% and 4.2% for applications submitted to foreign banks and Islamic banks respectively.

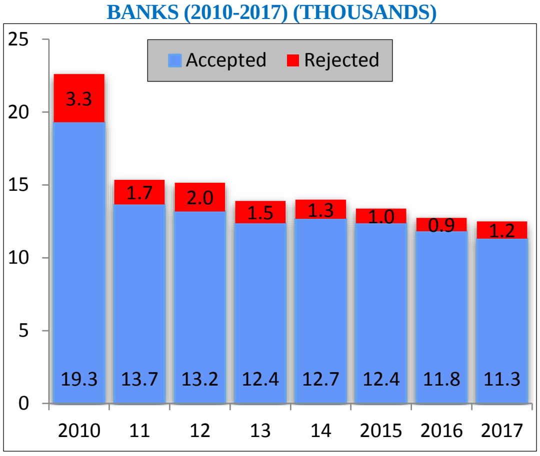
Comparing rejected applications submitted from individuals to those requested by corporates; reveal that the rejection rate for individuals has increased while it declined for corporates, which implies that banks are aware of high risks associated with individuals over indebtedness relative to their income, as will be clarified in chapter four.

FIGURE (3-18): VALUE OF REJECTED CREDIT APPLICATIONS SUBMITTED BY CORPORATES ACCORDING TO BANKS (2010-2017) (JD MILLION)



Source: CBJ

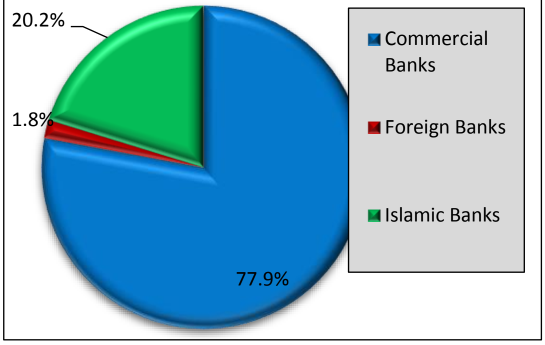
FIGURE (3-19): NUMBER OF ACCEPTED/REJECTED APPLICATIONS SUBMITTED BY CORPORATES TO BANKS (2010-2017) (THOUSANDS)



Source: CBJ

It is worth mentioning that applications submitted by SMEs to banks formed 68.7% of total applications of corporates. The SMEs applications totaled around 8.6 thousand applications, with a total value of JD 1,070 million, of which 15.3% were rejected, compared to 13.1% in 2016. The SMEs credit applications were submitted primarily to commercial banks, accounting for 77.9% of the total value of applications. The SMEs applications submitted to Islamic banks formed around 20.2% of total value, while applications submitted to foreign banks were relatively small at around 1.8%.

FIGURE (3-20): THE AMOUNT OF APPLICATIONS APPLIED BY SMES ACCORDING TO BANKS (2017) (%)



Source: CBJ

The number of rejected applications requested by SMEs formed 77.7% of total rejected applications of corporates. However, the highest rejected applications were those submitted to Islamic banks which accounted for 65.4% of total value of corporates rejected applications.

The above discussion validates the following conclusions:

1) The value and number of credit rejected applications of individuals have been on an upward trend since 2013, reflecting banks' vigilance in dealing with risks associated with lending to this sector and improving the lending criteria.

2) Banks' tendency to lend productive sectors (corporates) on the account of consumption credit facilities (facilities to individual), which may contribute positively to stimulating economic growth, as individuals are less likely to contribute to economic growth compared to other sectors. The analysis of the survey indicates the following:

- The increase in corporate credit facilities balances were higher than individuals' balances.
- The rejection rate for applications requested by individuals was greater than corporates (for commercial, Islamic and foreign banks in terms of number and value).

3) Individuals' applications were rejected mainly due to the following reasons:

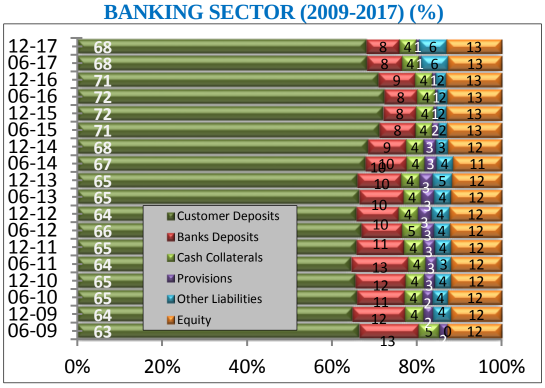
- Incompatibility with the requirements of bank's credit policy such as income, employer, minimum time employed, and client's age.

• High debt burden ratio (DBR) for clients (exceeding the percentage approved by the bank).
• Rejected cheques for insufficient balance and blacklisting of the client.

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 around 68.2% of total sources as of end 2017 compared to 71% at the end of 2016; declining by 3.9%; in contrary to the upward trend in the past years. (Figure 3-21).

FIGURE (3-21): LIABILITIES STRUCTURE OF BANKING SECTOR (2009-2017) (%)



Source: CBJ

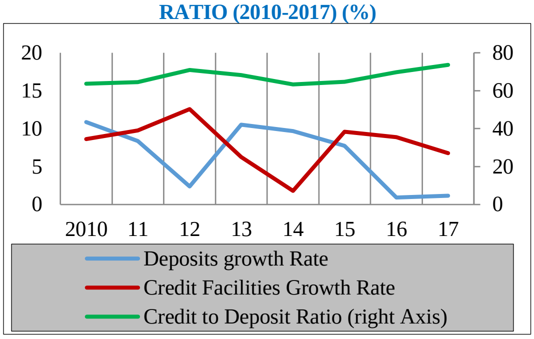
The second main source of funds was equity which increased from JD 6 billion at the end of 2016 to around JD 6.3 billion at the end of 2017; growing by 5%, which strengthens the solvency of the banking sector in Jordan.

Banks' deposits are the third source of funds in terms of importance; and they increased steadily since June 2012 to reach 10.2% of total sources of funding for banks at the end of 2013. In 2014 and 2015 they declined to reach 8.9% and 7.8% of banks' total sources of funds respectively, and declined further to 7.7% in 2017 compared to 8.6% in 2016.

With regard to developments of deposits in the banking sector; clients' deposits increased by 1.1% in 2017 to reach around JD 33.3 billion, against a growth of 1% in 2016. The deposits growth rate in 2017 was lower than credit facilities growth rate of around 8%, accordingly the ratio of credit facilities to deposits at the banking system in Jordan increased from 69.7% at the end of 2016 to 73.6% at the end of 2017 (Figure 3-22).

In this context, the modest growth of clients' deposits during the years 2016 and 2017 compared to previous years is attributed to number of non-recurring events including the reclassification of several deposits to banks' deposits which were classified previously as clients' deposits, consolidating the accounts and deposits of Ministries and government institutions' into one single account at the CBJ as requested by the Ministry of Finance, as well as the transactions of purchasing shares of numerous banks and companies such as the Arab Bank transaction, and the Potash transaction, which led some investors to withdraw part of their deposits to complete these transactions. Therefore, if the impact of these non-recurrent events is excluded, the growth of deposits is well aligned with the previous trend, indicating that liquidity level of banks is stable in general.

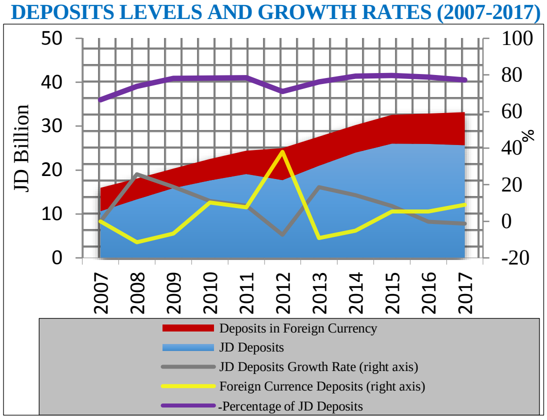
FIGURE (3-22): GROWTH RATES OF DEPOSITS AND CREDIT FACILITIES, AND CREDIT TO DEPOSITS RATIO (2010-2017) (%)



Source: CBJ

With regard to deposits composition in terms of currency, the JD-denominated deposits account for the largest share of deposits. Analyzing the changes of the ratio of JD denominated deposits in respect to total deposits indicates that it increased from 66.4% at the end of 2007 to reach 78.4% at the end of 2011. However, it started to decline reaching its record minimum of 71% by the end of 2012 due to unfavorable economic conditions that hit Jordan in 2012. Albeit, during the years 2013, 2014, and 2015, JD-denominated deposits retrieved the upward trend to reach its peak of 79.7% of total deposits at the end of 2015, as a result of preferable economic conditions represented by the improvement of most economic and monetary indicators. During the years 2016 and 2017 JD deposits decreased slightly to 78.9% of total deposits in 2016 and 77.2% in 2017, which is considered a comfortable level reflecting the confidence in the Jordanian dinar as a saving currency, which strengthen the monetary and financial stability in the Kingdom (Figure 3-23).

FIGURE (3-23): JD AND FOREIGN CURRENCY DEPOSITS LEVELS AND GROWTH RATES (2007-2017)



Source: CBJ

3-2-4 BANKING SECTOR RISKS IN JORDAN- FINANCIAL SOUNDNESS INDICATORS

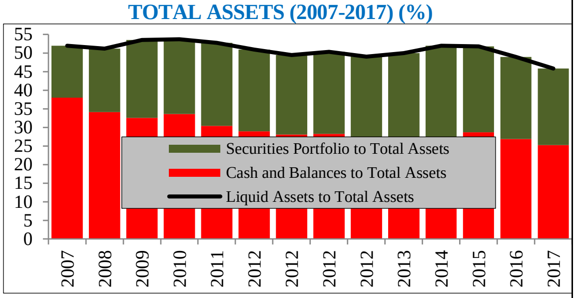
Notwithstanding the Arab Spring conditions, instability in the region, and associated risks and significant challenges, the Jordanian banking sector's financial and administrative position was generally sound and resilient. The next sections elaborate on the main developments of banks' financial ratios and indicators.

3-2-4-1 LIQUIDITY

The banking sector in Jordan enjoys a safe liquidity position, as of end 2017. Despite the slight decrease of liquidity at the end of 2017 compared to the previous year; the liquidity position of the banking system is safe and sound. The share of cash and cash balances to total assets reached 25.2% as of end 2017 compared to 26.8% at the end of 2016, while the share of securities portfolio (highly liquid) to total assets reached 20.6% at the end of 2017 compared to 22.1% at the end of 2016.

Accordingly, highly liquid assets formed around 45.8% of total assets at the end of 2017 compared to 48.9% at the end of 2016. This decline is explained by the higher growth rates of credit facilities compared to deposits (Figure 3-24).

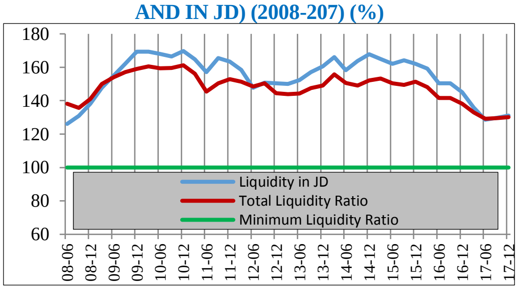
FIGURE (3-24): LIQUID ASSETS AS PERCENT OF TOTAL ASSETS (2007-2017) (%)



Source: CBJ

As for the overall legal liquidity ratio imposed by the CBJ on banks with a minimum of 100%; it decreased from 137.8% at the end of 2016 to reach 130.1% at the end of 2017 (Figure 3-25). This decline is owing to the upward growth of credit facilities at higher pace than deposits.

FIGURE (3-25): LEGAL LIQUIDITY RATIO (TOTAL AND IN JD) (2008-207) (%)

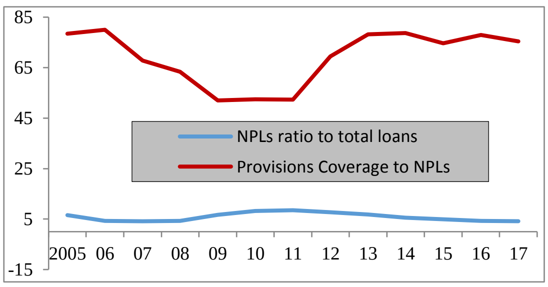


Source: CBJ

3-2-4-2 QUALITY OF ASSETS

As for the ratio of non-performing loans (NPLs) to total loans, it declined further in 2017 to reach 4.2% compared to 4.3%, 4.9%, 5.6%, 6.8%, and 7.7%, in the years 2016, 2015, 2014, 2013, and 2012, respectively. This downward trend is due to the increase in credit facilities (the denominator) more than the increase of NPLs (the numerator). The provisions' coverage ratio for NPLs continued its upward trend that started in 2011 to reach 75.4% at the end of 2017. (Figure 3-26).

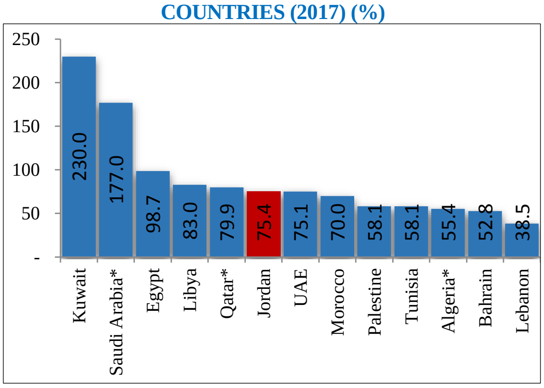
FIGURE (3-26): NPLS RATIO AND PROVISIONS COVERAGE TO NPLS (2005-2017) (%)



SOURCE: CBJ

The banking sector in Jordan ranked sixth among 13 Arab countries in terms of the NPLs coverage ratio. (Figure 3-27).

FIGURE (3-27): PROVISIONS COVERAGE RATIO FOR NPLS FOR JORDAN AND SELECTED ARAB COUNTRIES (2017) (%)

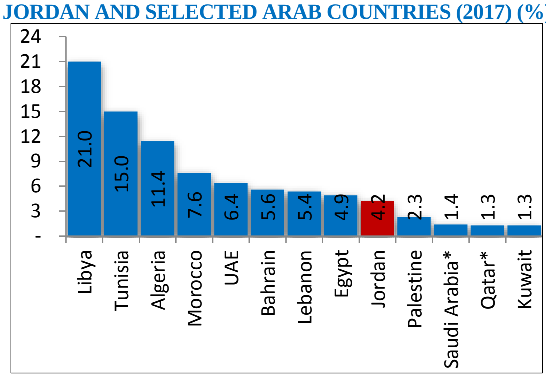


Source: Jordan's data: CBJ
Arab countries data: IMF
*: Refers to 2016 data.
- Consolidated leveldata for Saudi Arabia.

The outstanding balance of NPLs (excluding interest in suspense) at the banking system reached JD 1,019.4 million as of end of 2017, compared to JD 968.7 million in 2016; increasing by JD 50.7 million.

Moreover, when comparing the NPLs to total loans ratio in Jordan with selected Arab countries; Jordan is the fifth lowest ratio amongst 13 Arab countries. The ratio was lower in Jordan than Libya, Tunisia, Algeria, Morocco, UAE, Bahrain, Lebanon, and Egypt; yet it is higher than Palestine, Saudi Arabia, Qatar, and Kuwait. (Figure 3-28).

FIGURE (3-28): NPLS TO TOTAL LOANS FOR JORDAN AND SELECTED ARAB COUNTRIES (2017) (%)

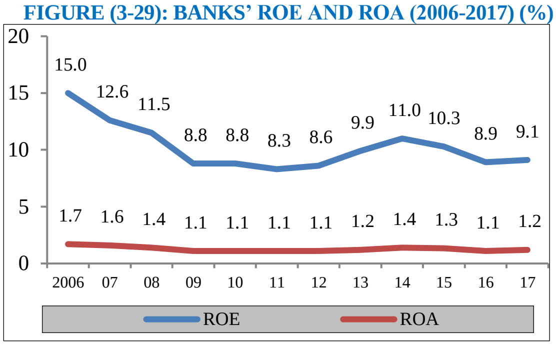


Source: Jordan's data: CBJ
Arab countries data: IMF
*: Refers to 2016 data.
- Consolidated level data for Saudi Arabia.

3-2-4-3 PROFITABILITY

The rate of return on assets (ROA) at the banking system in Jordan declined during the years (2006-2010); it was down from 1.7% at the end of 2006 to 1.1% at the end of 2009 affected by the repercussions of the global financial crisis impact on banks' profits. The ROA maintained that low level until the end of 2012, to increase to 1.2% and 1.4% in 2013 and 2014 respectively, as a result of the remarkable growth of banks' profits. In 2015 and 2016 banks' ROA declined to 1.3% and 1.1% respectively, which is attributed mainly to the increase of income tax rate on banks from 30% in 2014 to 35% in 2015. However, banks' ROA increased in 2017 to reach 1.2%. (Figure 3-29).

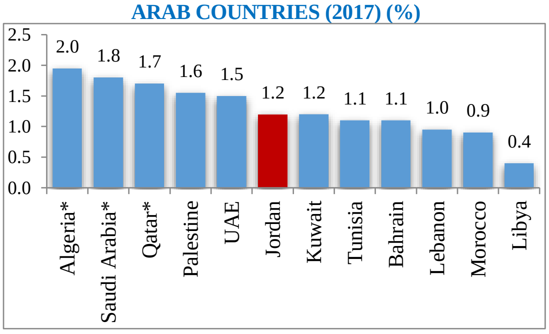
FIGURE (3-29): BANKS' ROE AND ROA (2006-2017) (%)



Source: CBJ

The comparison of Jordan to selected Arab countries according to banks' ROA in 2017 indicates that Jordan ranked in the middle among 12 Arab countries with available data. Libya ranked as the lowest ROA of 0.4%, whereas Algeria ranked first with a 2% ROA ratio. (Figure 3-30).

FIGURE (3-30): ROA FOR JORDAN AND SELECTED ARAB COUNTRIES (2017) (%)



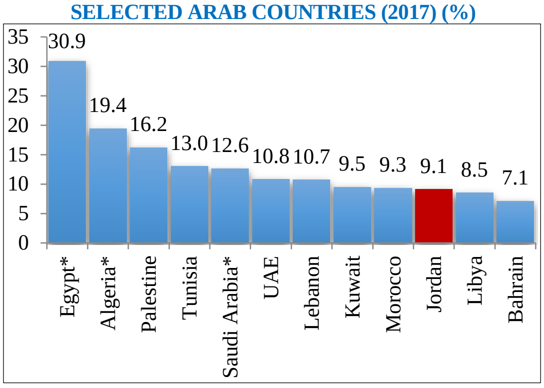
Source: Jordan's data: CBJ
Arab countries data: IMF
*: Refers to 2016 data.
- Consolidated level data for Saudi Arabia.

As for the return on equity (ROE), its trend was similar to ROA ratio. It declined during the period (2006-2011) from 15% at the end of 2006 to 8.3% at the end of 2011. ROE ratio increased in 2012, 2013, and 2014 to reach 8.6%, 9.9%, and 11%, respectively. However, it declined to 10.3% in 2015, and continued to decrease to record 8.9%

in 2016. In 2017, the ROE ratio improved to 9.1%. (Figure 3-31).

As compared to selected Arab countries, the ROE in Jordan remains low and ranked third amongst the lowest countries in terms of ROE. Bahrain had the lowest ROE of 7.1%, while Egypt had the highest rate of 30.9% (Figure 3-31). The low rate of ROE in Jordan compared to most of Arab countries is due to banks' conservatism and risk aversion, in addition to the high levels of capital held by banks and the relatively high rates of income tax paid by banks in Jordan.

FIGURE (3-31): BANKS' ROE FOR JORDAN AND SELECTED ARAB COUNTRIES (2017) (%)



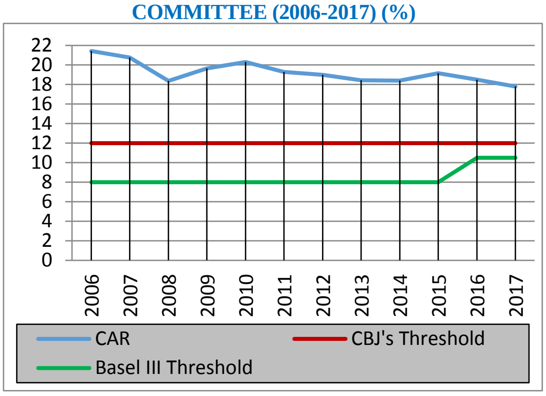
Source: Jordan's data: CBJ
Arab countries data: IMF
*: Refers to 2016 data.
- Aggregated data for Saudi Arabia.

3-2-4-4 CAPITAL ADEQUACY

The Capital Adequacy Ratio (CAR) of the banking sector in Jordan is high; as it ranged between 18%-21% during the period (2007-2016) which is amongst the highest five in MENA countries. It is generally well above the threshold set by the CBJ of 12% and the limit specified by Basel Committee of 10.5%. However, the CAR ratio slightly decreased to 17.8% at the end of 2017.

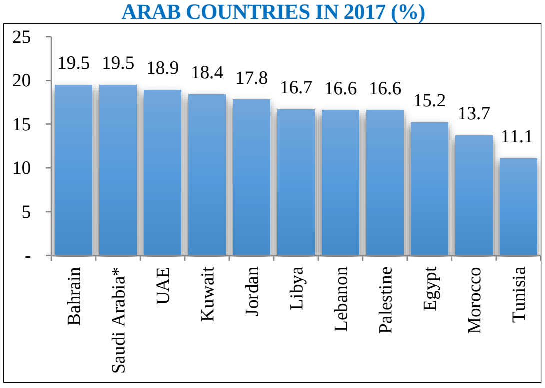
It is worth mentioning that capital adequacy ratio and the tier I core capital ratio are very close. The tier I core capital reached 17.4% at the end of 2017. This implies that most of banks' capital in Jordan is composed of tier I core capital which is the highest quality component of the capital and the most capable to withstand losses (Figure 3-32, and Figure 3-33).

FIGURE (3-32): ACTUAL CAR COMPARED WITH THE THRESHOLDS SET BY THE CBJ AND BASEL COMMITTEE (2006-2017) (%)



Source: CBJ

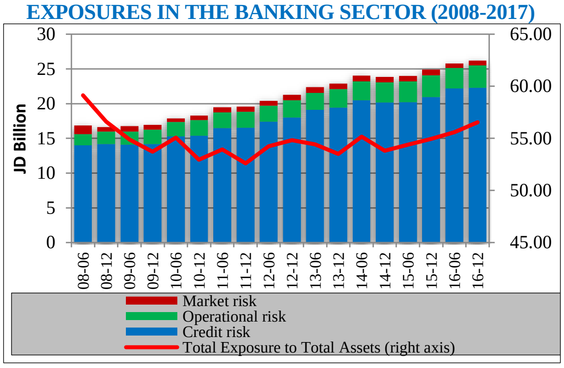
51FIGURE (3-33): CAR FOR JORDAN AND SELECTED ARAB COUNTRIES IN 2017 (%)



Source: Jordan's data: CBJ
Arab countries data: IMF
*: Refers to 2016 data.
- Aggregated data for Saudi Arabia.

With regard to main risks looming in front of banks, the credit risk is the most significant forming 86.5% of total risks as of end 2017, followed by operational risk, which constituted around 11.7% of total risk, and market risk which accounted for 1.8% of total risk. These figures are close to their levels in 2016 reflecting the relative stability of the risk structure in banks with no substantial changes. (Figure 3-34).

FIGURE (3-34): COMPONENTS OF TOTAL EXPOSURES IN THE BANKING SECTOR (2008-2017)



Source: CBJ

3-2-5 OPERATIONAL EFFICIENCY OF BANKS

Operational efficiency of banks is measured primarily by the Cost to income ratio (CIR). According to a study conducted by (McKinsey & Company) banks with CIR exceeding 55% suffer from weak operational efficiency in terms of the ability to generate income while rationing expenses. Therefore, as CIR declines it gives a positive indicator regarding the operational efficiency of banks.

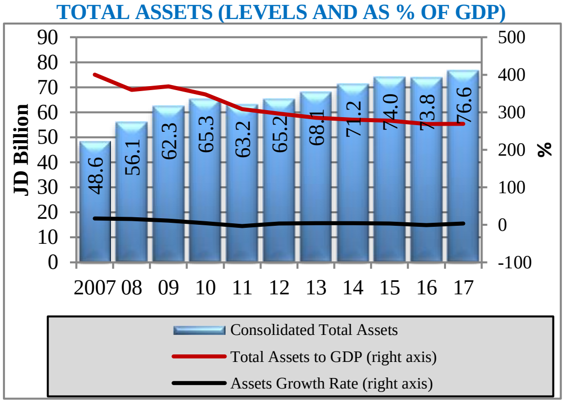
In Jordan, the CIR of banks reached to around 56.2% at the end of 2017 compared to 55.7% at the end of 2016. However, operational efficiency varies across individual banks, as the CIR exceeded 55% for 14 banks, while 11 banks registered CIRs below 55%. This implies that more than 55% of banks in Jordan need to boost their operational efficiency through rationalizing their operational expenses more effectively.

3-3 CONSOLIDATED ASSETS AND LIABILITIES OF THE BANKING SECTOR IN JORDAN (BRANCHES OPERATING IN JORDAN AND ABROAD AND SUBSIDIARIES)

3-3-1 ASSETS

As of end 2017, the number of Jordanian banks operating abroad reached to nine banks; the Arab Bank's assets abroad constituted around 85.3% of total assets of banks operating abroad, and about 73.8% of the Arab Bank's total assets. The consolidated total assets of the Jordanian banking sector approximated JD 76.6 billion as of end 2017 compared to JD 73.8 billion at the end of 2016, increasing by JD 2.8 billion or 3.8%. Branches in Jordan formed around 61.4% of total assets at the end of 2017 compared to 62.8% at the end of 2016. Despite the increase of consolidated assets of the banking sector from JD 48.6 billion at the end of 2007 to JD 76.6 billion at the end of 2017; their growth rates were trending downward from approximately 17% in 2007 to a contraction of 0.3% in 2016, and a growth rate of 3.8% in 2017 (Figure 3-35). This slowdown is reasonable given the repercussions of the political instability in the region and the deterioration of the global economic activity, particularly in the Euro area, which affected the operating of Jordanian banks abroad.

FIGURE (3-35): TRENDS OF CONSOLIDATED BANKS' TOTAL ASSETS (LEVELS AND AS % OF GDP)



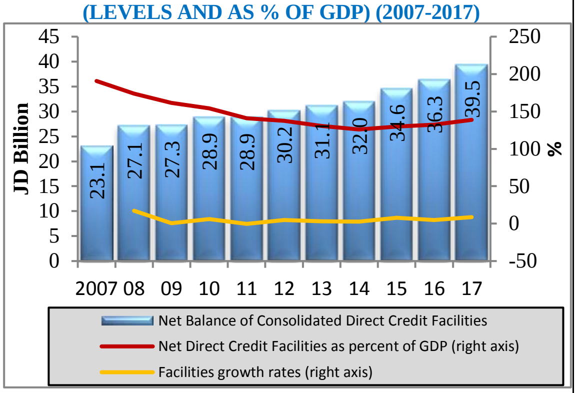
Source: CBJ

The consolidated assets of the banking sector relative to GDP reached 269.4% at the end of 2017, compared to 268.8% at the end of 2016. However, it was much higher at the end of 2007 and reached to 400%.

3-3-2 CREDIT FACILITIES

The consolidated net balance of credit facilities of banks grew by 8.6% to reach JD 39.5 billion at the end of 2017, compared to JD 36.3 billion at the end of 2016 (an increase of 5%). The consolidated credit facilities of the banking system as percent of GDP recorded 138.7% at the end of 2017 compared to 132.4% at the end of 2016, which is due to higher growth rates of credit facilities compared to GDP growth rates (Figure 3-36).

FIGURE (3-36): DEVELOPMENTS OF CONSOLIDATED BANKS' CREDIT FACILITIES (LEVELS AND AS % OF GDP) (2007-2017)

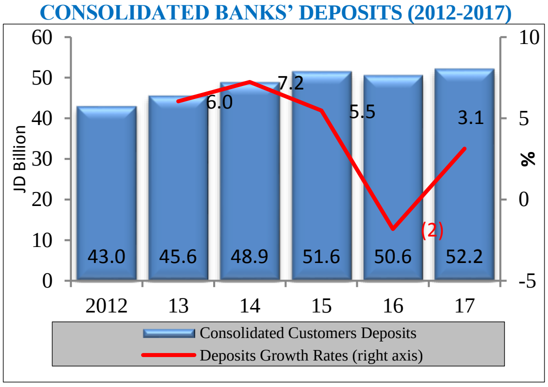


Source: CBJ

3-3-3 DEPOSITS

Consolidated banks Customers deposits increased by 3.1% to reach JD 52.2 billion at the end of 2017, against a contraction of 2% and a total value of around JD 50.6 billion at the end of 2016. (Figure 3-37).

FIGURE (3-37): DEVELOPMENTS OF CONSOLIDATED BANKS' DEPOSITS (2012-2017)



Source: CBJ

3-3-4 SHAREHOLDERS' EQUITY

The consolidated balance of banks shareholders' equity totaled JD 11.4 billion at the end of 2017, compared to JD 10.9 billion at the end of 2016. It is worth mentioning that the balance of shareholders' equity was upward trending since 2009 (Figure 3-38). This enhances the banks' solvency and resilience to encounter risks and, hence, strengthen the financial sector stability.

FIGURE (3-38): DEVELOPMENTS OF CONSOLIDATED SHAREHOLDERS' EQUITY (2009-2017)

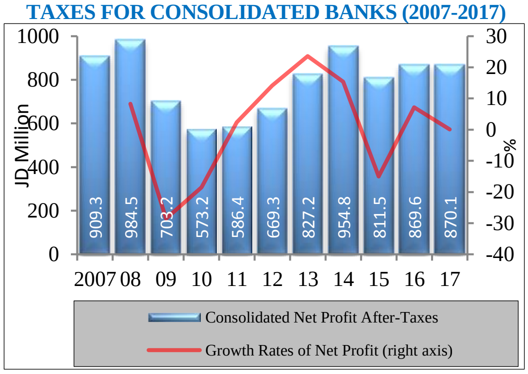
Source: CBJ

3-3-5 NET PROFIT AFTER-TAXES, RETURNS ON ASSETS AND RETURNS ON EQUITY

3-3-5-1 NET PROFIT AFTER-TAXES

The overall net profit after-taxes of banks registered JD 870.1 million at the end of 2017, which is almost the same level recorded in 2016 of around JD 869.6 million. (Figure 3-39).

57FIGURE (3-39): TRENDS OF NET PROFIT AFTER-TAXES FOR CONSOLIDATED BANKS (2007-2017)



Source: CBJ

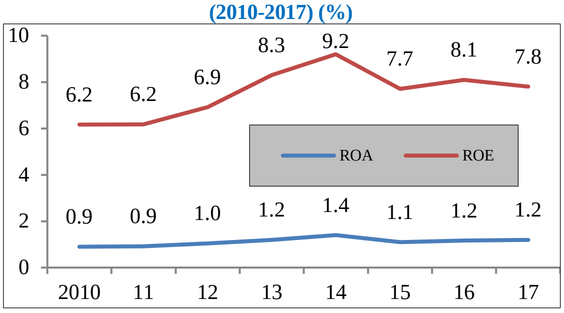
3-3-5-2 RETURN ON ASSETS

The consolidated ROA of banks reached to 1.2% at the end of 2017, which is equivalent to the level recorded in 2016. (Figure 3-40).

3-3-5-3 RETURN ON EQUITY

The consolidated ROE of banks registered 7.8% at the end of 2017 compared to 8.1% at the end of 2016. (Figure 3-40)

58FIGURE (3-40): CONSOLIDATED ROA AND ROE (2010-2017) (%)



Source: CBJ

3-4 FINANCIAL STABILITY INDEX

3-4-1 INTRODUCTION

Jordan Financial Stability Index (JFSI) was developed according to international best practices taking into consideration various methodologies followed by several countries for designing their indices, as each country uses different variables, statistical methods, weights, etc. Therefore, the JFSI considers the specific traits of Jordanian economy and financial system. The JFSI is a composite of three sub-indicators; each indicator represents a key element of the Jordanian financial system, namely: the banking sector index, which encompasses nine variables, the macro-economy index which is represented by six variables, and capital market index which consists of two variables. These 17 sub-indicators were calculated and analyzed using historical data of the last ten years (2007-2016) to calculate JFSI which was updated to reflect 2017 data as well.

3-4-2 METHODOLOGY

As stipulated earlier in the Financial Stability Report of 2016, the methodology used to develop JFSI is one of the most widely used in countries[6] computing the same indicator. The JFSI was developed based on international best practices in this regard, taking into account the specific features of the financial sector in Jordan which is dominated by the banking sector (forming more than half of the financial sector), thus half of the indicators used to calculate the overall financial stability index refer to the banking sector indicators. A brief explanation of the methodology used to calculate JFSI is indicated in the following box.

Data Normalization:

Re-scaling of sub-indicators methodology was used, through subtracting the minimum value of the sub-indicator from the value of the indicator and then divide the output by the sub-indicator according to the formula (1) below.

$$di = \frac{Ai-min}{Max-min} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

Where min[7] and Max represent the smallest and largest values of the di sub-indicator.

Calculation of sub-indicators:

The sub-indicator is calculated by using the weighted average of the normalized indicators, while setting the weights based on the relative importance of indicators. Numerous methods are available for selecting the weights of indicators, however the best method is to rely on experts' opinions, as weights are estimated according to the significance of the sub-indicator and its impact on the financial stability in the Kingdom. Based on that, the following weights were allocated to the indicators of the banking sector:

Variable	Weight
Capital adequacy ratio	28.3%
Quality of Assets	28.3%
Liquidity	28.3%
Profitability	15%
Total	100%

The sub-indicators for the banking sector, macro-economy and capital market were calculated using the following formulas:

Banking Sector Index (weighted average of sub-indicators):

$$Bsi = \frac{\sum_1^9 W_b d_b}{9} \ldots\ldots\ldots\ldots\ldots \text{(2)}$$

Macro-economy Index:

$$Esi = \frac{\sum_1^6 d_E}{6} \ldots\ldots\ldots\ldots\ldots\ldots \text{(3)}$$

Capital Market Index:

$$Msi = \frac{\sum_1^2 d_M}{2} \ldots\ldots\ldots\ldots\ldots \text{(4)}$$

Calculating the overall Financial Stability Index:

Using the weighted average of the three sub-indicators the aggregate JFSI is calculated using the following formula:

JFSI= ((9/17) *Bsi)+((6/17) *Esi)+((2/17)*Msi))………. (5)

The value of JFSI ranges from zero to 1.

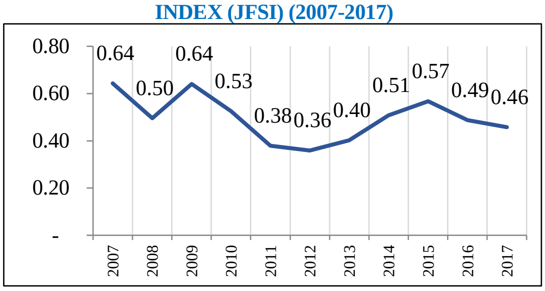
3-4-3 JORDAN'S FINANCIAL STABILITY INDEX (JFSI) RESULTS

As mentioned previously, the value of the JFSI ranges from zero to one. The closer the value to one, the greater the stability is in the financial

[6] Banking Stability Index: A Cross-Country Study.

[7] The minimum value is determined according to the thresholds stipulated in effective regulations instead of minimum values mentioned in the study.

FIGURE (3-41): JORDAN FINANCIAL STABILITY INDEX (JFSI) (2007-2017)



system. The pre-crisis value of the JFSI was 0.64 at the end of 2007, and then dropped to 0.5 by the end of 2008 due to the global financial crisis. The JFSI increased to 0.64 at the end of 2009 to fall again during the period (2010-2012) with the lowest value recorded at the end of 2012 of 0.36, influenced by the Arab Spring and the refugees' crisis as well as challenging economic conditions that faced the Kingdom, particularly in 2012. The JFSI started to recover to reach 0.49 by the end of 2016. However, the JFSI had declined slightly in 2017 to reach 0.46, which is attributed to the following:

1. The macro-economy stability index declined from 0.57 in 2016 to 0.46 in 2017 as a result of:

a. The pickup of inflation rate, as opposed to levels of 2016, to reach 3.3% in 2017, owing to the rise in oil prices in the global markets and their spill over to the local markets, in addition to the government measures including the abolition of subsidies on bread, as well as tax exemptions and raising taxes on several goods and services.

b. The widening of current account deficit as a percentage of GDP to 10.6% in 2017 up from 9.5% in 2016.

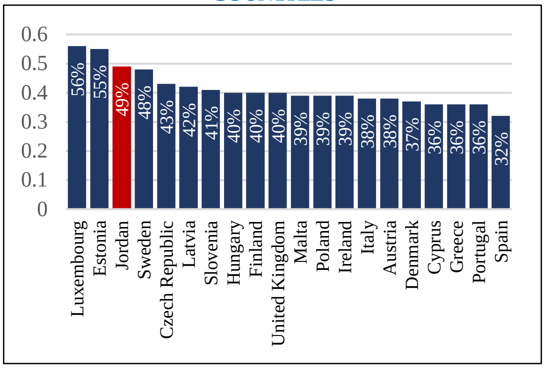
c. The credit to GDP gap broadens from -7.0% to -3.2%. The increase in this gap since 2015 until 2017 is due to higher credit growth rates compared to GDP growth rates.

2. The capital market index declined from 0.41 in 2016 to reach 0.30 in 2017 resulted from the decrease of the market value of listed shares at Amman stock exchange by 2.2% with an amount of JD 376.8 million to reach JD 17 billion.

As for the banking sector stability index, it almost remained stable at 0.49 in 2017 which is the same level of 2016. This is attributed to low ratios of NPLs, high profitability rates of banks (ROA and ROE) on one hand, and the slight decrease of capital adequacy ratio and liquidity ratios on another, as detailed previously in the section of the Jordanian banking sector financial soundness indicators. (Figure 3-41)

In conclusion, the JFSI indicates that the financial system in Jordan is quite stable taking into consideration the economic developments in the region and the Kingdom and their impact on financial stability. The stability index of the banking sector in particular shows that Jordan has a sound, resilient, and stable banking sector. Jordan ranked third, compared to 19 European countries, which developed a similar index. (Figure 3-42).

FIGURE (3-42): JFSI COMPARED TO FINANCIAL STABILITY INDEX FOR SELECTED EUROPEAN COUNTRIES



3-5 DEVELOPMENTS OF NON-BANKING FINANCIAL SECTOR (NON-BANKING FINANCIAL INSTITUTIONS)

3-5-1 INSURANCE SECTOR

The insurance sector is a pivotal component of the financial system. It protects individuals and properties against risks, in addition to accumulating and boosting national savings to support economic development. The contribution of insurance premiums to GDP reached 2.1% in 2017. Given the importance of this sector in promoting financial stability, the cabinet decided on 24/02/2016 to approve the following:

1. The CBJ undertakes the responsibility of supervising the insurance sector as one of its responsibilities according to the practices of several international regulatory authorities.
2. Transferring the supervision of the insurance sector to the CBJ within a period not exceeding two years.

3. Updating the supervisory frameworks of the insurance sector business within a period not exceeding two years to comply with market developments concerning the following:

- Improve the financial solvency of insurance companies and set clear and transparent standards to monitor it.
- Put in place regulatory requirements that ensure the separation of life insurance business from other forms of insurances for the companies that offer both categories.
- Implement the prudential regulatory requirements for investment policies of insurance companies.
- Determine the supervisory authorities and responsibilities for the insurance companies that are part of a group of financial companies.
- Enhance corporate governance requirements for insurance companies.

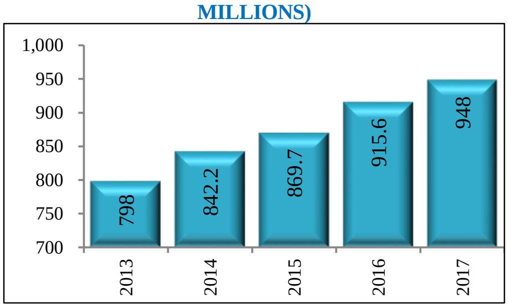
4. Formulate a committee headed by the Deputy Governor of the CBJ and the membership of the acting director of the insurance department at the Ministry of Industry, Trade, and Supply; a representative of the Legislation and Opinion Bureau; and a representative of the Ministry of Public Sector Development, to proceed with implementing and finalizing the aforementioned recommendations within a period not exceeding one year from the date of the Committee formulation. The Committee must later on 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 (is responsible currently for the supervision and oversight of the insurance sector) drafted a law to regulate the insurance business which aims to develop a cutting edge working mechanism that enables the CBJ to supervise and oversee the insurance sector effectively and efficiently. The draft law was published in October 2017 at the CBJ's website (www.cbj.gov.jo).

The Insurance Sector in Jordan consists of 24 companies; one company is licensed for offering life insurance, 8 companies are licensed to practice general insurance business, while 15 companies are licensed to provide both general, and life insurances. 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, actuarists, 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 948 million at the end of 2017, compared to JD 915.6 million at the end of 2016; an increase of 3.5% (Figure 3-43).

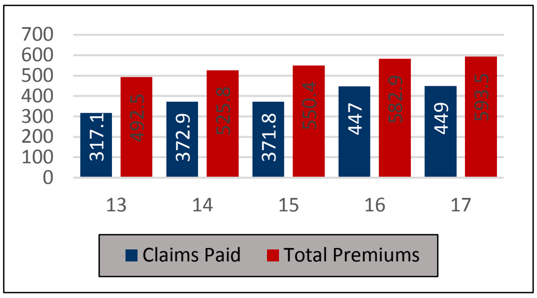
FIGURE (3-43): DEVELOPMENTS OF TOTAL ASSETS OF INSURANCE COMPANIES (2013-2017) (JD MILLIONS)



Source: Insurance Business Report 5/2017, and Preliminary Annual Financial Reports of Insurance Companies, 2017.

According to 2017 preliminary data of Insurance department at the Ministry of Industry, Trade, and supply; total insurance premiums increased by 1.8% in 2017 to reach JD 593.5 million, compared to JD 582.9 million in 2016. Meanwhile, total claims paid increased slightly by 0.45% to reach JD 449 million in 2017 compared to JD 447 million in 2016 (Figure 3-44).

FIGURE (3-44): DEVELOPMENTS OF TOTAL INSURANCE PREMIUMS AND TOTAL CLAIMS PAID (2013-2017) (JD MILLION)



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

As for the financial results of insurance companies, the investments increased from JD 543.5 million in 2016 to JD 569 million in 2017. However, paid in capital fell from JD 267 million in 2016 to JD 265 million in 2017 (Table 3-1).

TABLE (3-1): FINANCIAL RESULTS OF INSURANCE COMPANIES (2013-2017)

Item	2013	2014	2015	2016	2017
Total Investments	504.9	534.4	533.6	543.5	569
Total assets	798	842.2	869.7	915.6	948
Shareholders' equity	317.7	332.8	330.7	343.7	335
Total written premiums in Jordan	492.5	525.8	550.4	582.9	593.5
Total claims paid	317.1	372.9	371.8	447	449
Paid in capital	281	268	269	267	265

Source: Data for the period (2013-2016): The Jordanian Insurance sector results report.
Data of 2017: preliminary 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 and Trade. However, as a part of its endeavor to include non-banking financial institutions under its umbrella (such as the MFIs which 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- Leasing companies.
3- Mixed financing companies.
4- SMEs financing companies.

The main results of the study which 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

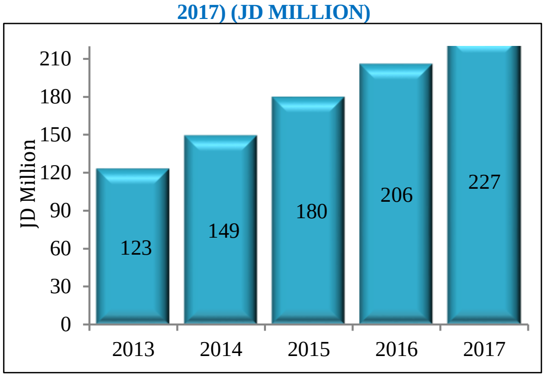
Item	Leasing Companies	Microfinance Institutions	Mixed financing Companies	SMEs Financing Companies	Total non-banking financial institutions
Number of companies	15	14	12	2	43
Size of loans Portfolio (JD million)	408	198	199	17	822
Market share (%)	49.7	24.1	24.2	2.1	100
Paid in capital (JD million)	127	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
Services provided	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, mortgages, 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[8]

The microfinance sector started its business in Jordan in 1994, and expanded rapidly in the last few years. Microfinance loans achieved a steady growth rate during the period (2013-2015) at 21%. These loans grew by 15% in 2016, and 10% by the end of 2017. (Figure 3-45).

Total loans portfolio of microfinance companies reached to JD 227 million as of end 2017, compared to JD 206 million at the end of 2016. The number of borrowers increased by 7% to reach 417,302 borrowers at the end of 2017 compared to 390,193 at the end of 2016. In addition, the average of loans volume increased from JD 508 at the end of 2016 to JD 549 at the end of 2017, an increase of 8%.

FIGURE (3-45): DEVELOPMENTS OF LOANS PORTFOLIO OF MICROFINANCE COMPANIES (2013-2017) (JD MILLION)



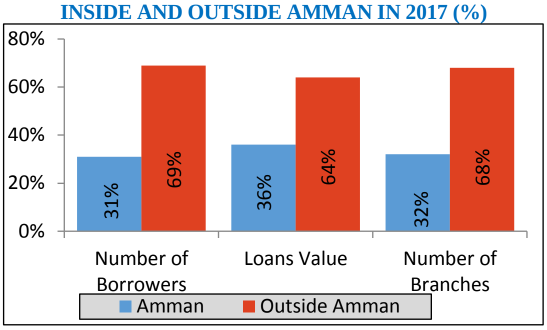
Source:Tanmeyah report, fourth quarter 2017.

Microfinance institutions steer their services towards women, to empower them and enhance their contribution to the economy and society. Their services are primarily focused on borrowers outside the capital Amman aiming to achieve economic and social development throughout the Kingdom as follows:

3-5-2-2 MICROFINANCE SECTOR ACTIVITIES OUTSIDE AMMAN

The microfinance sector activities are concentrated outside the capital Amman, as 69% of borrowers, 64% of loans values and 68% of microfinance institutions branches are located outside the capital Amman (figure 3-46). In 2017, the number of borrowers grew by 6% in Amman, while in governorates outside Amman, the growth rate ranged from 1% to 36%.

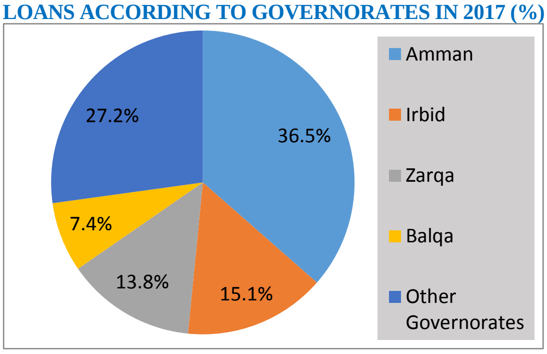
64FIGURE (3-46): MICROFINANCE SECTOR ACTIVITY INSIDE AND OUTSIDE AMMAN IN 2017 (%)



Source:Tanmeyah report, fourth quarter 2017.

As for the distribution of loans provided by the microfinance institutions to the governorates in 2017 (figure 3-47); the capital Amman gained 36.5% of loans, followed by Irbid 15.1%, Zarqa 13.8%, and Balqa 7.4%, while the remaining governorates received 27.2% of total loans.

FIGURE (3-47): DISTRIBUTION OF MICROFINANCE LOANS ACCORDING TO GOVERNORATES IN 2017 (%)



Source:Tanmeyah report, fourth quarter 2017.

Major characteristics of microfinance companies in Jordan are discussed as follows[9]:

- Microfinance institutions in Jordan totaled (14), of which (8) institutions are members of Tanmeyah Jordan Microfinance Network, one institution is a subsidiary to a bank, and one institution is affiliated to UNRWA.
- Total paid-up capital of microfinance institutions approximated to JD 20.45 million.
- These institutions provide productive loans to micro and small companies, in addition to individual loans which include: property maintenance loans, durable goods loans, student

[8] Reference: "Tanmeyah" report, fourth quarter 2017.

[9] According to the market study conducted by Ernest & Young company which is outsourced by the CBJ.

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 enable small enterprises to conduct feasibility studies of projects using financial forecasting and performance analysis.
- The size of a loan provided by microfinance institutions ranges from JD 300 up to JD 50,000.
- The services offered by the microfinance sector cover all governorates in the Kingdom, including remote areas.
- These companies charge rates ranging from 10%-18%.
- 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 Tanmeyah network can inquire about the credit applicants through the network. In addition, two microfinance companies are subscribed to Credit Bureau (CRIF).

3-5-2-3 LEASING COMPANIES[10]

Total assets of leasing companies which are subsidiaries to banks in Jordan totaled JD 499.7 million at the end of 2017 compared to JD 401.6 million at the end of 2016; a growth of 24.4%. Further, shareholders' equity increased from JD 227.8 million at the end of 2016 to JD 251.8 million at the end of 2017. As for the financial results of these companies, the net profit after taxes increased from JD 17.3 million at the end of 2016 to JD 17.6 million at the end of 2017. Despite the increase in profits as an absolute figure, the ROE decreased slightly from 8% in 2016 to reach 7.3% in 2017. The ROA also dropped from 4.8% in 2016 to 3.9% in 2017 due to the growth of shareholders' equity and assets at rates greater than the growth of profits. (Table 3-3).

TABLE (3-3): LEASING COMPANIES FINANCIAL RESULTS (2013- 2017) (JD MILLION)

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

Source: Preliminary annual balance sheets of leasing companies (subsidiaries of banks), and the CBJ's Calculations.

It is worth mentioning that the number of leasing companies, according to the market study conducted by Ernest & young totaled 15 companies, including 9 subsidiaries of banks which accounted for the vast majority of financial leasing activity in the Kingdom.

The main features of leasing companies[11] are displayed below:

- The total credit portfolio of these companies is approximately JD 408 million.
- These companies are primarily providing financial leasing to the real estate sector (more than 70% of the financial leasing portfolio), which encouraged them to diversify the financing provided to include medical, industrial and machinery equipment. However, financial leasing provided to individuals is granted mainly for housing loans and auto loans.
- Leasing companies offer their products at a floating interest rate ranging from 9.5%-13% with lower rates for housing loans and auto loans.
- 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.
- These companies finance their business primarily through borrowing from banks and shareholders' equity.

[10] The data include 8 leasing companies which are subsidiaries of banks and run most of financial leasing activity in Jordan. However, the financial leasing transactions funded by Islamic banks are not included in the calculation.

[11] According to the market study conducted by Ernest & Young company which is outsourced by the CBJ.

3-5-2-4 MIXED FINANCING COMPANIES

Mixed financing companies provide services to individuals and MSMEs. Following are the main features of these companies[12]:

- Total credit portfolio of these companies approached JD 200 million.
- These 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.
- These companies offer financing services only without any consultation services included.
- With regard to the financing provided to individuals, these companies provide financing to any person owns a bank account, and offer the highest financing amounts for housing loans and auto loans.
- The extended loans for MSMEs ranges between JD 5,000- JD 250,000, and may reach up to JD 1 million for certain customers.
- Generally, the collateral for financing provided by these companies are cheques or bills or both. For higher amounts; a property or car are 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 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 that 63% 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[13]:

- 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 EXCHANGE SECTOR

The licensed exchange companies in the Kingdom totaled 140 companies operating through headquarters in addition to 141 branches located all over governorates in Jordan, totaling 281 exchange points (Table 3-4).

TABLE (3-4): EXCHANGE COMPANIES AND BRANCHES

Governorate	Companies	Branches	Total
Capital Amman	86	92	178
Zarqa	13	11	24
Irbid	10	13	23
Aqaba	7	9	16
Other Governorates	24	16	40
Total	140	141	281

In light of the exchange sector developments and the evident growth in the last two decades which made it one of the most significant and vital sectors in the Kingdom; the Currency Exchange Law No. 44 for the year 2015 was enacted on 18/10/2015 to replace the old law No. 26 of the year 1992, in consistent with economic conditions and developments.

The new law represents the legislative framework that regulates the exchange activity in

[12] According to the market study conducted by Ernest & Young company which is outsourced by the CBJ.

[13] According to the market study conducted by Ernest & Young company which is outsourced by the CBJ.

the Kingdom through determining the terms and requirements of licensing, merging, liquidating, and regulating exchange companies. In addition, it addresses the records and documents that must be retained by companies, as well as validating the role of the chartered accountant in auditing the exchange companies' business through expanding the scope of the auditor's functions in compliance with best practices. The law also contributed to set the legal basis for informing companies with any decisions or instructions issued by the CBJ, and expanded the jurisdictions of the CBJ via imposing instructions on the ratios and safe limits of the exchange companies' financial positions, and the size of non-Jordanian labor force. The law lays down the legal basis for the formulation of a specified committee dedicated to deal with complaints related to services provided by exchange companies submitted to the CBJ.

The CBJ conducts onsite and offsite supervision on the exchange sector. The offsite supervision involves mainly examining and analyzing the periodic statistical data and audited financial statements of the exchange companies and set appropriate recommendations thereon. Whereas the onsite supervision which is carried out via on-site inspection teams verifies the compliance of the exchange companies with all effective laws and regulations, in addition to the role of external auditors of the exchange companies as stipulated in the provisions of the law (Table 3-5).

TABLE (3-5): LEADING INDICATORS OF THE EXCHANGE SECTOR IN 2017 (JD MILLION)

Indicator	JD Million
Total Business size	149
Total Capital	92
Total Financial guarantees offered	30.1
Total Purchases of foreign currency	7,547
Total Sales of foreign currency	7,793
Return on capital (%)	4.02
Return on assets (%)	2.17

In accordance with the Exchange Law, the instructions of holding foreign currency accounts with foreign banks by licensed exchange companies were enacted on 29/1/2017. In addition, regulations of Anti money laundering and counter terrorism financing for exchange companies were also issued on 17/1/2018.

3-5-4 SOCIAL SECURITY CORPORATION[14] (SSC)

The social security corporation (SSC) plays a significant role in the society as the social security umbrella includes 48,228 active firms, of which 60.6% are based inside the Capital Amman (98.7% of total active firms subscribed to the SSC are private sector firms) as indicated in the SSC annual report of 2016.

In addition to its fundamental role in society, the SSC contributes significantly in achieving financial stability through its vast investments portfolio in financial and non-financial assets, as well as lending the government through treasury bills and bonds. The SSC is characterized by the following features:

- The SSC holds an incredible investment capacity with a long term investment horizon, as it invests to finance the retirement compensations of individuals at various ages, which enables the SSC to undertake investments at different maturities, and also helps to diversify the risk portfolio of various maturities. This policy is particularly vital during financial crises when market suffers shortages of liquidity. In this regard, the SSC's investment accounted for 32.5% of GDP at the end of 2017 compared to 29.4% of GDP as of end 2016.
- The SSC generally invests using self-financing, as the source of funds are the subscribers' deductions not borrowings or deposits (such as banks). Therefore, SSC is not prone to high leverage ratio or risks of maturity mismatch of sources and uses of funds. These two factors led to failures among several international banks during the last global financial crisis. Therefore, the SCC cannot be a possible source of systemic risk in the financial system.

[14] Despite that SSC is not a non-banking financial institution; financial stability reports in most countries include them within non-banking financial institutions, given their fundamental role in achieving financial stability through their investments in financial and non-financial assets.

- The deductions of employees and employers are retained for a long period of time and cannot be withdrawn, unlike deposits at banks; which implies that the funds are protected against unexpected withdrawals.

With regard to the importance of the SSC in stimulating investment and in order to boost its funds, the Social Security Investment Fund (SSIF) was founded and began its work at the beginning of 2003 to tackle the investments of the SSC's funds aiming at realizing significant and constant returns, while maintaining the real value of its assets as well as ensuring sufficient liquidity to meet the obligations of the SSC. The SSIF's assets increased by JD 913.7 million or 11% to reach around JD 9,239.1 million at the end of 2017, compared to about JD 8,325.3 million at the end of 2016. In addition, the SSIF's net income increased by JD 44.6 million, or 14.2% to total JD 359.7 million at the end of 2017 compared to around JD 315.1 million at the end of 2016. The SSIF investment portfolios include seven main portfolios (Table 3-6).

TABLE (3-6): DISTRIBUTION OF SSIF PORTFOLIOS (2016-2017) (JD MILLION)

Investment Portfolios	2016	2017
Money Market Instruments	854.9	962.8
Bonds portfolio	3,957.3	4,680.7
Loans portfolio	168	229.6
Equity portfolio	2,131.1	2,072.4
Real Estate investments portfolio	581.1	581.1
Tourism investments portfolio	250.3	250.3
Other	382.7	462.2
Total	8,325.3	9,239.1

Source: SSIF Official website.

The SSIF's is engaged in several economic activities, as it is the second largest buyer (banks are the first largest buyer) of treasury bills and bonds, and government-guaranteed bonds which are allocated among money market portfolio (mature in less than one year), and bonds portfolio (with a maturity of more than one year). Moreover, the SSIF loans portfolio consists of medium and long term direct loans and syndicated loans, whereas the equity portfolio includes public listed companies' stocks traded in Amman Stock Exchange and strategic shares of private equity companies, as applicable by the SSIF's investment policy. The real estate portfolio includes lands, real estate projects, or real estate development. In addition, the tourism investments portfolio constitutes of all tourism firms, with this the SSIF aims to diversify the investment portfolios and mitigate risks, abiding by constraints for investment.

It is worth mentioning that the SSC is a strategic shareholder of the capital of several banks in Jordan. The total contribution of the SSC in banks' capital approached JD 277.5 million as end of February 2018, accounting for 8.2% of total Jordanian banks' capital (Table 3-7).

TABLE (3-7): DISTRIBUTION OF SSC CONTRIBUTION IN JORDANIAN BANKS' CAPITALS (FEBRUARY 2018)

Bank	Value (JD Million)	Share (%)
Jordan Kuwait Bank	21.04	%21.04
Jordan Commercial Bank	23.81	%19.84
Arab Bank PLC.	102.53	%16
Housing Bank for Trade & Finance	48.48	%15.39
Jordan Ahli Bank PLC	18.38	%10
Capital Bank of Jordan	18.54	%9.27
Safwa Bank	5.97	%5.97
Cairo Amman Bank	12.88	%7.15
Bank al Etihad	8.47	%5.29
Jordan Islamic Bank	9	%5
Arab Jordan Investment Bank	6.12	%4.08
ABC Bank	2.26	%2.05
Total	277.48	%8.2

Source: Securities Depository Center.

3-5-5 AMMAN STOCK EXCHANGE (ASE)

The ASE indicators showed a mix performance in 2017 compared to the previous year. During 2017, the trading volume increased by 25.6%, whereas free float share price index declined by 2%. Meanwhile, market capitalization decreased by JD 376.8 million, or 2.2%, to reach JD 17 billion which is equivalent to 61.8% of GDP. The net investment by non-Jordanians recorded a net outflow of JD 334.3 million in 2017. Following is a summary of the ASE's key performance indicators in 2017:

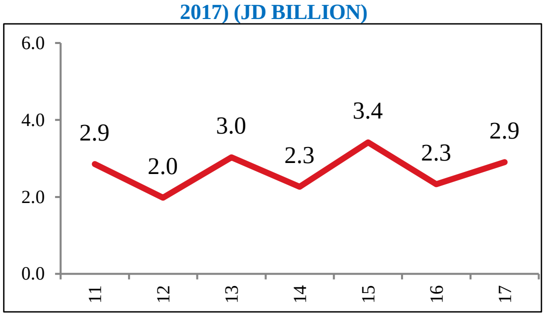
The trading volume in ASE surged by JD 596.7 million to reach JD 2,926.2 million in 2017 (figure 3-48). This increase is the outcome of the following factors:

1-The increase of financial sector trading volume by JD 693.35 million.

2-The decrease of the services sector trading volume by JD 48.6 million.

3-The decrease of the industrial sector trading volume by JD 47.97 million.

FIGURE (3-48): TRADING VOLUME AT ASE (2011-2017) (JD BILLION)



Source: ASE

The number of traded shares decreased by 120 million shares to reach 1,716.7 million shares, versus 1,836.7 million shares traded in 2016. Moreover, the number of executed contracts decreased to 717.5 thousand contracts at the end of 2017 from around 786.2 thousand contracts at the end of 2016. Regarding, the distribution of traded shares by sector, the financial sector had the largest share that composed about 64.8% of the trading volume in 2017, followed by the industrial sector which accounted for 22.4%, and the services sector forming 12.8% (Table 3-8).

TABLE (3-8): RELATIVE IMPORTANCE OF TRADING VOLUME BY SECTOR (2012-2017) (%)

Sector	2012	2013	2014	2015	2016	2017
Industrial	19.5	13.1	16.7	10.1	30.2	22.4
Services	20.4	13.5	16.5	21.2	18.2	12.8
Financial	60.1	73.4	66.8	68.7	51.6	64.8

As for non- Jordanian investors transactions in the ASE, it recorded a net outflow of JD 334.3 million in 2017, compared to a net inflow of JD 237.1 million in 2016. Purchases by non-Jordanian investors reached around JD 994.9 million in 2017, while their sales totaled JD 1,329.2 million (Table 3-9).

TABLE (3-9): NON-JORDANIAN BUYING AND SELLING AT ASE (2013-2017) (JD MILLION)

	2013	2014	2015	2016	2017
Total Purchases	939.5	362.7	981.7	666.5	994.9
Arabs	818.5	262.1	894.3	520.3	638.7
Foreigners	121.0	100.6	87.4	146.2	356.3
Total Selling	792.6	384.8	971.1	429.4	1329.2
Arabs	693.2	247.8	873.5	304.1	1177.6
Foreigners	99.4	137	97.6	125.3	151.6
Net Investment	146.9	-22.2	10.6	237.1	-334.3
Arabs	125.3	14.3	20.7	216.2	-538.9
Foreigners	21.6	-36.5	-10.1	20.9	204.7

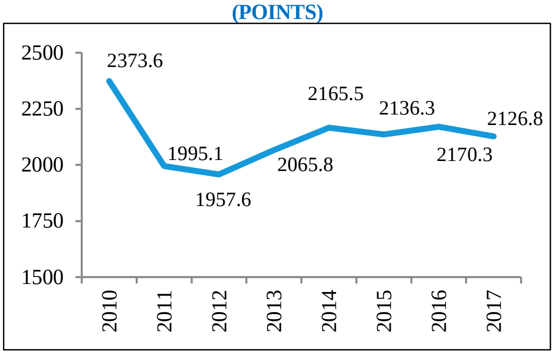
3-5-5-1 GENERAL SHARE PRICE INDEX WEIGHTED BY THE MARKET VALUE OF FREE FLOAT SHARES

The free float price index reached approximately 2,126.8 points at the end of 2017, declining by 43.5 points from its level at the end of the previous year. This decrease was an outcome of the decline in the services sector index by 155 points (9.7%) and the financial sector index by 51.7 points (1.8%) and the increase of the industrial sector index by 136.5 points (6.5%) compared to their levels in 2016.

3-5-5-2 SHARE PRICE INDEX WEIGHTED BY MARKET CAPITALIZATION

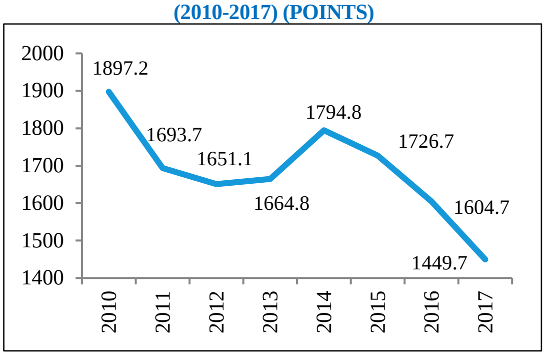
The weighted price index declined in 2017 by 60.3 points from its level at the end of 2016 to reach 4,009.4 points, compared to declining by 160.2 points in 2016. This decline resulted from the decrease of the indices of banks, financial companies, services companies, manufacturing and mining companies as well as insurance companies.

FIGURE (3-49): FREE FLOAT PRICE INDEX (CLOSING PRICE OF DECEMBER 1999=1000) (2010-2017) (POINTS)



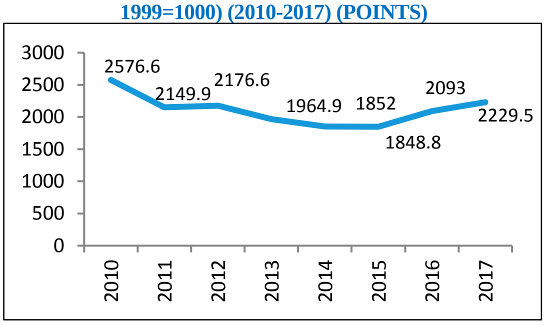
Source: ASE

FIGURE (3-50): FREE FLOAT PRICE INDEX OF SERVICES SECTOR (CLOSING PRICE DEC. 1999=1000) (2010-2017) (POINTS)



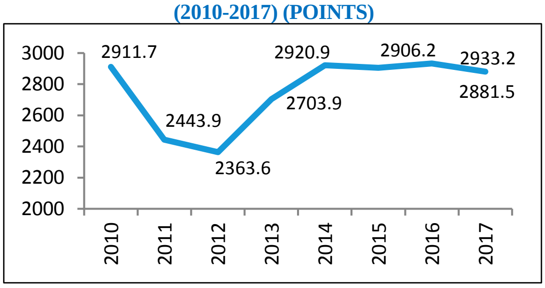
Source: ASE

FIGURE (3-51): FREE FLOAT PRICE INDEX OF INDUSTRIAL SECTOR (CLOSING PRICE DEC. 1999=1000) (2010-2017) (POINTS)



Source: ASE

FIGURE (3-52): FREE FLOAT PRICE INDEX OF FINANCIAL SECTOR (CLOSING PRICE DEC. 1999=1000) (2010-2017) (POINTS)



Source: ASE

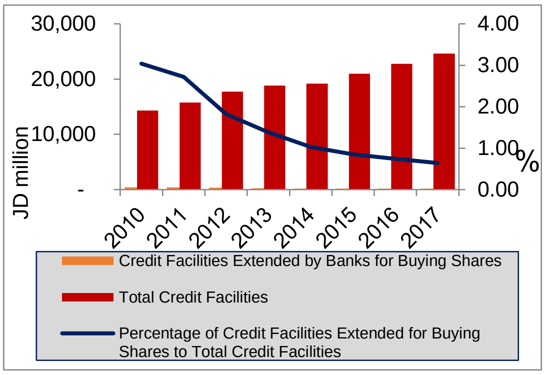
3-5-5-3 BANKS' EXPOSURE TO STOCK MARKETS RISKS

Capital markets are fundamental to stimulate the economy through attracting foreign investments, encouraging national savings, and providing sources of financing for economic projects, which ultimately serve the national economy. Given the significant importance of capital markets; risks facing these markets are gaining an increasing attention especially after the global financial crisis of 2007, through monitoring stock prices bubbles and assessing risks in these markets and the exposure of banks to these risks. Regarding the exposure of banks to stock market risks in Jordan, it could evolve from credit facilities extended by banks to finance buying shares or investments of banks in shares. Following is an analysis of the size of banks' exposure to these risks.

3-5-5-4 CREDIT FACILITIES EXTENDED BY BANKS FOR BUYING SHARES

Credit facilities extended to finance the purchase of shares constitutes a very small percentage of total credit facilities extended by licensed banks. They reached to JD 158.1 million at the end of 2017, representing 0.64% of total credit facilities, compared to JD 168.6 million at the end of 2016 with a decline of 6.2%. However, the facilities extended to finance buying shares witnessed slowdown during the period (2010-2017). (Figure 3-53)

FIGURE (3-53): CREDIT FACILITIES EXTENDED BY BANKS FOR BUYING SHARES & TOTAL CREDIT FACILITIES (2010-2017) (JD MILLION)

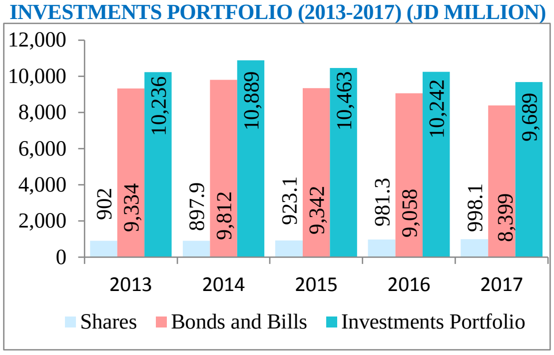


Source: ASE

3-5-5-5 INVESTMENTS OF BANKS IN SHARES

The securities portfolio of banks in Jordan reached around JD 9,689 million at the end of 2017, compared to JD 10,242 million at the end of 2016, decreasing by 5.4%. Banks' investments in shares accounted for 10.3% of total investments in securities at the end of 2017, which is much lower than investments in bonds (mostly government bonds) that capture the largest share of banks' investments in securities. Banks' investments in shares are low due to the slowdown in ASE, as well as the restrictions imposed by the Banking Law and the CBJ's regulations regarding these investments (Figure 3-54).

FIGURE (3-54): DISTRIBUTION OF BANKS' INVESTMENTS PORTFOLIO (2013-2017) (JD MILLION)



Source: ASE

CHAPTER FOUR: NON-FINANCIAL SECTOR DEVELOPMENTS AND RISKS

4-1 HOUSEHOLD SECTOR

4-1-1 EXPOSURE OF BANKS AND FINANCIAL INSTITUTIONS TO THE HOUSEHOLD SECTOR

Owing to the importance of the household debt to banks and the systemic risks it may cause and in the context of tracking household debt to income ratio, as this ratio for 2017 was calculated following the same methodology used in the previous financial stability reports, mainly relying on household indebtedness to the banking system since it is considered to be the predominant component of the financial system in Jordan, in addition to the gathered information regarding household indebtedness in each of the micro-financing sector, public shareholding companies which extend loans and financial leasing companies.

4-1-2 HOUSEHOLD INDEBTEDNESS TO BANKS AND NON-BANK FINANCIAL INSTITUTIONS

Table 4-1 shows the development of household debt with banks and non-bank financial institutions during the period (2014-2017). It is noticeable from the table that household debt went up from JD 9.6 billion at the end of 2016 to JD 10.4 billion at the end of 2017, increasing by 8.9 % compared to a decline of 1.7% in 2016.

TABLE (4-1): HOUSEHOLD DEBT AT BANKS AND NON-BANK FINANCIAL INSTITUTIONS (2014-2017) (JD MILLION)

Indebtedness	2014	2015	2016	2017
To the Banking System (JD Million)	8,066.3	8,967.2	8,737.2	*9,452.5
- Annual Growth Rate (%)	15.9	11.2	-2.6	8.2
To Non-Banking Financial Institutions (JD Million)	721.7	781.3	847.3	982.9
- Annual Growth Rate (%)	11.9	8.3	8.4	16.0
Total (JD Million)	8,788.0	9,748.5	9,584.5	10,435.4
- Annual Growth Rate (%)	15.6	10.9	-1.7	8.9

*: Source: CBJ.

This increase in 2017, is caused by the 16% rise in household debt to non-bank financial institutions, while the growth rate of household debt to the banking system reached 8.2% for the same period, which is almost equivalent to the growth rate of facilities in general. As mentioned in the Financial Stability Report of 2016, the decline in household debt to banks in 2016 is not an actual decline but is resulted from some banks reclassification of their data, continuing to improve their data classification accuracy, especially after the CBJ's implementation of the aggregate electronic data system, which helped to improve the accuracy and comprehensiveness of banks data. In addition to the CBJ's request from banks in 2016 to provide it with more detailed data on household debt. In case of excluding that impact, household debt would have increased by 13% indicating that the year 2017 actually witnessed a growth in household debt at a lower rate than in 2016.

Household debt to non-bank financial institutions increased from JD 847.3 million at the end of 2016 to reach JD 983 million at the end of 2017, as it rose by 16% in 2017 compared to a growth rate of 8.4% in 2016. The table (4-2) clarifies the details of this indebtedness.

TABLE (4-2): HOUSEHOLD DEBT AT NON-BANK FINANCIAL INSTITUTIONS (2014-2017) (JD MILLION)

Company	2014	2015	2016	2017
Micro-finance companies*	149.2	180.2	206.3	227
Companies Listed in Amman Stock Exchange**	111.8	117.4	185.7	221.4
Financial Leasing Companies (Subsidiaries of Banks)	460.7	483.7	455.2	534.5
Total	721.7	781.3	847.3	983

*: Source: Annual Report of the Jordanian Micro-Finance Network (Tanmeyah).
**Amman Stock Exchange.

4-1-3 HOUSEHOLD DEBT TO INCOME RATIO

Table (4-3) shows the details of household debt to income ratio in Jordan during the years (2013- 2017). It is evident that there is a continuous increase in that ratio during the period (2013- 2015); as it rose from 65.5% at the end of 2013 to 69.4% at the end of 2015, which is attributed to the increase in household debt (liabilities) exceeding the increase in their income, which is a normal result due to the difficult conditions experienced by the region and their negative repercussions on Jordan. In 2016, this ratio declined to around 65%. However, this decline, as mentioned before, is a result of some banks reclassification of their data and the more detailed data collected on household debt by the CBJ. In case of excluding this impact, the household debt to income ratio in 2016 would reach approximately 69.3% which is almost equivalent to the ratio in 2015. At the end of 2017, the ratio stood at 67.4% meaning that it actually dropped from its level in 2016, which is a positive indicator proving the decrease in household debt risks (Figure 4-1).

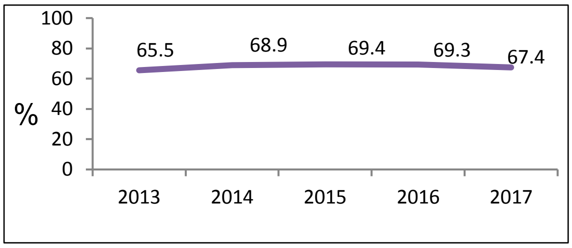
TABLE (4-3): HOUSEHOLD DEBT TO INCOME RATIO (2013-2017)

Year	Household Debt (JD Million)	Household Annual Income* (JD Million)	Household Debt to their 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

* Based on the Household Expenditure and Income Survey for the years 2010 and 2013, which was carried out by the Department of Statistics. Income for the remaining years was estimated based on a growth rate of 10% per annum for the years 2012-2015 and the growth rate was reduced to 5% starting from 2016.

** When taking into consideration the impact of some banks reclassification of their data and the impact of collecting more detailed data on individuals' indebtedness by the CBJ, the ratio would reach 65%.

FIGURE (4-1): HOUSEHOLD DEBT TO INCOME RATIO (2013-2017) (%)



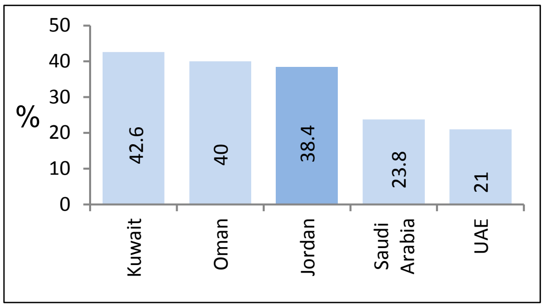
Source: CBJ

To clarify, the rates above represent the total balance of household debt as a percent of the annual disposable income and not the annual debt burden of an individual as a percent of income, which is measured by the amount of installments and annual interests paid by the borrower, and which accounts for- on average- approximately 40% of the total annual income of the borrower.

4-1-4 HOUSEHOLD DEBT IN SOME ARAB COUNTRIES

Concerning the household debt in some Arab countries, the information in this regard is limited. However, it is possible to measure household debt by using the ratio of facilities extended to households to the total facilities extended by the banks. In Jordan, this ratio stood at 38.4% in 2017, and when comparing this ratio with the ratio of some other Arab countries, it is noticeable that Jordan occupies a middle rank among the compared countries. As this ratio in Jordan is higher than in Saudi Arabia and United Arab Emirates but lower than in Kuwait and Oman (Figure 4-2).

FIGURE (4-2): RATIO OF FACILITIES EXTENDED TO HOUSEHOLDS TO THE TOTAL FACILITIES EXTENDED BY THE BANKS IN JORDAN AND SELECTED ARAB COUNTRIES (2017) (%)



4-1-5 CONCLUSION

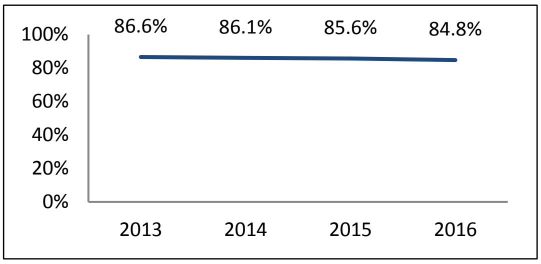
By following the development of the household debt to income ratio during the last five years, it is noticeable that this ratio was continuously increasing until the end of 2015, then it remained stable in 2016 before slightly going down in 2017. Although this fall is a positive indicator of the decline in household debt risks on the households themselves and on the banking system, the rates are still comparatively high, which indicates that the banks shall continue being attentive to the risk of lending to this sector and examining its expansion taking into consideration the development of these risks, especially that there are about (9) banks whose Debt Burden Ratio (DBR) ceiling specified in their credit policies exceeds 50% of the regular monthly income of the client, despite that none of these banks have an actual average debt burden ratio exceeding 50%.

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[15]. The non-banking financial companies sector consists of insurance companies, securities companies, micro-finance companies, financial leasing companies and other companies providing various financial services. Whereas, the non-financial companies listed at Amman Stock Exchange (ASE) sector, includes the industry, services and real estate sectors, which are subject to the supervision of the Ministry of Industry, Trade and Supply. In 2016, the assets volume of the non-financial companies amounted JD 10,692 million, accounting for 84.8% of the total assets of the corporate sector, compared to JD 10,467 million at the end of 2015 or 85.6% of the total assets of the corporate sector (Figure 4-3).

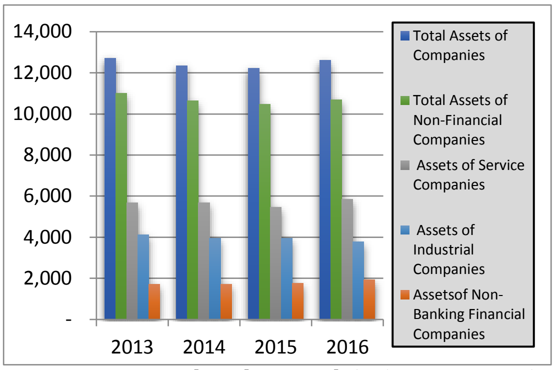
75Figure (4-3): Ratio of Non-Financial Companies' Assets to Total Companies' Assets for The Period (2013-2016)



Source: Amman Stock Exchange Website (www.ase.com.jo).

Assets of the public shareholding non-banking financial companies reached approximately JD 1,923.8 million, representing 15.3% of the total assets of the corporate sector at the end of 2016. Assets of service companies amounted to JD 5,837.9 million approximately forming 54.6% of the total assets of the non-financial companies' sector at the end of 2016. Assets of the industrial companies amounted to about JD 3,783.6 million or 35.4% of the total amount of assets of non-financial companies at the end of 2016. Meanwhile, real estate companies' assets stood at about JD 1,070.1 million accounting for 10% of the total assets of the non-financial companies' sector at the end of the same year (Figure 4-4).

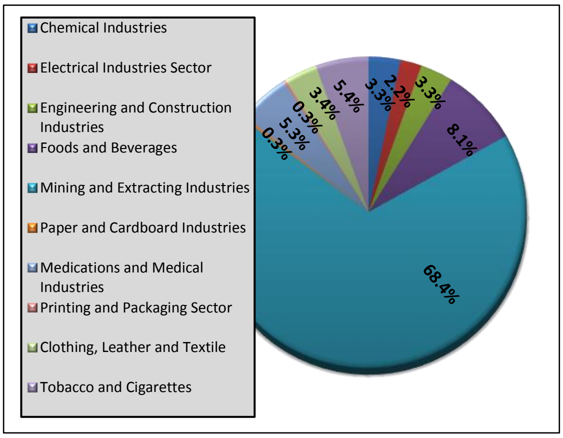
Figure (4-4): Total Assets of Companies Listed at Amman Stock Exchange by Sector (2016-2013) (JD Million)



Source: Amman Stock Exchange Website (www.ase.com.jo).

As for the sub-sectors of the non-financial companies, the assets of the extractive and mining industries accounted for 68.4% of the total assets of the industrial companies (Figure 4-5). In regard to service companies, energy and utilities sector's assets represented 42.5% of the total assets of the service companies (Figure 4-6).

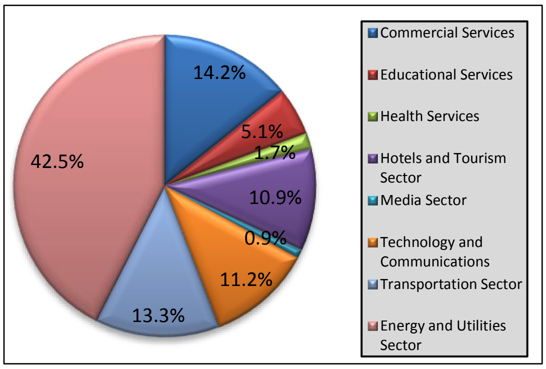
Figure (4-5): Percentage Distribution of Industrial Companies Sector Assets in 2016



Source: Amman Stock Exchange Website (www.ase.com.jo).

[15] Based on non-financial companies listed at Amman Stock Exchange (ASE) data for 2016, due to the unavailability of data on non-financial companies not listed at ASE (noting that some data for previous years were changed by the source)

FIGURE (4-6): PERCENTAGE DISTRIBUTION OF SERVICE COMPANIES SECTOR ASSETS IN 2016



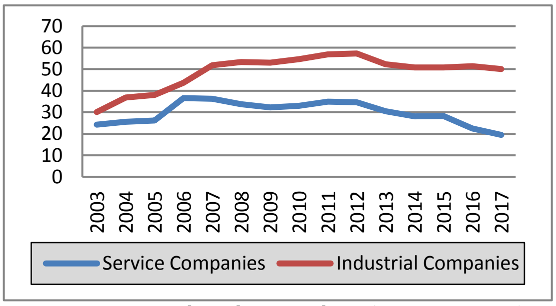
Source: Amman Stock Exchange Website (www.ase.com.jo).

The developments of the non-financial companies sector (industrial, service and real estate), which consists of 169 companies listed at the end of 2016 according to Amman Stock Exchange website, will be analyzed below. As for the financial companies' sector, its evolution and risks are discussed in details in chapter 3.

4-2-2 STRUCTURE OF NON-FINANCIAL COMPANIES' OWNERSHIP

The ratio of non-Jordanian ownership (Arabs and foreigners) in the capital of non-financial industrial and service companies reached 50.5% and 19.7%, respectively, at the end of 2017, compared to 51.4% and 22.4% respectively at the end of 2016. Ownership of foreign investors' in these companies' capital reflects the investors' confidence in the Jordanian economy in general, noting that most of these properties are stable contributions (Figure 4-7).

FIGURE (4-7): NON-JORDANIAN OWNERSHIP (ARABS AND FOREIGNERS) IN THE CAPITAL OF NON-FINANCIAL COMPANIES FOR THE PERIOD (2003-2017) (%)



Source: Amman Stock Exchange Website (www.ase.com.jo).

4-2-3 ASSETS OF NON-FINANCIAL COMPANIES

Assets of non-financial companies listed at ASE at the end of 2016 amounted to about JD 10,692 million compared to JD 10,467 million at the end of 2015, expanding by 2.2%, due to the rise in the service companies' assets by 6.9%, as they reached JD 5,837.9 million at the end of 2016 compared to JD 5,462.3 million at the end of 2015. Furthermore, the real estate companies' assets rose by 1.1%, standing at JD 1,070.1 million at the end of 2016 up from JD 1,058.4 million at the end of 2015. As for the industrial companies sector, it witnessed a drop in the assets by 4.1% down from JD 3,946.1 million in 2015 to stand at JD 3,783.6 million at the end of 2016 (Figure 4-8).

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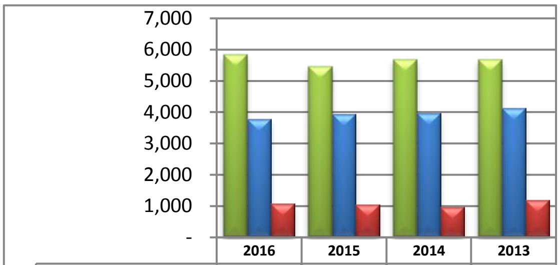
FIGURE (4-8): NON-FINANCIAL COMPANIES' ASSETS FOR THE PERIOD (2013-2016) (JD MILLION

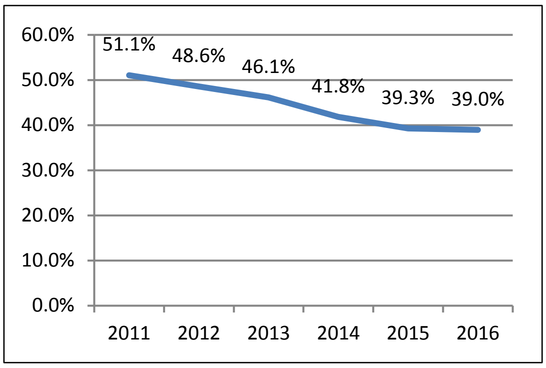


	2016	2015	2014	2013
Service Companies' Assets	5,838	5,462	5,691	5,689
Industrial Companies' Assets	3,784	3,946	3,964	4,134
Real Estate Companies' Assets	1,070	1,058	976	1,184

Source: Amman Stock Exchange Website (www.ase.com.jo).

Concerning the ratio of the non-financial companies' assets to Gross Domestic Product (GDP), it remained on a downward trend during the period (2011-2016). The ratio reached 39% at the end of 2016 compared to 39.3% at the end of 2015 and 51.1% at the end of 2011. This decline is a result of a relatively small rise in the non-financial companies' assets during the period (2011-2016) in comparison with the GDP growth (Figure 4-9).

FIGURE (4-9): RATIO OF ASSETS OF THE NON-FINANCIAL COMPANIES' SECTOR TO THE GDP FOR THE PERIOD (2011-2016)

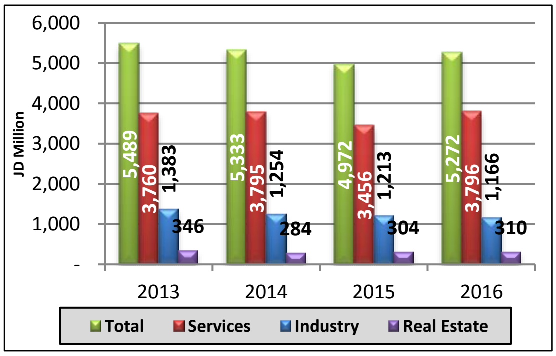


Source: Amman Stock Exchange Website (www.ase.com.jo), and staff calculations.

4-2-4 NON- FINANCIAL COMPANIES' LIABILITIES

At the end of 2016, non-financial companies' liabilities amounted to JD 5,272 million compared to JD 4,972 million at the end of 2015, showing an increase by 6%. Liabilities of service companies increased by 9.8% reaching about JD 3,795.8 million at the end of 2016 compared to an amount of JD 3,455.6 million at the end of 2015. In contrast liabilities of industrial companies declined by 3.9%, to stand at JD 1,165.6 million at the end of 2016 compared to JD 1,212.8 million at the end of 2015. As for the real estate companies, their liabilities rose by 2.2% to reach JD 310.4 million in 2016 in comparison with an amount of JD 303.8 million at the end of 2015 (Figure 4-10).

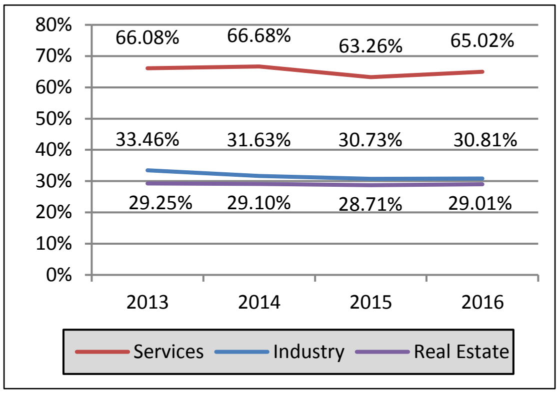
FIGURE (4-10): NON-FINANCIAL COMPANIES' LIABILITIES FOR THE PERIOD (2013-2016) (JD MILLION)



Source: Amman Stock Exchange Website (www.ase.com.jo).

Regarding the liabilities to assets ratio, there was a slight rise for all sectors from 28.71%, 30.73%, and 63.26% for the real estate, industry, and service companies sectors, respectively, at the end of 2015 to reach 29.01%, 30.81%, and 65.02% for the same sectors, respectively, in 2016 (Figure 4-11).

FIGURE (4-11): LIABILITIES TO ASSETS RATIO FOR THE NON-FINANCIAL COMPANIES DURING THE PERIOD (2013-2016) (%)

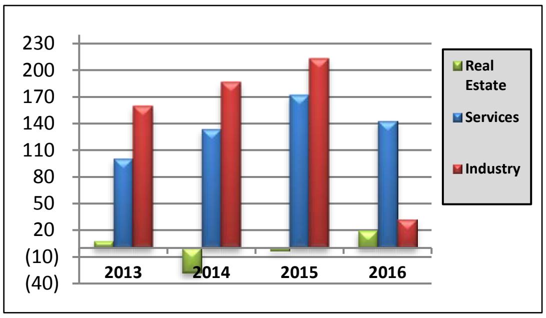


Source: Amman Stock Exchange Website (www.ase.com.jo).

4-2-5 PROFITABILITY OF NON-FINANCIAL COMPANIES

Net profit of non-financial companies decreased to JD 195 million at the end of 2016 compared to a net profit of JD 382 million at the end of 2015. This decrease was preceded by an upward trend during the years (2013-2015). This drop was driven by the sharp drop in net profit of the industrial companies from JD 213 million in 2015 to JD 33 million in 2016. The main reason for this steep decline in net profits of the industrial companies is the decrease in the profits of Jordanian Phosphate Mines Company from JD 34.6 million in 2015 to a loss amounted to JD 90.1 million in 2016 as well as the decrease of Potash Company's profits from JD 131.3 million in 2015 to around JD 67.4 million in 2016. Moreover, there was also a drop in net profits of service companies amounting to 143 million in 2016 preceded by an amount of JD 172 million in 2015. In contrast, the real estate companies marked a net profit amounting to about JD 20 million during the year 2016 after recording a loss in the amount of JD 2.8 million in 2015 (Figure 4-12).

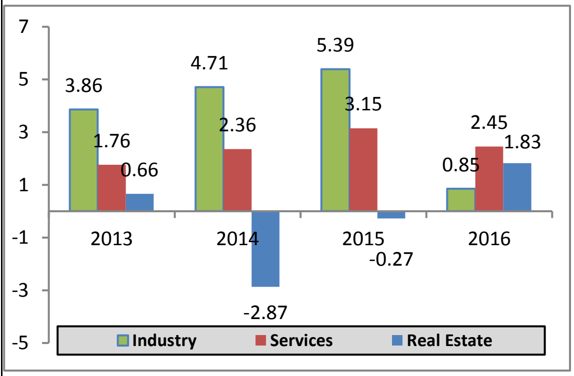
FIGURE (4-12): NON-FINANCIAL COMPANIES' NET PROFITS (2013-2016) (JD MILLION)



Source: Amman Stock Exchange Website (www.ase.com.jo).

The year of 2016 marked a drop in the return on assets (ROA) reaching 0.85% compared to 5.4% at the end of 2015. There was also a decline in the return on assets of the service companies, which went down from 3.15% in 2015 to 2.45% at the end of 2016. However, real estate companies marked a growth in the return on assets in 2016 reaching 1.83% after previously recorded -0.27% at the end of 2015 (Figure 4-13).

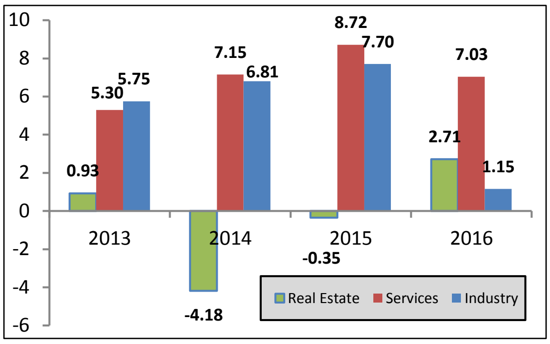
FIGURE (4-13): RETURN ON ASSETS RATIO OF NON-FINANCIAL COMPANIES FOR THE PERIOD (2013-2016) (%)



Source: Amman Stock Exchange Website (www.ase.com.jo).

Moreover, return on equity (ROE) for the industrial companies declined to 1.15% at the end of 2016 compared to 7.7% at the end of 2015. While service companies' return on equity also went down to about 7% at the end of 2016, compared to about 8.7% at the end of 2015, and real estate companies ROE increased from about -0.35% at the end of 2015 to reach 2.71% at the end of 2016 (Figure 4-14).

FIGURE (4-14): RETURN ON EQUITY RATIO OF NON-FINANCIAL COMPANIES FOR THE PERIOD



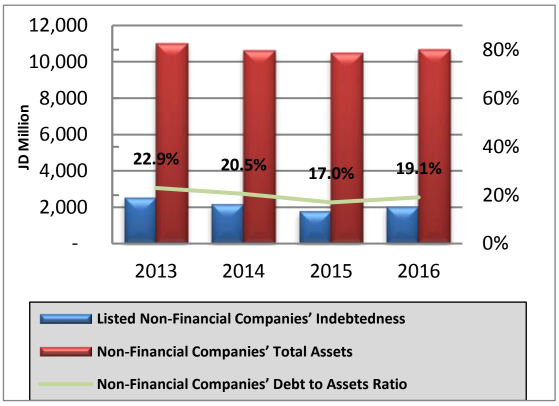
(2013-2016) (%)

Source: Amman Stock Exchange Website (www.ase.com.jo).

4-2-6 FINANCIAL LEVERAGE OF NON-FINANCIAL COMPANIES

Most of the non-financial companies listed at Amman Stock Exchange are still less dependent on borrowing. The ratio of debt to assets of non-financial companies stood at about 19.1% at the end of 2016, which is 12% higher than the 17% approximated in 2015 (Figure 4-15).

FIGURE (4-15): DEBT TO ASSETS RATIO FOR NON-FINANCIAL COMPANIES FOR THE PERIOD (2013-2016) (%)

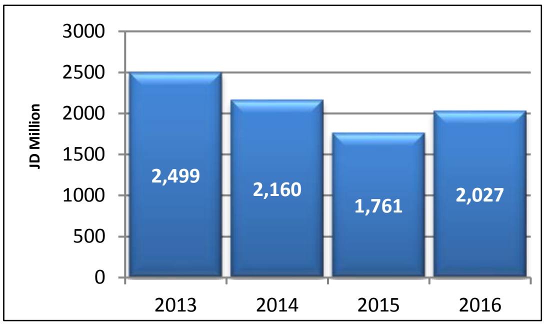


Source: Amman Stock Exchange Website (www.ase.com.jo).

4-2-7 NON-FINANCIAL COMPANIES' INDEBTEDNESS TO THE BANKING SECTOR

Facilities extended by banks to non-financial companies listed at ASE reached JD 2,027 million at the end of 2016 marking a 15.1% increase compared to JD 1,761 million at the end of 2015. The facilities extended to service companies amounted to JD 1,456.2 million in 2016 compared to JD 1,208.3 million in 2015 with an increase of 20.5%. As for the rise in the facilities extended to real estate companies listed at ASE, they reached about JD 95 million in 2016 compared to JD 93.3 million in 2015, witnessing an increase of 1.76%. Facilities extended to industrial companies also rose by 3.53%, amounting to JD 475.7 million in 2016, up from JD 459.6 million in 2015 (Figure 4-16).

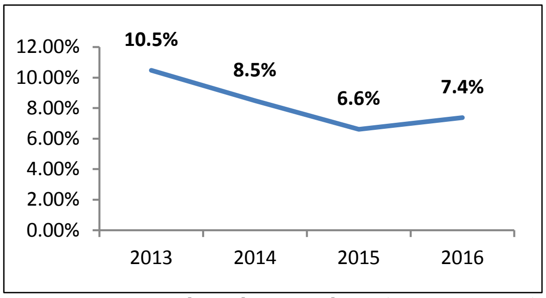
FIGURE (4-16): NON-FINANCIAL COMPANIES' INDEBTEDNESS TO THE BANKING SECTOR FOR THE PERIOD (2013-2016) (JD MILLION)



Source: Amman Stock Exchange Website (www.ase.com.jo)

In 2016, there was a slight increase in the indebtedness of non-financial companies listed at ASE to GDP ratio following a period of decline from 2013 to 2015. The ratio stood at 7.4 % in 2016 compared to 6.6% in 2015 (Figure 4-17).

FIGURE (4-17): INDEBTEDNESS OF NON-FINANCIAL COMPANIES' TO THE BANKING SECTOR TO THE GDP RATIO FOR THE PERIOD (2013-2016) (%)



Source: Amman Stock Exchange Website (www.ase.com.jo), and Staff Calculations.

4-2-8 STRESS TESTING FOR NON-FINANCIAL COMPANIES

Stress testing have been conducted on non-financial public shareholding companies in order to measure the wellbeing and soundness of the companies' sector and its ability to withstand shocks and thus assess the companies' ability to repay their indebtedness to the banks and the financial sector in general. These tests are conducted after building a stress testing model for the companies' sector by the Financial Stability Department in the CBJ.

This model depends on the Interest Coverage Ratio (ICR) for the borrowing companies, which is a common and important measure to assess the companies' ability to repay their indebtedness. It is defined as the ratio of earnings before interest and tax (EBIT) to interest expenses paid on loans. The ratio assesses the ability of borrowing companies to cover the interest expense of extended loans by current period revenues, which is considered to be safe when it exceeds 150% but if the ratio stands within the range of (100%-150%), it means that the debt is at risk, and is considered to be uncovered debt when it is less than 100%.

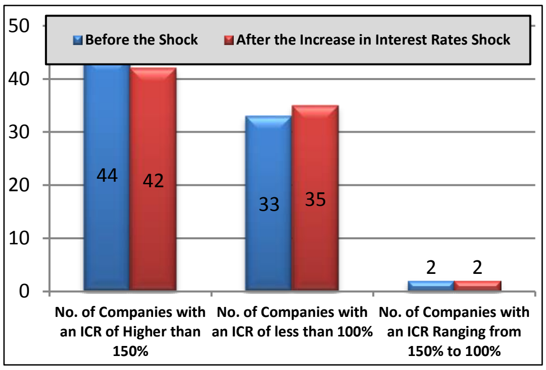
To carry out these tests, several shocks related to the increase in interest rates or the fall in companies' profits were assumed. The impact of each shock on the interest coverage ratio was measured and thus the companies' ability to repay their debt to banks was assessed based on the new interest coverage ratio assuming the shock has happened.

4-2-8-1 AN INCREASE IN INTEREST RATES SHOCK

The rise in the interest rate leads to an increase in interest expenses paid by borrowing companies assuming that their revenues remain the same, which will negatively affect the ability of companies to pay interest expenses, and thus the interest coverage ratio for the borrowing companies will fall by increasing their interest expenses. Assuming that the increase in interest rates on the loans extended to these companies surge by 200 basis points, the interest coverage ratio of these companies will decrease from 358% to 262%, staying above the minimum for a safe indebtedness which is 150%. This means that the effect of this shock on the companies will be relatively limited and will not significantly affect their ability to serve their indebtedness.

As on the individual level, there are two companies whose ratio will go down below 100% resulting in a reduction in the number of companies having safe debt from 44 to 42 companies, and increasing the number of companies with an interest coverage ratio below 100% from 33 to 35 companies, while two companies will have a ratio between 100-150% (Figure 4-18).

FIGURE (4-18): ICR FOR COMPANIES BEFORE AND AFTER THE INTEREST RATES SHOCK



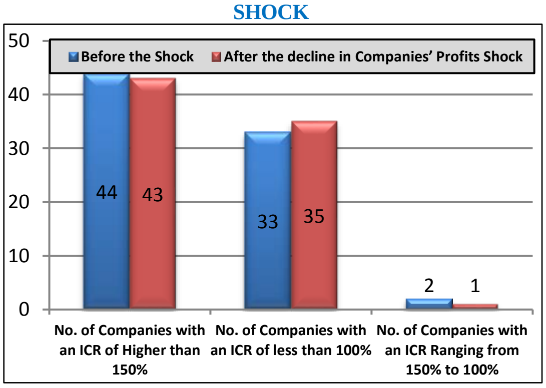
At the sectoral level, the average interest coverage ratio for industrial companies will fall from 392% to 279%, for service companies from 339% to 257%, and for the real estate companies from 161% to 126%. This implies that the real estate companies sector has the lowest interest coverage ratio before and after the shock.

4-2-8-2 The Decline in Profits of Borrowing Companies Shock

Assuming a decrease in the profits of borrowing companies by 25% due to the weak economic activity in the kingdom, this will lead to a decline in the interest coverage ratio for these companies from 360% to 217%. The effect of this shock is more considerable than the effect of the rise in interest rates shock though this ratio remains above the minimum to be considered safe, which is 150%, and by a comfortable margin.

At the individual level, two companies will have their ratio lower than 100% leading to a rise in the number of companies with an interest coverage ratio below 100% from 33 to 35 companies (Figure 4-19).

FIGURE (4-19): ICR FOR COMPANIES BEFORE AND AFTER THE DECLINE IN COMPANIES' PROFITS SHOCK



In regard to the sectoral level, the average interest rate coverage ratio for industrial companies will fall from 392% to 221% and for service companies from 339% to 229% and for real estate companies from 161% to 95%. This indicates that industrial and service companies are generally able to withstand these shocks, meanwhile the real estate companies will be affected by this shock because their interest coverage ratio was already relatively low (before the shock).

4-2-9 CONCLUSION

By analyzing the financial position of non-financial companies' sector, we can say that despite the difficult political and economic conditions in the region and their impacts on Jordan, the service companies and industrial companies' sectors maintained their financial stability during the period (2013-2015) due to the continued increase in their profits. However, it decreased in 2016 as a result of the decline in the profits of phosphate and potash companies. On the other hand, the real estate companies sector witnessed a considerable decline in the size of its business and profitability during the period (2013-2015). Nevertheless, it started improving again in 2016. After analyzing the results of stress testing for the non-financial companies' sector, it was found that about 95% of companies are able to withstand the two shocks of interest rates increase or these companies' profitability decline. The real estate companies sector, however, was the most affected by these shocks.

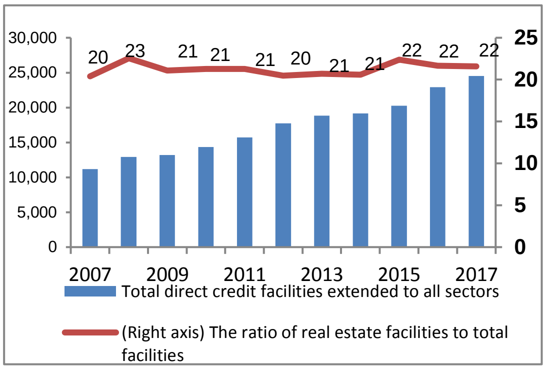
CHAPTER FIVE: THE EXPOSURE OF BANKS IN JORDAN TO REAL ESTATE MARKET RISKS AND THE REAL ESTATE PRICE INDEX

5-1 INTRODUCTION

Interest in the real estate sector risks and the financing provided for this sector increased after the global financial crisis, which began with the American real estate bubble in 2007 and its spillovers on most of the world's economies, including Jordan.

During the last two decades, the real estate market in Jordan witnessed successive spikes mainly driven by the political and economic developments in the region that caused an abnormal growth of the population in Jordan through the influx of large numbers of Arabs from neighboring countries, especially from Iraq and Syria. This chapter will focus on the real estate sector in Jordan and the exposure of banks operating in Jordan to the risks of this sector. Moreover, the development of real estate prices in the Kingdom will be analyzed through scrutinizing the Real Estate Price Index, which is an indicator developed in cooperation between the CBJ and the Department of Lands and Survey. Credit facilities extended to the real estate sector for residential and commercial purposes amounted to JD 5.29 billion at the end of 2017, accounting for 21.6% of the total facilities provided by banks compared to JD 4.96 billion at the end of 2016, with a growth rate of 6.5% for 2017 compared to 9.6% for 2016. It is noteworthy that the average annual growth rate during the years 2007-2017 reached 10.9% (Figure 5-1).

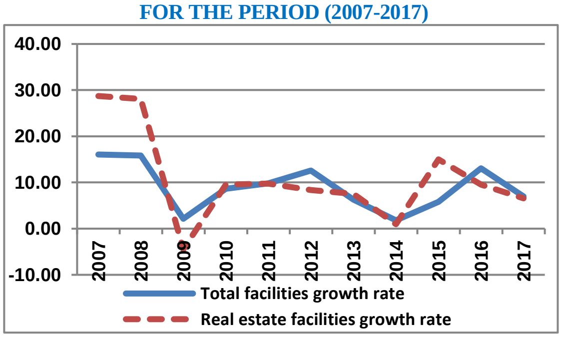
FIGURE (5-1): DIRECT CREDIT FACILITIES EXTENDED FOR THE REAL ESTATE SECTOR AND THEIR RATIO TO TOTAL DIRECT CREDIT FACILITIES EXTENDED DURING THE YEARS (2007-2017) (JD



MILLION)

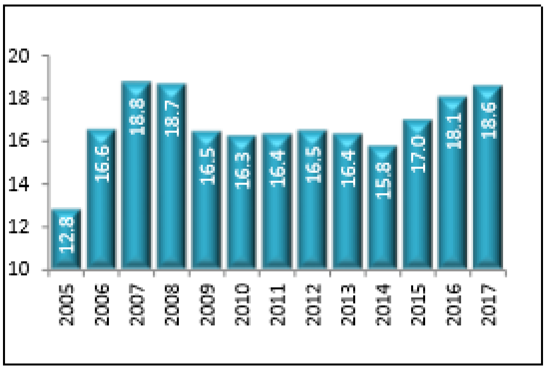
Comparing the average annual growth rate of real estate facilities and total facilities during the period 2007-2017, it can be noted that the average annual growth rate in real estate facilities was higher than the average annual growth rate in total facilities. The average of the real estate facilities reached 10.9% compared to 9% growth in total facilities (Figure 5-2). However, the year of 2017 witnessed a 6.5% drop in the real estate growth rate which is lower than total facilities' growth rate standing at 8%, as a result of the slowdown in economic activity in Jordan and its repercussions on the real estate sector.

FIGURE (5-2): THE GROWTH RATE OF CREDIT FACILITIES TO REAL ESTATE COMPARED TO THE GROWTH RATE OF CREDIT FACILITIES IN GENERAL FOR THE PERIOD (2007-2017)



As for the ratio of facilities extended to the real estate sector to the GDP, figure 5-3 clarifies this ratio's development during the period 2005-2017. It can be noted from the figure that there was a marked increase in the period 2005-2008 reaching 18.7% at the end of 2008, then it declined to 15.8% at the end of 2014 due to the repercussions of the global financial crisis and the current situation in the region. In 2017, it increased to 18.6%.

FIGURE (5-3): RATIO OF CREDIT FACILITIES EXTENDED TO THE REAL ESTATE SECTOR TO GDP

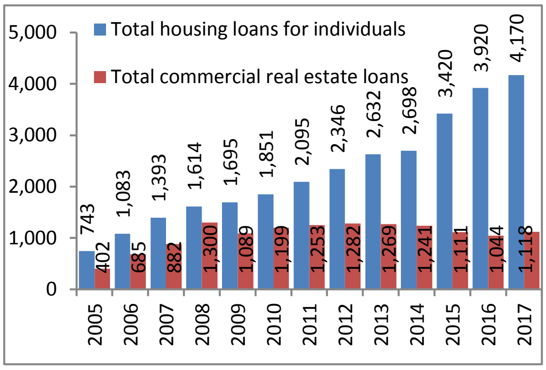


FOR THE PERIOD (2005-2017) (%)

5-2 COMPONENTS OF FACILITIES EXTENDED TO THE REAL ESTATE SECTOR

Regarding the components of facilities extended to the real estate sector, housing loans extended to individuals accounted for 78.9% of total real estate facilities at the end of 2017. Whereas, the commercial real estate loans accounted for 21.1% of total real estate facilities (Figure 5-4).

95FIGURE (5-4): HOUSING LOANS FOR INDIVIDUALS AND COMMERCIAL REAL ESTATE LOANS FOR THE PERIOD (2005-2017) (JD MILLION)



5-2-1 HOUSING LOANS FOR INDIVIDUALS

Total housing loans extended by banks to individuals rose by 6.4% up from JD 3,920 million at the end of 2016 to reach JD 4,170 million at the end of 2017. The most significant rise in the housing loans for individuals occurred in the period preceding the global financial crisis (2006-2008). This period witnessed a high demand for real estate, especially by non-Jordanians. The average growth of the housing loans in this period reached 30% and was later followed by a considerable slowdown in the growth pace in the years 2009 and 2010 due to the repercussions of the global financial crisis accompanied by the uncertainty of banks and their reluctance to extend housing loans. The growth of housing loans resumed in the years 2011 to 2017 since the impacts of global financial crisis have faded, market conditions improved and demand for real estate expanded due to the influx of Arab refugees, especially the Syrians. However, this growth, particularly during 2017, came at a slower pace than during the phase preceding the last global financial crisis (Figure 5-5) and (Figure 5-6).

FIGURE (5-5): HOUSING LOANS AND THEIR RATIO TO TOTAL CREDIT FACILITIES EXTENDED FOR THE REAL ESTATE SECTOR (2005-2017) (JD MILLION)

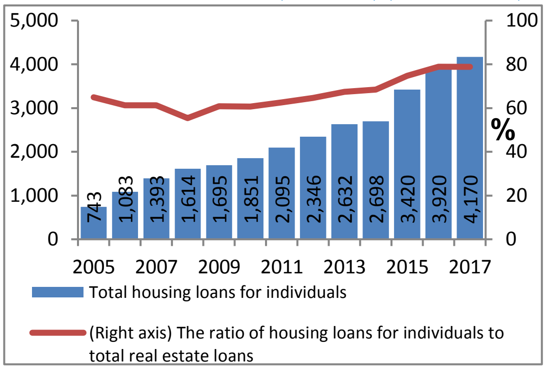
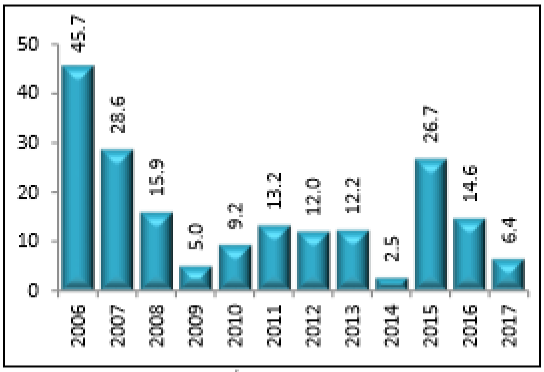


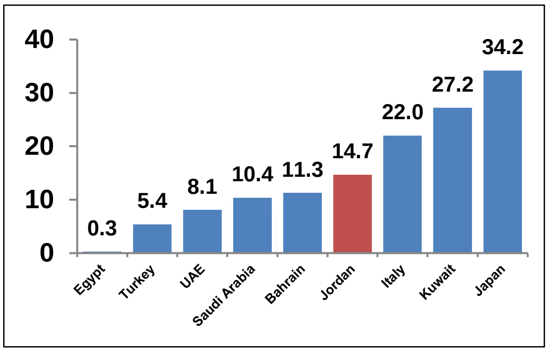
FIGURE (5-6): HOUSING LOANS EXTENDED TO INDIVIDUALS GROWTH RATE (2006-2017) (%)



*: Growth rate in 2015 will become 11.9% when eliminating the impact of lease purchase (lease-to-own) which was reclassified under real estate loans by one of the Islamic banks

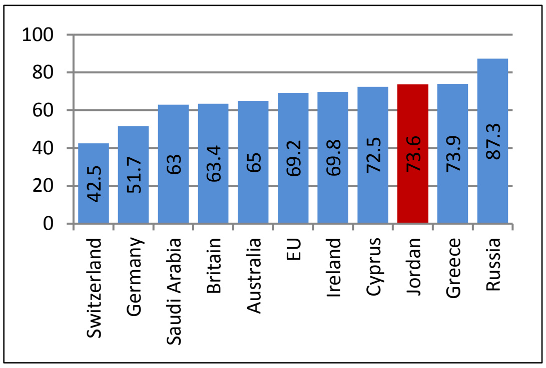
The ratio of Housing loans for individuals to GDP stood at 14.7% at the end of 2017, preceded by 14.2% for 2016. When compared to selected other countries, this ratio in Jordan occupies the 6th lowest ratio among the countries compared (Figure 5-7). One of the reasons for such a low ratio is that 73.6% of Jordanians own their living places. Another reason is that there are other lending alternatives utilized by Jordanians to finance the costs of owning their homes. These alternatives include employee housing loans and loans from institutions, cooperative funds and societies such as the Housing and Urban Development Corporation.

FIGURE (5-7): RESIDENTIAL REAL ESTATE FACILITIES RATIO TO GDP FOR SEVERAL COUNTRIES (2017) (%)*



*: Compared countries data are for the year 2016

FIGURE (5-8): CITIZENS OWNING RESIDENTS RATIO IN JORDAN AND SOME COUNTRIES IN THE WORLD (2016) (%)*



Source for Jordan: Department of Statistics/ Population and Housing Census 2015

5-2-2 COMMERCIAL REAL ESTATE LOANS

Total commercial real estate loans extended by banks at the end of 2017 amounted to JD 1,118 million, representing 21.1% of total credit facilities for the real estate sector. These facilities increased by 7.1% compared to their level at the end of 2016 amounting to JD 1,043 million. The period preceding the global financial crisis (2005-2008) witnessed a significant growth in commercial real estate loans, which rose during this period from JD 400 million to JD 1,300 million, with an average annual growth rate of 49%, then noticeably declined in 2009 to about JD 1,089 million due to the significant negative effect of the global financial crisis on the commercial real estate. The decline in 2009 was followed by a slow rise in the years 2010-2012 before going down again during the period 2013-2016. These facilities increased again in 2017 as figures (5-9) and (5-10) show. The global financial crisis and the subsequent political and economic conditions in the region and Jordan have remarkably affected the commercial real estate sector compared to the residential real estate sector, which is a normal outcome as the demand for residential properties is less affected by the difficult conditions than the commercial real estate due to population growth, especially if there is an abnormal population growth, as the case in Jordan.

FIGURE (5-9): COMMERCIAL REAL ESTATE LOANS GROWTH RATE (2006-2017) (%)

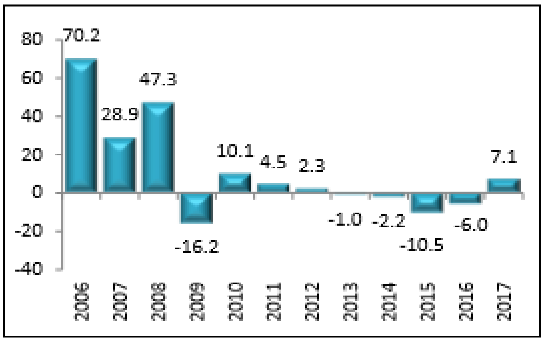
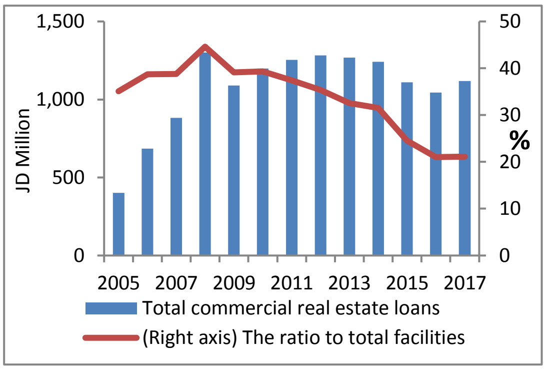


FIGURE (5-10): COMMERCIAL REAL ESTATE LOANS AND THEIR RATIO TO TOTAL CREDIT FACILITIES EXTENDED FOR THE REAL ESTATE



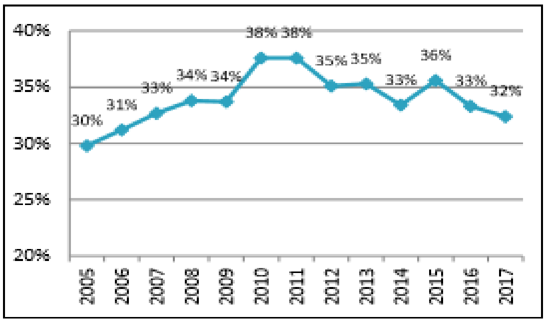
SECTOR (2005-2017)

5-3 THE VOLUME OF DIRECT FACILITIES EXTENDED AGAINST REAL ESTATE COLLATERALS

In addition to the direct exposure of banks to real estate market risks through extending facilities to finance the purchase or construction of residential or commercial properties which are usually guaranteed by these properties, there is another exposure to real estate market risks through the use of real estate as collaterals to guarantee the facilities extended by banks for different purposes. In this case, the decline in real estate prices will affect the value of collaterals and reduce the ability of banks to recover their funds in case of borrower's default and inability to repay. In this respect, total direct facilities extended by banks for other purposes against real estate collaterals amounted to JD 2,646 million in 2017 compared to JD 2,571 million in 2016.

By adding direct facilities extended against real estate collaterals for other purposes to the facilities extended for residential and commercial real estate purposes, total direct facilities extended against real estate collaterals reached around JD 7,934 million, representing 32.4% of total facilities at the end of 2017 compared to 33.3% and 35.6% in 2016 and 2015 respectively. This is an indication of the decline in bank's exposure to the real estate sector risks in 2017 compared to 2015 and 2016 (Figure 5-11).

FIGURE (5-11): CREDIT FACILITIES EXTENDED BY BANKS AGAINST REAL ESTATE COLLATERALS



RATIO TO TOTAL FACILITIES

5-4 THE LOAN TO VALUE (THE AMOUNT OF THE LOAN TO THE VALUE OF MORTGAGED PROPERTY) RATIO CEILING FOR INDIVIDUAL HOUSING AND COMMERCIAL REAL ESTATE LOANS IN JORDAN

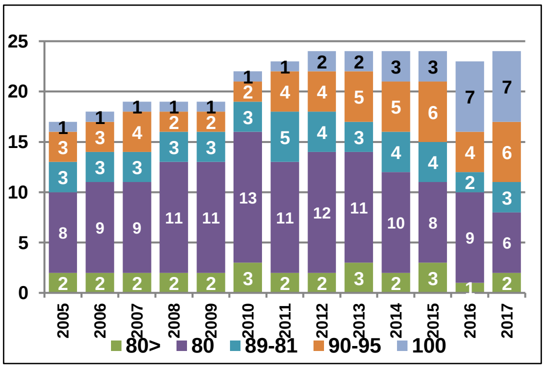
The loan to the value of the mortgaged real estate (LTV) ratio is one of the most essential rates and indicators to be monitored in order to assess the level of banks' exposure to real estate market risks. The significant increase in this ratio may expose banks to high risks if the real estate prices fall deterring the banks' ability to recover their money in case of clients' default due to the drop in the value of real estate guaranteeing these loans.

Countries tend to impose limitations on the LTV ratio when there are indicators signaling a beginning of a price bubble in the real estate market to curb the real estate prices bubble, as well as to reduce the probability of bankruptcy when home prices shrink, and diminish losses by raising the value of collateral, which enhances the banks' ability to face these risks.

To analyze the level of the LTV ratio in Jordan, the CBJ has compiled some data from banks regarding the LTV ratio ceiling along with its actual average.

Figure (5-12) shows the ceiling of the LTV ratio for housing loans for individuals. It is clear from the figure that the LTV ratio for 8 banks (forming 33.3% of banks extending housing loans to individuals) does not exceed 80%, 3 banks have an LTV ratio between 81% and 89%, whereas, 6 banks have an LTV ratio between 90% and 95% and the remaining 7 banks have a 100% LTV ratio.

FIGURE (5-12): BANKS DISTRIBUTION ACCORDING TO THE LTV RATIO CEILING FOR

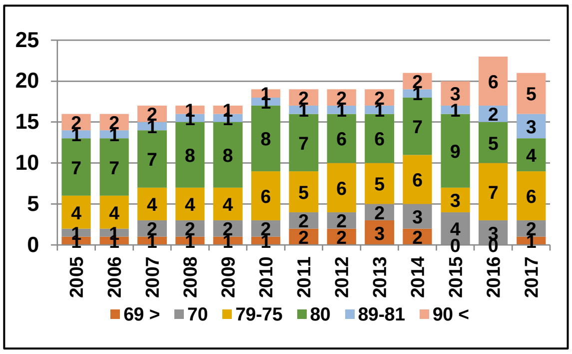


HOUSING LOANS FOR INDIVIDUALS

It is evident from the figure above that the number of banks with an LTV ceiling of 100% rose from 3 banks in 2015 to 7 banks in 2016 and 2017, indicating that some banks in Jordan have a tendency to finance higher values of residential real estate in the Kingdom.

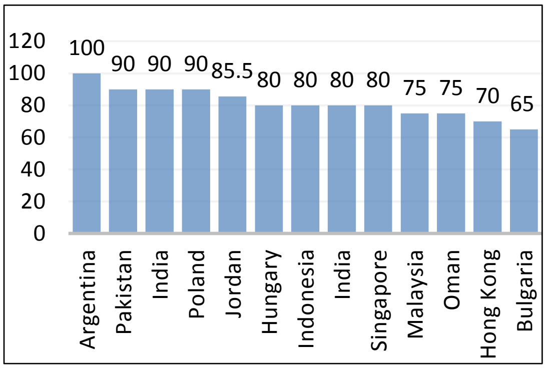
The ceiling of the LTV ratio for commercial real estate loans is lower than the ceiling of the LTV ratio for housing loans at the majority of banks, as 62% of banks offering commercial real estate loans have an LTV ratio which does not exceed 80% (Figure 5-13).

FIGURE (5-13): BANKS DISTRIBUTION ACCORDING TO THE LTV RATIO CEILING FOR COMMERCIAL REAL ESTATE LOANS (2005-2017) (%)



The average LTV ratio ceiling varied among several countries ranging between 65% and 100%. Jordanian banks had an average LTV ratio of around 85.5% as most of them have an LTV ratio ranging between 80% and 90% (Figure 5-14).

FIGURE (5-14): BANKS DISTRIBUTION ACCORDING TO THE LTV RATIO CEILING FOR REAL ESTATE LOANS (RESIDENTIAL AND COMMERCIAL) FOR



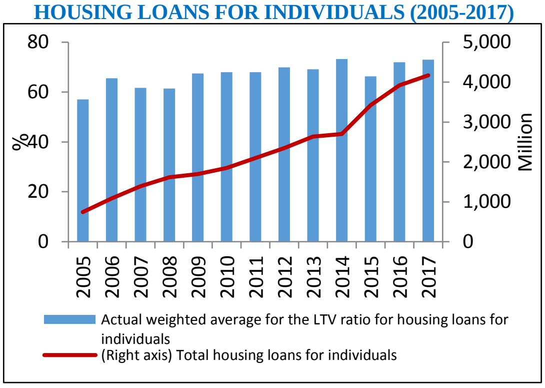
SEVERAL COUNTRIES IN THE WORLD (%)*

*: Data for the compared countries are for the year 2015.

5-5 ACTUAL AVERAGE OF THE LTV RATIO FOR INDIVIDUAL HOUSING AND COMMERCIAL REAL ESTATE LOANS

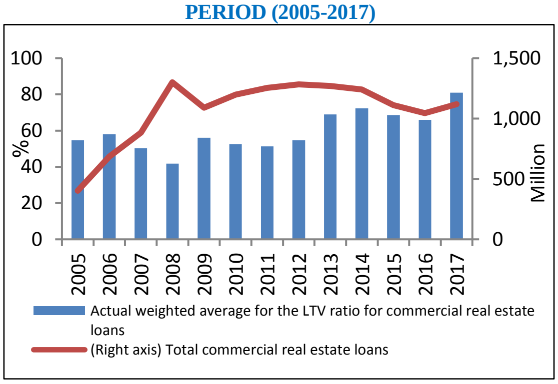
In spite of the increase in the LTV ratio ceiling for individual housing loans at some banks, the actual average of the LTV ratio is below the ceiling that can be financed (i.e. the ratio specified in banks' credit policies). The actual weighted average of the LTV ratio stood at 73.2% in 2014, followed by a drop to 66.3% in 2015, resuming its upward trend in 2016 to reach72% and standing at 73% at the end of 2017 (Figure 5-15).

FIGURE (5-15): TOTAL VALUE AND ACTUAL WEIGHTED AVERAGE FOR THE LTV RATIO FOR HOUSING LOANS FOR INDIVIDUALS (2005-2017)



With regard to the actual average of the LTV ratio for the commercial real estate loans, it rose to 70.5% in 2017 against 66% in 2016 (Figure 5-16).

FIGURE (5-16): TOTAL VALUE AND ACTUAL WEIGHTED AVERAGE FOR THE LTV RATIO FOR COMMERCIAL REAL ESTATE LOANS FOR THE PERIOD (2005-2017)



5-6 CBJ MEASURES FOR MITIGATING THE BANKS' EXPOSURE TO REAL ESTATE MARKET RISKS AND ENHANCING THEIR ABILITY TO DEAL WITH THEM

As mentioned in previous Financial Stability Reports, the CBJ has set some limitations, aiming at reducing banks' exposure to real estate market risks and enhancing their ability to tackle these risks as follows:

1. Setting a cap on real estate loans: Credit Concentration Instructions No. (9/2001) dated August 1st, 2011 set a cap on direct operating credit extended for the construction or purchase of real estate at 20.0% of customers' deposits in dinars.

2. Capital Adequacy Instructions issued by the CBJ specified the risk weight for housing loans with an LTV ratio not exceeding 80% to be 35% which increases to 100% if the LTV ratio is above 80%. In other words, if the LTV ratio of the loan rose above 80%, then these loans are subject to higher capital requirements, thus enhancing the ability of banks to cope with these risks and strengthening financial stability in the Kingdom.

5-6-1 REAL ESTATE ASSETS PRICE INDEX IN JORDAN

The value of real estate assets is a fundamental pillar of investment activities in the economy, owing to their considerable inter-linkages with other investment sectors and the implications of the developments imposed by real estate assets' prices on inflation, monetary policy, and financial stability. Given the crucial importance of calculating the real estate assets price indicator (Real Estate Price Index "REPI"), and as we already mentioned in previous reports, in the beginning of 2014 a real estate assets price indicator in Jordan was developed in cooperation between the CBJ and the Department of Lands and Survey based on best methodologies applied internationally in calculating this indicator and taking into consideration the data available at the Department of Lands and Survey. This indicator has a pivotal role in identifying developments in many issues, such as its use for monitoring real estate assets price bubbles, hence estimating real estate market risks, in addition to forecasting economic growth, estimating the value of houses as part of wealth measurement, and even as a tool for international comparisons.

Figures (5-17 to 5-22) illustrate the REPI in Jordan and the change in this indicator during the period 2005-2017. These figures show that the REPI in Jordan dropped by (-0.9%) from 121.2 points in 2016 to 120.1 points in 2017 after rising by 1.8%, 3.4% and 9.1% in 2016, 2015 and 2014, respectively.

This indicates that real estate prices have witnessed a marked slowdown in 2015 and 2016 recording a decline in 2017. This decline is mainly due to the drop in the volume of trading in the real estate market as a normal result of the slowdown in economic activity in the Kingdom and its repercussions on the real estate sector. The decline in 2017, was mostly concentrated in commercial real estate prices, as REPI for commercial real estate declined by 1.4% compared to 1.3% and 0.5% for housing and land properties, respectively. In this regard, as mentioned in previous reports, the REPI passed through several stages, that can be summarized in three phases as follows:

The first phase, pre-global financial crisis phase, (2005-2008), witnessed high demand for real estate especially by non-Jordanians, in addition to the significant rise in prices of residential and non-residential properties. While the second phase (2009-2010) was a period of global financial crisis repercussions, accompanied by an uncertainty and a contraction in loans extended by banks, all of which noticeably contributed to the decline in demand for real estate assets, and subsequently the decline in prices of real estate assets. As a result, in mid-2009, the government expanded the scope of the exemptions for apartments and included land in the exemptions to promote the activity in the real estate market. During the third phase (2011-2016), real estate investments resumed their activity, but at a slower pace than before the global financial crisis.

In 2017, real estate assets prices fell driven by several factors, including the slowdown in economic activity in the Kingdom and its repercussions on the real estate sector and the worsening of the conditions of Jordanian workers in the Gulf countries, who are considered the group most willing to purchase real estate. Furthermore, the banks' perception of the risk of a large expansion in real estate loans and rising interest rates has contributed to the decline in the real estate facilities extended by banks growth rate, which led to a decrease in the demand for real estate purchases and consequently lowering their prices.

FIGURE (5-17): REPI (RESIDENTIAL, COMMERCIAL, AND LANDS) IN JORDAN (2005-2017)

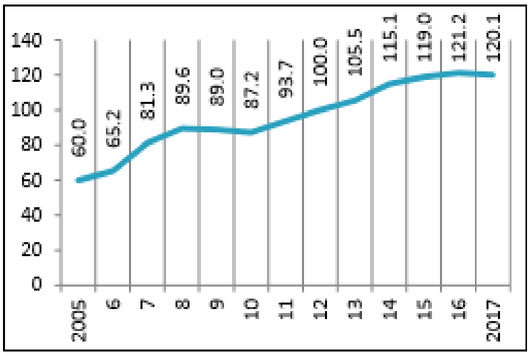
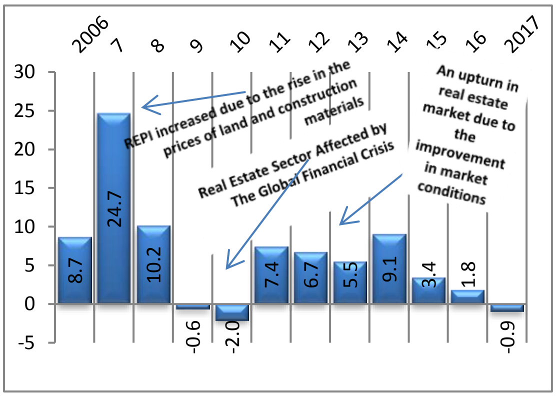


FIGURE (5-18): CHANGE IN REPI (RESIDENTIAL, COMMERCIAL, AND LANDS) IN JORDAN (2006-2017)



(%)

FIGURE (5-19): REPI (RESIDENTIAL, COMMERCIAL, AND LANDS) IN JORDAN AND TOTAL CREDIT FACILITIES FOR REAL ESTATE (2005-2017)

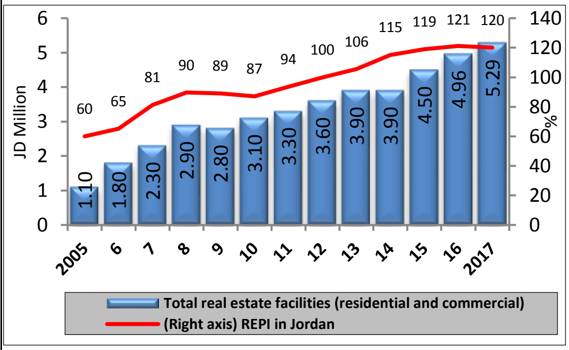


FIGURE (5-20): RESIDENTIAL REPI IN JORDAN AND ITS PERCENTAGE CHANGE (2006-2017)

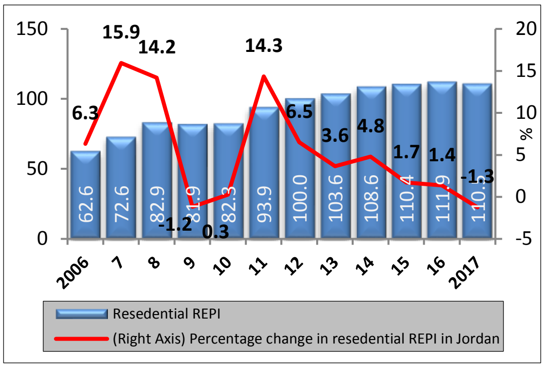


FIGURE (5-21): NON- RESIDENTIAL REPI IN JORDAN AND ITS PERCENTAGE CHANGE (2006-2017)

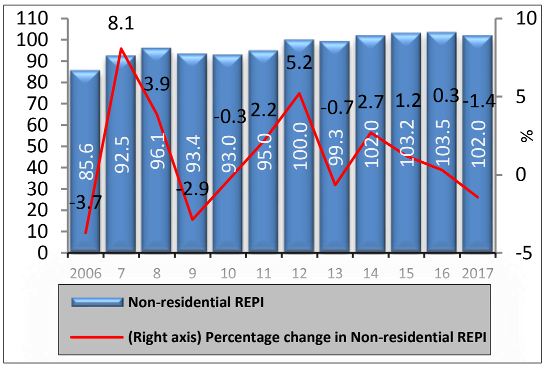
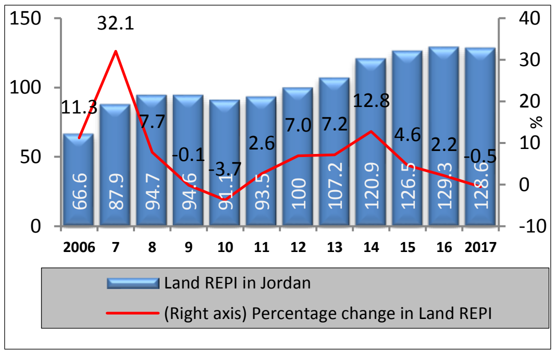


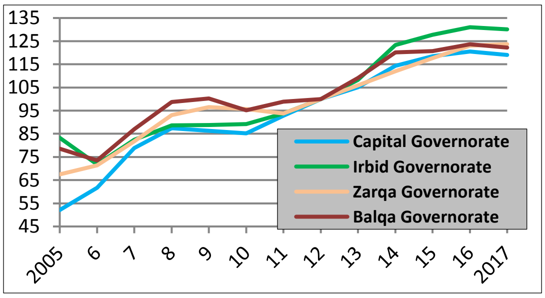
FIGURE (5-22): LAND REPI IN JORDAN AND ITS PERCENTAGE CHANGE (2006-2017)



It is worth mentioning that the REPI dropped in seven governorates, including the capital Amman, while it rose in five other governorates. Regarding REPI for major governorates in Jordan; in Amman REPI has slightly decreased in 2017 compared to 2016, as it stood at 120.5 points in 2016 followed by a drop to reach 119.1 points in 2017, decreasing by 1.2%. As for other governorates, Balqa Governorate's REPI decreased from 123.7 points in 2016 to 122.3 points in 2017 down by 1.1%. In Irbid it fell from 131.0 points in 2016 to 130.1 points in 2017 declining by 0.7%, whereas the REPI of Zarqa governorate rose from 123.1 points in 2016 to 123.7 points in 2017 increasing by 0.5% (Figure 5-23).

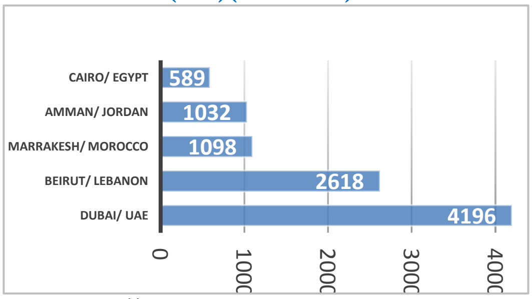
Following up the historical development of the REPI for the capital Amman and other governorates, the capital's REPI witnessed a noticeable growth during the period 2005 to 2017, except for 2017, when the index declined compared to 2016. The index stood at 52.1 points in 2005 and rose by 128.6% to reach 119.1 points in 2017. Other governorates witnessed an increase in the REPI although at a lower rate than the capital. In Balqa, the REPI rose from 78.6 points in 2005 to 122.3 points in 2017 with a growth of 55.6%. In Irbid, it increased from 83.2 points in 2005 to 130.1 points in 2017 growing by 56.4%. In Zarqa, REPI went up from 67.5 points in 2005 to 123.7 points in 2017 marking a growth of 83.3%, which means that the highest increase in the index during the last twelve years was in the Capital governorate followed by Zarqa then Irbid and then Balqa (Figure 5-23).

FIGURE (5-23): REPI FOR MAJOR GOVERNORATES IN JORDAN (2005-2017)



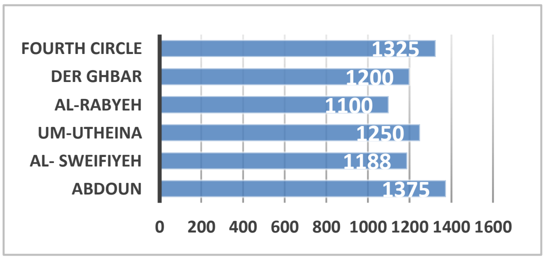
Concerning the average price per residential square meter in Amman, according to the information available for West Amman areas (the most attractive areas for investment), the average price per residential square meter stood at JD 1,032 in 2017. It is worth mentioning that the price per square meter in many Arab cities like Marrakech, Beirut and Dubai are higher than in Amman (Figure 5-24 and Figure 5-25).

FIGURE (5-24): THE PRICE OF ONE SQUARED METER IN AMMAN AND SELECTED ARAB CITIES (2017) (JD PER M2)*



*:Source: http://www.globalpropertyguide.com (Website)

FIGURE (5-25): THE PRICE OF ONE SQUARED METER IN SELECTED AREAS IN AMMAN (2016) (JD PER M2)*



*:Source: http://www.globalpropertyguide.com (Website)

5-6-2 TRADING VOLUME IN THE REAL ESTATE MARKET IN JORDAN

The report issued by the Department of Lands and Survey for the year 2017 stated that the trading volume in the Jordanian real estate market during 2017 dropped by 14.1% to reach JD 6,062 million compared to JD 7,057 million in 2016. Figure (5-26) shows the development of the real estate trading volume and the REPI for Jordan for the period (2005-2017).

Sales to non-Jordanians, amounted to JD 321.8 million at the end of 2017, accounting only for 5.3% of total real estate trading volume. Sales to Iraqis' came first in 2017 with an investment of JD 157.2 million, or 48.9% of total estimated value of sales to non - Jordanians during 2017 (Table 5-1).

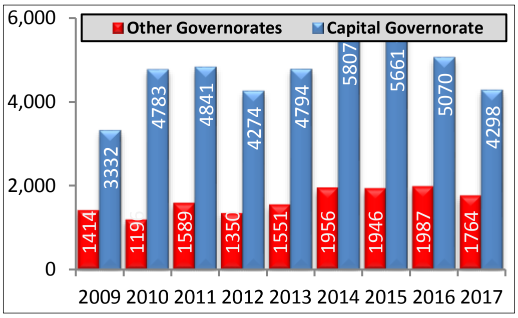
TABLE (5-1): SALES TO NON-JORDANIANS (2012-2017) (JD MILLION)

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

Source: Department of Lands and Survey

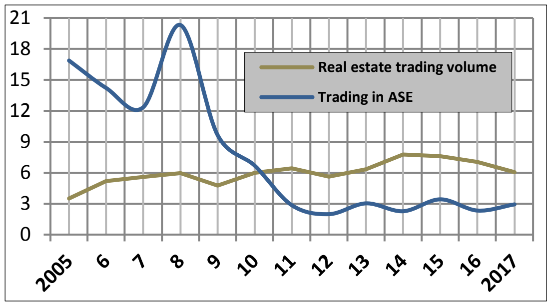
When comparing the trading volume in 2017 for the governorates, it is noted that the capital is the largest governorate in terms of trading volume amounting to JD 4,298 million, accounting for 70.9% of total trading volume in the real estate market, while other governorates recorded a trading volume amounting to JD 1,764 million, or 29.1% of total trading volume (Figure 5-27).

FIGURE (5-27): REAL ESTATE TRADING VOLUME FOR THE CAPITAL AND OTHER GOVERNORATES (2009-2017) (JD MILLION)



As for comparing the trading volume of real estate with that in Amman Stock Exchange (ASE), it is noticeable that the trading volume in the financial market during the period 2005-2009 was much larger than the trading volume in the real estate market because of the boom that prevailed in the Amman financial market during that period accompanied by a large inflow of liquidity to the financial market by Arabs, specially Iraqis, leading to a spike in the prices in the financial market, which also attracted many investors among citizens to invest in it. However, after the deepening of the impact of the global financial crisis and the significant decline in prices in the financial market, the trading volume in the financial market has sharply dropped becoming much lower than the trading volume in the real estate market, as investing in real estate is considered a safe haven in comparison with financial investments (Figure 5-28).

FIGURE (5-28): REAL ESTATE TRADING VOLUME AND ASE TRADING VOLUME (2005-2017) (JD MILLION)



In order to continue stimulating the real estate market, reviving the sector and enabling citizens to purchase appropriate houses, the cabinet decided in a meeting held on December, 24th 2017, to prolong the decision of exempting the apartments and single houses from the registration fees until December, 31st 2018. The decision states that all completed residential units like apartments and single houses, regardless of the seller, are exempted from registration fees, provided that the area does not exceed 150 square meters excluding services. If the area ranges between 150 square meters up to 180 square meters, the extra space is subject to registration fees. Whereas, if the area exceeds 180 square meters, the entire area is subject to registration fees and related charges. The above exemption is granted to Jordanian citizens exclusively.

5-7 CONCLUSION

Following up the trading volume in the real estate market and the REPI in Jordan, it can be noted that the real estate market started being affected by the slowdown of the economic activity in the Kingdom and the economic and political developments in the region in 2017 more markedly than in previous years. In 2017, the real estate trading volume decreased by 14.1%, while the REPI fell by 0.9%. However, the decline in the REPI is still unsubstantial and not to be worried about at the current time, especially due to banks' awareness of these risks, reflected in the decline in the exposure of banks to the risks of real estate loans and guarantees, at the same time, some banks should consider the ceiling for the LTV ratio, especially at banks with an LTV ratio of higher than 80%, to avoid any risks that may result from a fall in real estate prices.

CHAPTER SIX: STRESS TESTING

6-1 INTRODUCTION

Stress testing is an important tool used by regulatory authorities and banks to measure the banks' ability to withstand the shocks and the high risks they may confront. These tests aim at assessing the financial position of the Bank within severe but plausible scenarios and thus using their results to determine the level of capital and liquidity required to be maintained by the banks to be able to withstand financial shocks and high risks.

These tests use a forward looking approach in risk assessment utilizing tools that go beyond statistical methods based on historical information. These tests also help the senior management to understand the circumstances of the bank in times of crises. Stress testing is an essential part of risk management as well as capital and liquidity planning. Nonetheless, it cannot cover all aspects of the bank's vulnerabilities, it operates within an integrated risk management policy to enhance the soundness and solidity of banks and strengthen the financial system as a whole.

6-2 STRESS TESTING FOR THE BANKING SECTOR

6-2-1 FIRST: SENSITIVITY ANALYSIS

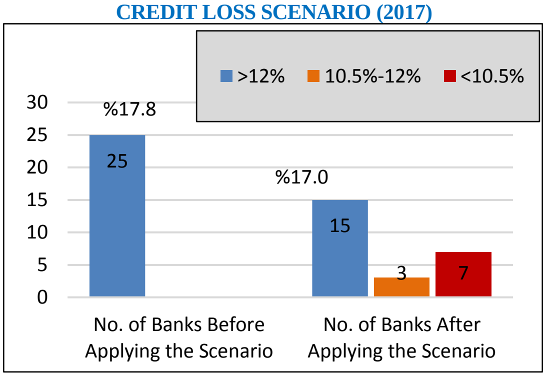
In general, sensitivity analysis tests are used to measure the impact of changes in risk factors - separately - on the financial position of the bank such as the rise in the non-performing loans ratio, changes in interest rates, changes in exchange rates and changes in stock prices. The source of the shock (the source of this type of risk) is usually not identified in these tests. Following are the sensitivity tests carried out on a number of risk factors at banks operating in the Kingdom.

6-2-1-1 CREDIT RISK SENSITIVITY ANALYSIS

In terms of credit risk sensitivity tests, an increase of 100% in non-performing loans (banks default rate) was assumed due to the worsening political conditions in the region and their impact on the economic situation as well as on banks in Jordan. In this case, capital adequacy ratio (CAR) of the banking sector in Jordan will fall from 17.8% to 17.0%, which means that the banking sector in general is able to withstand this shock as the CAR after the effect of the shock remains higher than the minimum required CAR of 12% applied in Jordan.

The reason behind the limited impact of this shock is the banks' high capital adequacy ratios in Jordan, which are considered to be some of the highest in the region. Moreover, banks enjoy a high level of profits, which enables them to absorb the additional allocations and losses resulting from the shock if it occurs without significantly affecting the capital, providing protection for banks' capital. At the individual level, the CAR will remain higher than 12% at all banks (except for one bank) which is a sign of the ability of most banks in Jordan to cope with this shock (Figure 6-1).

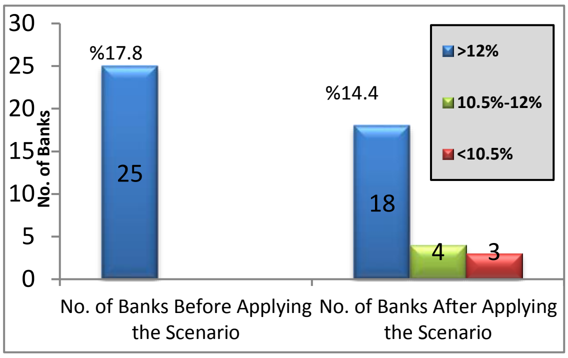
FIGURE (6-1): CAPITAL ADEQUACY RATIO BEFORE AND AFTER APPLYING THE INCREASE OF CREDIT LOSS SCENARIO (2017)



6-2-1-2 CREDIT CONCENTRATION RISKS SENSITIVITY ANALYSIS

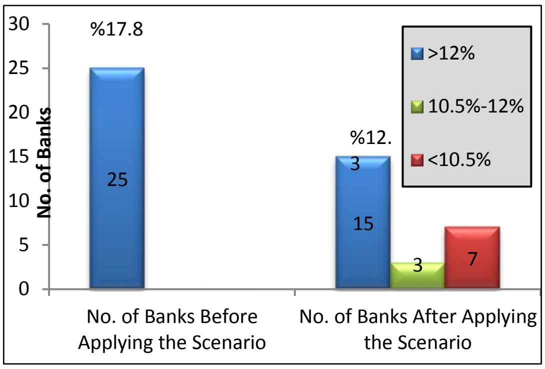
As for the risk of credit concentration and in case of the largest three borrowers default (except for the Jordanian government facilities and the government guaranteed facilities) at the individual bank level, the capital adequacy ratio will remain above the minimum of 12% at 18 banks and fall below 12% in 7 banks, 4 of which have a higher adequacy ratio than the internationally applicable minimum of 10.5%. At the total banking sector level, capital adequacy ratio will fall from 17.8% to 14.4% (Figure 6-2).

FIGURE (6-2): CAPITAL ADEQUACY RATIO BEFORE AND AFTER APPLYING THE LARGEST THREE BORROWERS DEFAULT SCENARIO (2017)



Whereas, if the largest six borrowers default (except for the Jordanian government facilities and the government guaranteed facilities) at the individual bank level, the capital adequacy ratio at the total banking sector level will remain above 12%, declining from 17.8% to 12.3%. At the individual bank level, the capital adequacy ratio will remain above 12% for 15 out of 25 banks, while it will fall below 12% for 10 banks, 3 of which will remain above the internationally applicable minimum of 10.5%, indicating that the majority of banks in Jordan have the ability to face the concentration risk shock. However, some banks need to reduce their concentration risks. noting that, the CBJ constantly follows up banks' concentration risks through credit concentration instructions (Figure 6-3).

FIGURE (6-3): CAPITAL ADEQUACY RATIO BEFORE AND AFTER APPLYING THE LARGEST SIX BORROWERS DEFAULT SCENARIO (2017)



6-2-1-3 MARKET RISKS SENSITIVITY ANALYSIS

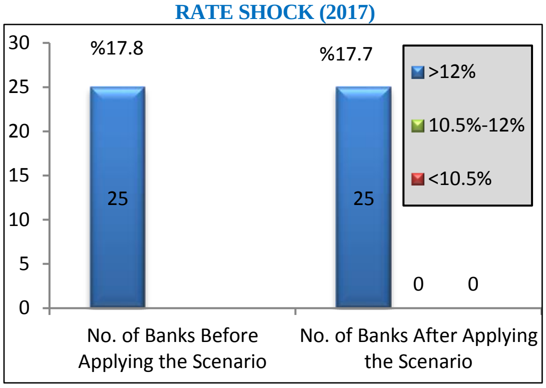
Some tests were conducted to assess banks' sensitivity to market risks and their impact on capital adequacy. The analysis was limited to three types of shocks: interest rates, exchange rates, and stock prices, which are the most common variables in this context.

6-2-1-4 INTEREST RATE SHOCK

Assuming that interest rates rise by 200 basis points, the capital adequacy ratio of the banking sector will slightly drop from 17.8% to 17.7%[16], which indicates that the impact on the banking sector in general is insignificant, as the CAR after the shock will remain higher than the minimum of 12% applied in Jordan and by a comfortable margin. On the individual level, the ratio will remain above 12% for all banks, which indicates the ability of all banks in Jordan to withstand this shock (Figure 6-4).

[16] The impact of the shock was calculated using a gap analysis test that identifies the banks' position with respect to the balance of assets and liabilities that are sensitive to interest rate risk.

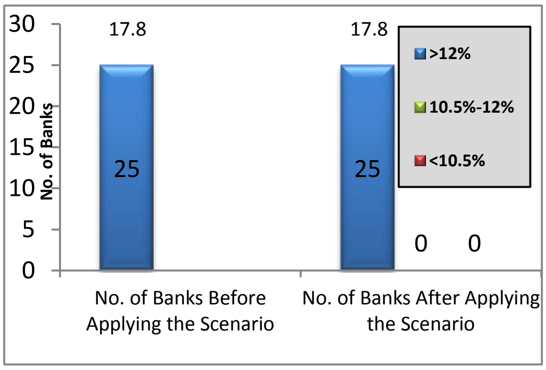
FIGURE (6-4): CAPITAL ADEQUACY RATIO BEFORE AND AFTER APPLYING THE INTEREST RATE SHOCK (2017)



6-2-1-5 FOREIGN EXCHANGE RATE SHOCK

Assuming a decline in the exchange rate of the Jordanian dinar [17] by 25% against all foreign currencies, the banking sector's capital adequacy ratio will not be affected remaining at 17.8%[18], which indicates that the banking sector is highly capable of coping with this shock due to the coverage of foreign currency assets, by a comfortable margin, of banks' foreign currency liabilities. This refers to the existence of long foreign currency positions at most banks. At the individual level, CAR will remain above 12% at all banks (Figure 6-5).

FIGURE (6-5): CAPITAL ADEQUACY RATIO BEFORE AND AFTER APPLYING THE FOREIGN EXCHANGE RATE SHOCK SCENARIO (2017)



6-2-1-6 Equity Price Shock

Assuming that the stock prices in the financial market went down by 30%, the capital adequacy ratio of the banking sector in Jordan will not be affected as well. It will remain at 17.8%, which implies that there is no material impact for this shock on the banking sector in general. CAR after the shock will remain higher than the minimum requirement of 12% applied in Jordan and by a comfortable margin. At the individual level, the ratio will remain above 12% for all banks, indicating that banks in Jordan are able to withstand the shock of equity price risks due to the low exposure of banks to the financial market in Jordan.

6-2-2 SECOND: MACRO-STRESS TESTING

Credit risk is one of the most significant risks faced by banks and has the highest impact on their solvency. Therefore, the Satellite Model has been employed to predict the non-performing loans ratio for the period 2018-2020. In this context, a series of scenarios have been assumed. Medium and severe stress macro-scenarios represent hypothetical scenarios designed to assess the banks' ability to withstand shocks. Some of the scenarios assumed are the worsening regional conditions surrounding the Kingdom, a reduction in the aid from the Gulf countries, the decline in tourism income and direct investment, the drop in national exports, and a rise in the inflation indicator, which could lead to a marked slowdown in economic growth rates compared to expectations, rising unemployment, and a contraction in the financial market. It was also assumed that the increase in interest rates on the US dollar will be higher and faster than expected, in case if the economic conditions in the United States continue to improve and the CBJ continues raising interest rates on the Jordanian dinar to preserve its' attractiveness as a savings currency.

In order to measure the impact of these assumptions on banks, GDP growth rate (economic growth rate) was used as one of the major economic variables affecting non-performing loans, and measuring their impact on

[17] This is a hypothetical scenario mainly aimed at examining the banks' exposure to exchange rate risk. Noting that the CBJ's foreign currency reserves at the end of April 2018 reached USD 13.4 billion, sufficient to cover the Kingdom's imports for about 7 months (very comfortable level), which significantly strengthens the stability of the dinar exchange rate.

[18] This analysis does not take into account the indirect effects of the decline in the exchange rate of the Jordanian dinar on the economy and therefore on the non-performing loans of banks.

the regulatory capital adequacy ratio and Tier1 capital[19] at the bank. Economic research, indicate that the decline in economic growth rate leads to an increase in non-performing loans as a result of the decline in economic activity and thus the ability of customers to repay their debts. Other variables such as interest rates, stock prices and the unemployment rate can also be used to predict the ratio of non-performing loans.

To predict the non-performing loans ratio, the stress testing methodology using the Satellite Model included the assumption of 3 scenarios to predict the value of the dependent variable (Non-performing loans "NPLs" ratio) and to study their effect on the capital adequacy ratio of banks for the coming years. These scenarios, in terms of severity, are ranked as follows:

- Baseline Macro Stress Scenario
- Medium Macro Stress Scenario
- Severe Macro Stress Scenario

In order to forecast the non-performing loans ratio, the following model was used[20]:

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

Where:

NPL: Non-performing loans ratio expected for 2018

$NPL_{(t-1)}$: Non-performing loans ratio for the preceding year

$\Delta RGDP_{(t-1)}$: Real GDP growth rate (economic growth rate)

UNEMPt: Unemployment rate

RIR_t: Real interest rate

C: Constant

Based on the conducted statistical tests, it was found that there is a significant inverse relationship between the economic growth rate and the non-performing loans ratio, a significant positive relationship between the unemployment rate and the non-performing loans ratio, and a significant positive relationship between the interest rates and the non-performing loans ratio at banks, according to the following equation:

$$\mathbf{NPL_t = -5.6 + 0.61 NPL_{(t-1)} - 0.46 \Delta RGDP_{(t-1)} + 0.47\, UNEMP_t + 0.34\, RIR_t}$$

The following table shows the results of the econometric analysis of the above model:

TABLE (6-1): RESULTS OF THE MACRO ECONOMETRIC ANALYSIS:

Variable	Coefficient	T-Statistic
NPL(-1)	0.61*	5.3
RGDP(-1)	-0.46**	-1.8
UNEMP	0.47**	1.6
RIR	0.34*	2.6
C	-5.6	-1.3
Coefficient of Determination (R^2)	87.0%	
Adjusted R^2 Coefficient	81.8%	

(*): Statistically significant at 95% confidence level
(**): Statistically significant at 90% confidence level

6-2-3 USED ASSUMPTIONS

The CBJ has developed stress tests so that it became possible to predict the non-performing loans ratio and its effect on the capital adequacy ratio at banks for several future years (Multiple-Period Stress Testing), instead of only one year. Hence, the non-performing loans ratio for the period 2018-2020 was predicted on the basis of assumed change in economic growth rate, the unemployment rate and interest rates, and the following scenarios were assumed:

TABLE (6-2): ASSUMED SCENARIOS FOR THE YEARS 2018-2020

Year	Variable	Economic growth rate	Unemployment rate	Real interest rate RIR*
Scenarios for 2018	Baseline Scenario	2.50	17.9	5.30
	Medium Scenario	0.27	19.33	6.80
	Severe Scenario	-1.95	20.75	7.30
Scenarios for 2019	Baseline Scenario	2.70	18.00	7.30
	Medium Scenario	0.47	19.43	8.80
	Severe Scenario	-1.75	20.85	9.30
Scenarios for 2020	Baseline Scenario	2.90	18.00	9.30
	Medium Scenario	0.67	19.43	10.80
	Severe Scenario	-1.55	20.85	11.30

[19] According to Basel III definition

[20] This model was estimated using the Fully Modified Ordinary Least Squares (FMOLS) method, which provides optimal estimates for cointegrated regressions by modifying the least squares to calculate the effects of autocorrelation and homoscedasticity in the dependent variables which result from an autocorrelated relationship between the dependent variable and independent variables.

Scenarios were assumed according to the following methodology:

Medium Scenario: Economic growth rate expected for 2018 minus one standard deviation of the economic growth rate data for the period 1994-2017, the expected unemployment rate for 2018 plus one standard deviation of the unemployment rate data for the period 1994- 2017).

Severe Scenario: The expected economic growth rate for 2018 minus two standard deviations of the economic growth rate data for the period 1994-2017, the unemployment rate for 2018 plus two standard deviations of the unemployment rate data for the period 1994-2017.

As for the real interest rates, interest rates were assumed to go up by 150 and 200 basis points for the medium and severe scenarios respectively, and the baseline scenario for the coming year is the most severe scenario for the previous year. These ratios were guided by the assumptions used in the Central Bank's stress testing instructions and Basel Committee guidelines for Banking.

* The weighted average interest rates on credit facilities / loans and advances minus the inflation rate.

6-2-4 RESULTS

Table (6-3) and Figure (6-6) show the non-performing loans and capital adequacy ratios expected for 2018, assuming the above scenarios occur. The non-performing loans ratio will rise from 4.2% in 2017 to 6.6% in 2018 under the severe scenario, thus the capital adequacy ratio will drop from 17.8% to 17.5% in 2018.

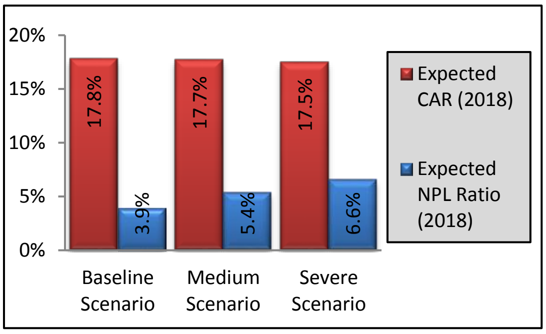
TABLE (6-3): RESULTS OF MACRO STRESS TESTS FOR THE YEAR 2018

Assumed Scenarios	Expected Non-Performing Loans Ratio (2018)	Expected Capital Adequacy (2018)
Baseline Scenario	3.9%	17.8%
Medium Scenario	5.4%	17.7%
Severe Scenario	6.6%	17.5%

* The non-performing loans ratio at the end of 2017 stood at about 4.2%.

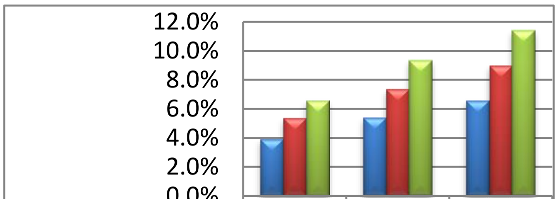
** Capital adequacy at the end of 2017 reached 17.8%

FIGURE (6-6): NON-PERFORMING LOANS AND CAPITAL ADEQUACY RATIOS AFTER APPLYING ALL SCENARIOS (2018) (%)



Assuming that these scenarios were materialized (Table 6-2: assumed scenarios), the expected non-performing loans ratios for 2018-2020 after the implementation of the (three) scenarios will be as shown in Figure 6-7.

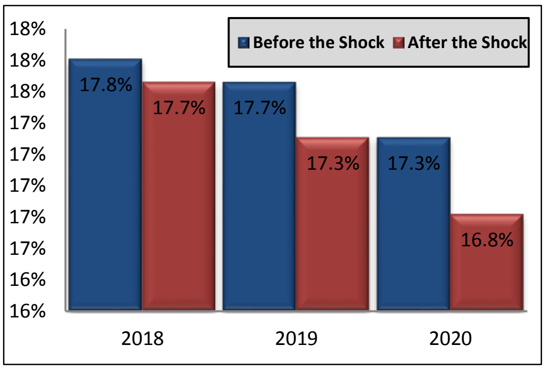
FIGURE (6-7): NON-PERFORMING LOANS RATIO AFTER ASSUMING THE SCENARIOS IN TABLE 6-2



	2018	2019	2020
Baseline Scenario	3.9%	5.4%	6.6%
Medium Scenario	5.4%	7.4%	9.0%
Severe Scenario	6.6%	9.3%	11.4%

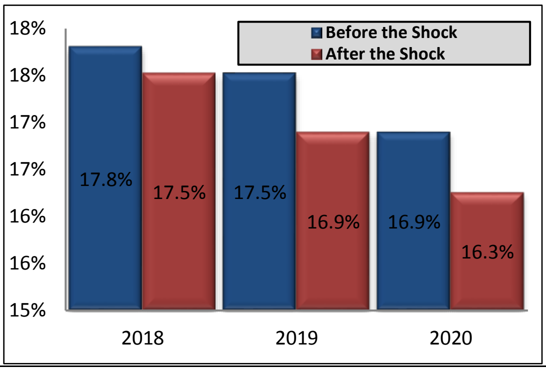
Accordingly, the capital adequacy ratio for the years 2018-2020 after applying the medium scenario will decrease to 16.8% in 2020 remaining above 12% for the three years 2018 to 2020 by a comfortable margin. This indicates that the banking sector in Jordan is able to withstand this shock (Figure 6-8).

FIGURE (6-8): CAPITAL ADEQUACY RATIO AFTER APPLYING THE MEDIUM SCENARIO (2018-2010) (%)



After applying the most severe scenario, the capital adequacy ratio will fall to 16.3% in 2020 remaining above 12% for the three years (2018-2020), indicating that the banking sector in Jordan has high capital adequacy rates capable of bearing this shock as well (Figure 6-9).

FIGURE (6-9): CAPITAL ADEQUACY RATIO AFTER APPLYING THE SEVERE SCENARIO (2018-2020) (%)



6-3 CONCLUSION

Based on the results for the years (2018-2020), the banking sector is generally able to withstand the shocks and high risks represented by high non-performing loans ratio due to the adverse change in the economic conditions and the continued aggravation of these conditions until 2020. The capital adequacy ratio at the banking sector for years 2018, 2019 and 2020 will reach 17.5%, 16.9% and 16.3% respectively, assuming the most severe scenario. These positive results are caused by the banks' high levels of capital and high profits level which enable them to absorb the provisions and additional losses that resulted from the assumed shocks without significantly affecting banks' capital, which implies sufficient protection for banks' capital. Furthermore, it is noticed from the sensitivity tests that the credit concentration risk has a greater impact on some banks compared to other risks, indicating that some banks need to reduce their concentration risk. The CBJ will continue developing these tests and conducting more of them taking into account the risks developments at the international, regional, and domestic levels to ensure the soundness and solidity of the Jordanian banking sector.

CHAPTER SEVEN: FINANCIAL TECHNOLOGY (FINTECH), AND ITS IMPLICATIONS ON FINANCIAL STABILITY

7-1 INTRODUCTION

Over the last few years; the financial technology sector (Fintech) has grown markedly. Several financial and banking services are currently carried out using Fintech, which are also offered by institutions other than conventional financial and banking institutions. This contributed to improve access to financial services and increase the competition in the financial system; thus fostering economic growth and financial inclusion, which in turn contribute to enhancing financial stability.

Owing to its distinguished features; Fintech is more competitive and attractive to customers in terms of ease of use, direct connection between parties involved, low cost, as well as rapid outreach and access. Consequently, the booming of Fintech may threaten the conventional financial and banking systems and affect their profitability; unless they maneuver with this technology. However, Fintech boost will allow for new opportunities to support economic growth and financial inclusion.

The main challenge for regulatory bodies is to develop a well-balanced regulatory framework that facilitates Fintech innovations which will benefit the economy and the financial system, in conjunction with ensuring appropriate risk management. This balanced approach will enhance the soundness and safety of the financial system, protect financial consumers, and ensure compliance with effective laws and guidelines; including Anti money laundering and counter terrorism financing rules.

7-2 THE DEFINITION OF FINTECH

The term "financial technology" (Fintech) is relatively new and there is no universally accepted definition for Fintech, as the difference between Fintech providers and financial services institutions is not straightforward. However, the World Economic Forum (WEF) defined Fintech as "the use of technology and innovative business models in financial services", whereas the Financial Stability Board (FSB) defines Fintech as "technologically enabled innovation in financial services that could result in new business models, applications, processes or products that have material effect on financial markets and institutions and the provision of financial services". Generally, it can be said that Fintech stands for "any of the technological innovations employed to develop, change, or provide financial services".

The main features of Fintech:

- Providing technology-enabled innovation in financial services.
- The ability to substantially improve and change business models, applications, regulatory supervision, processes, or products.

7-3 THE SCOPE OF FINTECH ACTIVITIES

Fintech is used in several financial areas; including retail and capital markets and financial infrastructure. The FSB has recently classified Fintech applications into five broad financial categories:

1. Payments, clearing and settlements.
2. Deposits, lending and raising capital.
3. Insurance.
4. Investment management.
5. Market support.

7-4 LATEST FINTECH INNOVATIONS

A wide set of technological innovations has emerged in the last decade. Although part of these innovations emerged for decades ago, but they were not used to provide innovative financial services. Development in basic technologies have created new applications that incorporate all financial functions. The following are Fintech's prominent innovations:

- Cloud Computing.[21]
- Blockchain.[22]

[21] Cloud Computing Technology: a model for enabling network appropriate and on-demand access from anywhere to a shared set of configurable system resources (such as networks, servers, storage media, applications, and services) at the cloud service provider.

[22] Blockchain: a decentralized storage technology for transferring information of a set of transactions so that customers can transfer assets online without the need to a centralized third party. Blockchain technology will enable to trade encrypted transactions including bonds, stocks and other financial assets; which is the technique used in digital and encrypted currencies.

- Crypto-Currencies.[23]
- Digital Currencies.[24]
- Mobile Wallets.[25]
- Crowdfunding.[26]

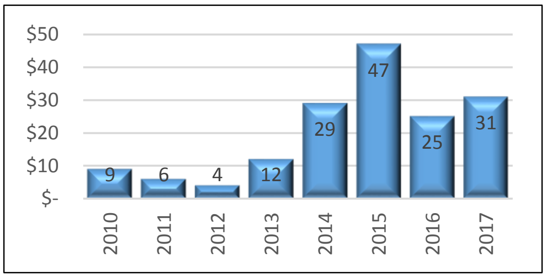
7-5 THE DEVELOPMENTS OF CUTTING-EDGE FINTECH

7-5-1 THE GLOBAL TRENDS OF FINTECH

Fintech initially emerged in 2008, aftermath the global financial crisis. Cutting-edge Fintech has grown considerably in recent years due to several factors, namely; rapid technological booming, increasing customers' expectations regarding services offered to them, the development of financial legislations, and market structure. According to experts, this boom is expected to continue.

The magnitude of Fintech investments increased from USD 9 billion in 2010 to reach USD 31 billion in 2017. The number of Fintech startups is estimated at more than 10,000 startups; The United States accounting for nearly half of the total investments in Fintech during 2017 with approximately USD 15.2 billion. In Asia, total Fintech investment approached USD 3.8 billion[27] in 2017.

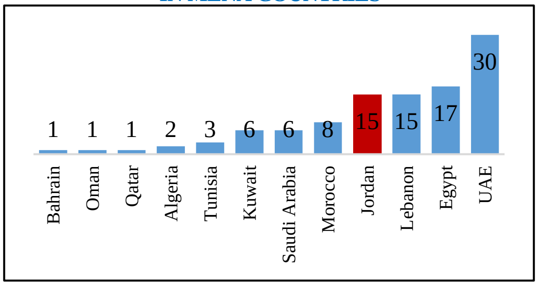
FIGURE (7-1): MAGNITUDE OF FINTECH INVESTMENTS DURING THE PERIOD (2010-2017) (USD BILLION)



7-5-2 DEVELOPMENTS OF FINTECH IN MENA COUNTRIES

The number of startups offering Fintech services in Arab countries totaled 105 companies as of end 2015. According to a specialized report issued by Payfort and Wamda platform,[28] these startups are operating in 12 Arab countries, of which 73% are based in UAE (30 companies), Egypt (17 companies), Jordan (15 companies) and Lebanon (15 companies). The report shed light on how these countries are appropriate ecosystems for Fintech; which is attributed to government support, interest of the private sector, financial literacy level, and political stability. The report also projected that the number of Fintech startups in MENA countries will increase to 250 companies by the year 2020.

FIGURE (7-2): NUMBER OF FINTECH STARTUPS IN MENA COUNTRIES



[23] Crypto-Currencies: A type of digital currencies, yet they are encrypted and decentralized, and have specific system and do not rely on intermediaries. They are intermediaries for electronic exchange through the Blockchain model using encryption technology. In order to control creation of money units and to ensure the transfer of funds; the amount of money supply is determined by certain regulations and rules without resorting to central banks. One of the most common Crypto-currencies is the Bitcoin.

[24] Digital Currencies: Virtual currencies that are traded online and do not have a physical substance, however they have central system which is subject to intermediaries.

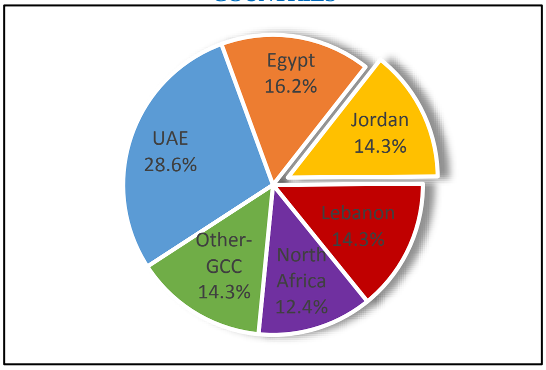
[25] Mobile Wallet: a digital or virtual solution, such as digital credit cards, which allow customers to make payments through mobile phones; a feature that uses biometric data and encryption to make payments and transfers.

[26] Crowdfunding: a collaborative financing through a platform that brings together investors and entrepreneurs who need to finance their projects. It has been developed in particular to finance small projects and startups by inviting the public to contribute to financing these projects. Projects are offered by their owners through crowdfunding platforms so investors can choose the project that meets their expectations. The financing provider will earn returns from the project or in-kind contributions to the project.

[27] Source: KPMG Report, "The pulse of fintech Q4 2017: Global analysis of investment in fintech", 13 February 2018.

[28] Payfort and Wamda platform report, "The state of fintech in MENA counties", 2017.

FIGURE (7-3): FINTECH OUTREACH IN MENA COUNTRIES



Total investment in Fintech startups in MENA region has reached USD 100 million over the last decade (2007-2016), whereas USD 36 million has been invested during the period (2014 -2016). It is worth mentioning that 84% of Fintech startups in MENA region are offering payments and lending services.

In terms of opportunities and drivers of the Fintech startups growth in MENA countries, they are triggered by several factors namely; financial exclusion as 86% of adults do not have bank accounts, SMEs lending in MENA region stands at half of the global average, in addition to the prospects of e-commerce which is set to quadruple in the next five years, as well as increasing customers' tendency towards digital banking services.

7-5-2-1 BARRIERS FOR FINTECH IN MENA COUNTRIES

The report of Payfort and Wamda platform "Fintech in MENA countries" indicated four barriers affecting the potential of Fintech startups in the region, which need to be addressed:

- **Policies and laws:** financial laws in some countries do not encourage Fintech investments, which requires to review and modify these laws.
- **Human Capital:** Fintech companies suffer the inability to recruit and retain competent personnel and experts in Fintech. This requires motivating persons with skills and expertise to work in startups and increase the awareness about Fintech entrepreneurship.
- **Support and investment:** Fintech startups access to finance is constrained. This shall be addressed through increasing the access of Fintech startups to business accelerators[29], as well as building partnerships with large companies or banks.
- **Market size:** the market size as well as domestic and international competitiveness are key challenges to Fintech companies. The entrance of international startups to the region is increasingly affecting the ability of local firms to expand and compete. This requires local companies to better investigate and analyze the market to improve their competitiveness and enhance customers acquisition.

7-6 BENEFITS AND RISKS OF FINTECH ON THE BANKING AND FINANCIAL SECTOR

As previously mentioned, Fintech features make it more competitive and attractive to customers, which jeopardizes conventional financial and banking systems and weighs on their profitability. Therefore, banks and financial institutions need to cope with advanced financial technology to compete with Fintech companies. To that end, several banks in Jordan started to induce changes to their business models, by investing in its own infrastructure, moving towards automatization to reduce expenses, as well as building partnerships with innovative startups by improving their competitiveness capacities and using Fintech to deliver and improve services.

Fintech's benefits and risks and their implications on the banking sector according to the Basel Committee on Banking Supervision[30] are described in the following table:

TABLE (7-1): FINTECH BENEFITS AND RISKS AND THEIR IMPLICATIONS ON THE BANKING SECTOR ACCORDING TO THE BASEL COMMITTEE ON BANKING SUPERVISION

Implications on Consumers	
Benefits	**Risks**
• Promoting financial inclusion.	• Confidentiality and security of data.
• Enhancing and improving banking services.	• Disruption of banking services arising from systems failure or cyber attacks.
• Reduce transaction costs and accelerate the provision of banking services.	• Inappropriate marketing practices.

[29] Business accelerator: an institution that provides the services of mentorship, training and communication in addition to small investments, in exchange for shares in the startups to help them in their early stages of growing business.

[30] Source: Basel working paper "Implications of fintech: developments for banks and bank supervisors", February 2018.

Implications on Banking System	
Benefits	**Risks**
• More efficient and sophisticated banking operations. • Innovative use of data for marketing and risk management. • Potentially positive impact on financial stability due to increased competition. • Use regulatory technology to enhance compliance to regulations.	• Strategic risks. • Jeopardize profitability of conventional banking systems. • Cyber risks. • Increase the level of interconnectedness among financial institutions. • High operational risks. • Third party risks. • Risk of non-compliance with regulations including financial consumer protection and data security. • Risks of money laundering and terrorism financing. • Liquidity risk and volatility of banks' sources of funds.

7-7 THE ROLE OF FINTECH IN PROMOTING FINANCIAL STABILITY

The development and spread of financial technology contributes to the promotion of economic growth and financial stability through several dimensions. The following are the potential advantages of financial technology and its implications on financial stability[31]:

Decentralization and diversification: decentralization and diversification of the financial system can dampen the effects of financial shocks in some circumstances. Furthermore, failure of a single institution or type of institutions is less likely to lead to halt providing financial services as there would be other institutions/ types of providers of these services.

Efficiency: improving efficiency of operations arising from the distinguished traits of Fintech and incentives created by contestability, supports stable business models of financial institutions and contributes to the overall efficiency gains in the financial system and the real economy.

Transparency: reduces information asymmetry and unfair practices in markets, and enables risks to be more accurately assessed, which strengthen financial stability.

Access to and convenience of financial services (promoting financial inclusion): facilitating access to financial services will promote the financial inclusion of individuals and businesses, including SMEs. This is crucial for supporting sustainable economic growth and providing a diversification of exposure to investment risk.

7-8 RISKS ASSOCIATED WITH FINTECH AND IMPLICATIONS ON FINANCIAL STABILITY

Investing and dealing with Fintech remains limited in comparison with conventional financial services, hence the implications and risks on financial stability are still relatively minor. However, the rapid and steady growth of Fintech may trigger new potential risks to financial stability. These risks are classified into **microfinancial and macrofinancial risks**.

7-8-1 MICROFINANCIAL RISKS

These risks may affect individual financial institutions yet can impact the financial system as a whole if they were substantially problematic, or affecting a whole sector. These risks can also harm essential services or markets. The following section elaborates on microfinancial risks and their implications on financial stability:

7-8-1-1 OPERATIONAL RISKS

Governance/ operational controls risks: poor management can increase financial risk. Fintech may not be subject to the same level of supervision on governance and operational processes as regulated financial institutions. This may imply challenges or risks on the financial system, particularly when Fintech companies grow rapidly.

Cyber risk: which is the risk of financial loss and/ or reputational harm for an institution as a result of a defect or failure in its technical infrastructure. The vulnerability of the financial activity to a cyber-attack is higher as financial systems are more interconnected. Fintech could increase these risks; as cyber-attacks incrementally threaten the entire financial system.

In this regard, platforms of crowdfunding are prone to cyber attacks, which would result in losing personal data of users. Such risks can arise

[31] Source: FSB, "financial stability implication from fintech", 2017.

if the crowdfunding platform lacks a secure management policy of documents, or it is unable to adequately address cyber attacks. In addition, the anonymity of an investor in digital currencies may increase the likelihood of cyber attacks. Ransomware Wannacry's [32] cyber attack for example revealed that hackers often prefer virtual currencies because of inadequate controls.

The competitive advantage arising from ease of accessing markets can lead to the adoption of new unprecedented technologies which are not sufficiently tested.

In the light of these risks, the process of integrating cybersecurity into early system design and raising the awareness in the technical and technological fields are essential in contributing to the reduction of possible cyber events which may have negative effects on financial stability.

Third-Party reliance risk: These risks may arise when financial institutions are reliant on the same third parties to obtain necessary services that enable them to provide Fintech services. These risks are increasing when financial institutions are reliant on services provided by third parties beyond the regulatory framework (such as cloud computing and Robo-Advice).

Legal /regulatory risk: Fintech activities are innovative, and they are not subjugated to effective legislations, in addition regulatory frameworks are not adapted to developments in Fintech area which may increase legal risks for fintech users. For example, lenders and borrowers, through crowdfunding platforms, may encounter the problem of uncertainty about their rights and obligations towards involved parties, especially with the absence of a legal framework governing these activities. This risk will increase if the crowdfunding platform does not disclose accurate information about the services and contractual rights and obligations applicable to the parties concerned.

Infrastructure risk: expansion of Fintech activities could weaken the role of conventional financial intermediation in the financial system. For example, the use of blockchain technology, which can be activated by the new Fintech companies, can induce changes in the market infrastructure in terms of clearing and settlement operations and terminating the role of conventional intermediation services providers. These changes may therefore have a potential impact on market infrastructure such as payment systems and securities settlement systems.

7-8-1-2 FINANCIAL RISKS

Maturity mismatch risk: These risks apply primarily to crowdfunding platforms, as they provide sales options that allow investors to sell their loans to other investors before their maturity in exchange for a fee, which may lead to higher risk of maturity mismatch.

Liquidity risk: These risks arise when assets and liabilities have different liquidity features, as financial institutions are exposed to the risk of being unable to immediately liquidate the assets. It is worth indicating that the lack of a physical and regulatory market for crowdfunding platforms makes it difficult to liquidate obligations. Also, lenders may face liquidity problems if the loan is not repaid on time after finalizing the funded project.

Financial leverage risk: financial leverage is normally not associated with Fintech activities in its current form, however; in some circumstances temporary issuances of bonds or equity are financed through crowdfunding platforms. In addition, a small proportion of Fintech financing platforms use their own funds to finance issuances, which may raise leverage risks.

7-8-2 MACORFINANCIAL RISKS

Macrofinancial risks are those affecting the overall financial system, and can amplify and increase shocks that impact the financial system. Several macro financial risks have been identified by authorities, which may arise from Fintech activities, including the following risks:

Contagion risk: The failure of an institution or a component of the financial sector may spill over to other institutions or sectors, either through direct exposure or as a result of the level of

[32] A cyber attack (malicious virus) restricts access to computer system and request money or any other request to be paid for the hacker to allow access to files in the system.

interconnectedness, which may result in a general loss of confidence in those institutions or sectors.

Pro-cyclicality risk: market participants can act in a manner that exacerbates the degree and effect of cyclical fluctuations on the financial system in the short and/ or the long term. For example, the interaction between investors and borrowers is more volatile in crowdfunding platforms than conventional financial intermediation. For instance, a sudden and unexpected increase in NPLs could lead to loss of confidence by financing providers and thus not offering new financings. In certain circumstances, crowdfunding platforms and Fintech credit intermediaries may have limited capacity and standards for assessing credit quality, which can result in extensive provision of lending (or provide less credit) which subsequently increase the impact of cyclical fluctuations and financial shocks on the financial system.

Systemic importance risk: rapid growth in Fintech can lead to the emergence of systemically important Fintech companies in the future. Blockchain technology, for example, allows for a wide range of potential applications, including playing a central role in the settlement of securities, replacing the central counterparty clearing house (CCPs). In addition, digital currencies and e-wallets can supersede conventional payment systems and thus threaten the role of conventional financial intermediation. Moreover, if loans granted through crowdfunding platforms capture a large share in credit markets; systemic risks may evolve.

7-9 RECOMMENDATIONS OF SUPERVISORY AND REGULATORY BODIES

The FSB issued a report that highlights ten major issues that need to be addressed by regulatory authorities regarding Fintech. The first three aspects are suggested to take priority in international cooperation[33]:

1. Managing operational risks arising from third parties service providers.
2. Mitigating cyber risks.
3. Monitoring macrofinancial risks.

Other issues that merit attention by authorities:

4. Cross-border legal considerations and regulatory arrangements.
5. Governance and disclosure frameworks supporting big data analytics.
6. Assessing the regulatory perimeter and updating it on a timely basis.
7. Shared learning with a diverse set of private sector parties.
8. Further developing open lines of communication across relevant authorities to ensure the preparedness to confront any risks are likely to occur.
9. Building staff capacity in new areas of required expertise.

10- Studying alternative configurations of digital currencies and their impact on monetary policy and financial stability.

7-10 FINANCIAL TECHNOLOGY IN THE KINGDOM

Jordan witnessed a remarkable evolution in the field of financial technology and innovation, as it has an innovation supporting investment environment. In addition, there is an increase in the demand for financial technology at the Jordanian market.

The payment systems strategy in Jordan during the period (2013-2016) has paved the way towards developing payment systems at wholesale and retail sectors, and providing the financial sector with modern payment instruments. The CBJ (along with banks operating in Jordan and relevant stakeholders represented by the National Payments Council) has developed and restructured the payment and settlements systems in the Kingdom, as detailed in chapter two of the report "The Infra and Legislative Structures of the Financial System".

7-11 REGULATORY FRAMEWORK OF FINANCIAL TECHNOLOGY IN THE KINGDOM, AND THE ROLE OF THE CBJ IN SUPPORTING MODERN FINANCIAL TECHNOLOGY

The CBJ announced its support to the initiatives and innovations which use the latest global technology including the Blockchain

[33] Source: FSB, "financial stability implication from fintech", 2017

technology, with giving priority to the applications which enhance the accessibility to digital financial services easily, efficiently and safely, while considering the controls of strengthening cyber security for financial services in general. Following are key legislations regulating the financial technology sector in the Kingdom, issued by the CBJ during the year 2017, and the first half of 2018:

- As mentioned in “the infra and legislative structures of the financial system” chapter, the CBJ launched the Fintech Regulatory Sandbox [34] Guideline in the beginning of 2018, aiming at creating an incubator for business pioneers to support and promote innovation and development in the Financial Technology Sector, which will in turn enhance competitiveness in the field of digital financial services, efficiency, effectiveness, and safety of money transfers, and promote 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 guideline included a definition of Fintech Regulatory Sandbox, its goals, scope, targeted segments, related risks, methodology, and the phases which the activities go through in the Sandbox. The first accepted application for joining the Sandbox, was a project related to developing a product for mobile payment. Currently, work is still in progress for providing a technical and legal experimenting environment to carry out the testing and experimenting operations for the project according to the frameworks identified in the Fintech Regulatory Sandbox Guideline.
- The CBJ launched the Cloud Computing Guideline in March 2018. This guideline tackles clarifying the definition of the cloud computing technology [35] and its main characteristics, publication templates, related service forms, and guidelines regarding some important issues, which the companies must carefully look into when using this technology, of which; cloud computing governance, its risks management, business continuity, in addition to the controls and mechanisms used for protecting their data safely and effectively. The guideline also includes a special appendix for regulations and circulars issued by the CBJ regarding 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 facilitate the banks’ referral to it.
- Instructions of Cyber Risks Resilience [36] No.26/1/1/1984 dated February 6th, 2018 were issued. The provisions of which apply to 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’ ability to withstand cyber -attacks with high technicality and professionalism, and enabling them to continue providing their services and carry out their operations safely, and promote investing in the field of electronic and cyber security, due to its importance and role in achieving a technological progress that serves the national economy. These instructions require from the subject parties to set and regulate the appropriate processes and procedures in line with best international practices for managing cyber risks and penetration testing, enhancing the controls for protecting the systems, programs, networks, as well as network devices, detecting and responding to and recovering from emergency cyber security incidents reaching the achievement of an effective and efficient approach for cyber governance.
- The CBJ issued a circular No. (10/3/3777) dated March 14th, 2018, directed to banks operating in the Kingdom, in addition to

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

[35] Cloud Computing Technology: a model for enabling network access from any place, in an appropriate manner and on demand to a joint group of configurable computing sources (such as networks, servers, storage means, applications and services) with the cloud service provider.

[36] Cyber (Electronic) Risks: is a risk of financial losses and/or bank’s disruption or damage to the reputation due to malfunction or failure in the relevant technical infrastructure.

financial companies, exchange companies, payment cards companies, and payment and electronic transfer companies regarding the continuity of the prohibition of dealing with Bitcoins and all other cryptocurrencies.

- Within the framework of CBJ's support to financial technology in the Kingdom, the CBJ, with the cooperation of key stakeholders, established the National Financial Technology Centre (Jo-NAFTECH) in October 2017, which represents a high level discussion meeting among all related parties and numerous stakeholders to promote and support financial technology innovations in the Kingdom.
- The CBJ also signed on February 28th, 2018 an agreement with Bill and Melinda Gates foundation, indicating that the foundation will provide assistance for the Kingdom in the amount of USD 3 million to support CBJ's programs in launching the Mobile Money for Resilience (MM4R) initiative. The MM4R program aims at providing access to financial services for low-income citizens and refugees. The initiative targets increasing financial contributions to reach USD 11 million over the following five years, to expand access range for electronic financial services provided from the government and money transfer programs from humanitarian assistance organizations.
- Within the framework of enhancing the use of digital financial services, the digital transfers partnership initiative (Digi#ances) was launched, as a joint project by the CBJ and the German Agency for International Cooperation (GIZ); aiming at using digital solutions in carrying out international transfers through the JoMoPay system, and improving the usage of digital financial services in Jordan.

The CBJ also issued instructions regarding regulating the payments services and electronic transfer of funds sector as follows:

- Instructions of financial collaterals for payments services and electronic transfer of funds companies No. (1/2018) dated March 14th, 2018. These instructions include the requested requirements and collaterals for providing electronic money issuance and management services after gaining CBJ's approval. The instructions also regulated the complete separation process between the company's funds and the clients' funds.
- Instructions on payment and electronic transfer of funds companies' licensing fees No.2/2018 dated March 14th, 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 March 14th, 2018, which included the minimum limit for paid-in capital for the company to practice payment services activities.
- Instructions on dealing with electronic payment of funds services companies' agents No. (4/2018) dated March 14th, 2018. These instructions regulate the minimum limit of terms, requirements, and standards which the payment services providers should commit to when dealing with the agent for providing some or all licenced activities through the systems and tools operating at the payment services provider.
- Instructions on allowing foreign companies to practice payment services and electronic funds transfer activities No. (5/2018) dated March 14th, 2018, which included terms and requirements necessary for allowing foreign companies, through a branch registered according to the Companies' Law provisions to practice the activities of payment services and electronic transfer of funds, in addition to licencing procedures and cancellation cases.
- Automated teller machines (ATM) Instructions No. (6/2018), dated April 11th, 2018, addressed to companies operating in the Kingdom and licensed by the CBJ to practice the electronic management of cash deposits and withdrawals activity through ATMs in addition to all banks operating in the Kingdom. The instructions included ATMs installation terms, in addition to technical and security conditions which should be available at ATMs. They also emphasized that the payment service provider (a bank or a company) should commit to providing a special unit for managing and monitoring all

ATMs and undertaking the necessary measures for protecting the users.

- External audit instructions for payment services and electronic transfer of funds companies No. (7/2018) dated May 2nd, 2018, which included the minimum requirements which has to be embedded in the external audit policy, prepared and approved by the company, in addition to the criteria of choosing the audit office, and the necessity of ensuring the ability of the party contracted with for providing technical and technological audit services.
- Technical and technological requirements instructions for payment services and electronic funds transfer companies No. (8/2018) dated May 2nd, 2018, which included information technology and communications environment requirements necessary for providing payment services or managing and operating the electronic payment services and their protection requirements, and 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 May 2nd,2018 which include the necessity of the company's approval on the outsourcing policy, as well as identifying the nature and scope of the outsourcing occurring 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 May 2nd, 2018 which include corporate governance requirements for payment and electronic transfer of funds companies, as corporate governance represents the system which directs and manages the company, and 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 company's commitment to legislations and its internal policies
- The requirements of providing issuance and management of electronic money services No. (11/2018) dated May 2nd, 2018 which commits 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 identified by the provisions of these instructions of electronic money issuance and management terms and the controlling disciplines.
- Anti-money laundering and counter terrorism financing instructions for payment services and electronic funds transfer companies No. (12/2018) dated May 28th, 2018. These instructions identified the necessary care requirements which should be considered by the payment services and electronic transfer companies, whereas the instructions prohibited these companies from maintaining accounts or entering into relations with unidentified persons or with fake or fictitious names, or fake banks or companies. These instructions also dealt with the programs which should be implemented on the financial groups and external branches regarding anti-money laundering and counter terrorism financing and the provisions which should be followed when dealing with all incoming and outgoing transfers including electronic transfers sent or received by the company subject to these instructions. The instructions also included the necessity of notifying the anti-money laundering and counter terrorism financing unit about the operations suspected of being linked to money laundering or terrorism financing, as under the provisions of these instructions, the anti-money laundering and counter terrorism financing for the providers of payment services through the mobile phone instructions No. (1/2014) for the year 2014 were canceled.
- The Instructions on Internal Procedures for Handling Consumers' Complaints of Financial and Banking Services Providers" No. (1/2017) were issued by the CBJ on August 28th, 2017

which provisions are applied on banking and financial services providers subject to the oversight and supervision of the CBJ (including banks operating in the Kingdom, and the financial institutions which are subject to the supervision and oversight by the CBJ).

- Circular No. (26/2/1/10136) dated July 20th, 2017 directed to payment services providers in the Kingdom, including the counter terrorism financing guideline for banks, exchange companies and payment services providers, while emphasizing on the necessity of the inclusion of terrorism financing indicators mentioned in the manual in the systems they use, in addition to holding internal training courses for introducing these indicators to the relevant employees.
- Instructions for personal data protection of payment services and electronic transfer clients No. (l/1/5/5537) dated April 12th, 2017 which provisions apply to electronic payment systems administrators and payment services providers (the company licensed to practice any payment activities). These instructions include the policies and procedures which the company must set for protecting clients' personal data and considering complete privacy of all their data, and the issues to be considered when collecting clients' personal data, processing them, storing them, and providing security protection for them.
- Instructions on financial consumer protection and dealing with the complaints of payment system through mobile phones clients No. (1/1/5/4941) dated March 30th, 2017 which provisions are applied on all payment services through mobile phones providers and their agents, who are registered at the CBJ, as these instructions regulate the protection of the clients of payment services by mobile phone and dealing with complaints.

The CBJ has previously issued instructions and by-laws controlling and regulating the technology sector in the Kingdom, of which we mention the following:

- Instructions for presenting and collecting bills electronically issued in 2014 and their amendments.
- Instructions for mobile payments issued in 2013 and their amendments.

7-12 CONCLUSION

In the current time, financial technology doesn't represent a threat to financial stability due to its small size and limited interconnection with financial institutions, and its early to provide a final estimation for the overall risks or benefits related to financial technology at this time.

Noting that and despite the importance of financial technology in enhancing financial stability and financial inclusion, however, it might bring new risks to the financial system, and may have repercussions on the financial stability specially if it continues growing at a high pace. Accordingly, central banks and regulatory bodies should intently monitor financial technology developments to be able to develop and improve the legislative, regulatory, and supervisory framework for financial technology to minimize potential risks.

CHAPTER EIGHT: THE IMPACT OF IMPLEMENTING THE INTERNATIONAL FINANCIAL REPORTING STANDARD NO. 9 (IFRS9) ON THE BANKS OPERATING IN THE KINGDOM

8-1 INTRODUCTION

The last global financial crisis in 2008 resulted in a decline in the value of financial instruments, followed by delayed recognition of the credit losses regarding loans (and other financial instruments) leading to an aggravation of the crisis. This vulnerability of accounting standards made banks incur losses. Accordingly, the Group of Twenty (G20), investors, regulatory bodies, supervisory authorities, and international accounting standards- setters demanded developing the standards and basis for calculating credit allocations. As a result, a new model for expected credit losses, was added by the International Accounting Standards Committee (IASC) as part of IFRS9 to prove the expected losses of financial instruments, which requires faster recognition of credit losses, and requires calculating loans allocations from the first day (the origination date) of the loan, and before the event of default which will have an impact on measuring credit risks. Specifically, the new standard requires banks and financial institutions to register expected credit losses from the first day of recognizing the financial instruments. The expected losses should be recognized over their expected life and in a faster manner, in addition to other variables related to the standard such as hedge accounting. As a result of these reforms, the risk management and disclosure of financial and accounting information issue gained an increasing importance in financial markets.

IFRS9 brings up a substantial amendment on business models of banks, and is considered a significant reforming model for hedge accounting, while enhancing disclosures regarding risk management activity. The new accounting standard represents a big convergence and consistency between accounting standards and risk management activities, allowing the banks and financial institutions to better reflect those activities in their financial statements. In addition, the users of financial statements will be able to get better information on risks management and the impact of hedge accounting on financial statements.

Moreover, applying the IFRS9 will help avoid the problem of profits and losses fluctuations, occurring as a result of changes in credit risks of the instruments which are intended to be measured by fair value. The profits resulting from the reduction of credit risks for any of these instruments, are no longer achieved in the profit or loss statement.

As we mentioned the IFRS9 obliges all banks to build precautionary provisions for future expected losses on all credit assets once generated and during the different phases of their life, which requires banks to re-evaluate all assets and set new accounting technology systems which qualify them to implement the new standards.

8-2 THE IMPACT OF IMPLEMENTING IFRS9 ON THE STABILITY OF THE FINANCIAL SYSTEM

Since the global financial crisis, focus on the interaction between financial stability and International Financial Reporting Standards increased, due to the significant impact of these standards on the credit policies of banks and financial institutions and their ability of financing. In addition, enhancing financial solvency of the financial system through implementing the new accounting standard strengthens financial stability.

Major impacts of implementing IFRS9 on financial stability are as follows:

Enhancing transparency and comparability

The changes made on the accounting methodology for financial instruments will contribute to enhancing transparency and comparability. Transparency is considered a key element for strengthening financial stability, through promoting confidence in data accuracy and quality, thus enhancing confidence in the financial system. Although the transparency provided by the standard might have some negative effects over the short term due to the errors and hidden discrepancies which may show up as a result of its implementation. However, correcting these errors will be better when using high quality accounting standards which prevent the management from accepting unnecessary risks, and provide them with the data at the appropriate time, and enable them to take the right decisions. This will reflect on enhancing financial stability over the medium and long term.

Strengthening clients' trust

It is expected that implementing IFRS9 will reflect positively on the level of deposits with the banks, through enhancing depositors trust in the banking sector and raising turnout on depositing, due to depositors realizing that this standard will strengthen the soundness and solidity of banks, which enables banks to provide necessary liquidity to fulfill their obligations. Implementing the new standard will also lead to improving credit solvency studies for clients which represents better protection for banks from any risks related to borrowers inability to fulfill their financial obligations, and ensures the availability of potential provisions for tackling any possible default, and contributes to adding wider and more comprehensive concepts in risk management, which in turn requires the availability of sound governance structure and procedures at banks to ensure proper implementation for the concepts included in the standard.

Reduction of Pro-Cyclicality

In addition, IFRS9 may enhance financial stability through mitigating the impact of pro-cyclicality on the financial system, as the expected credit losses (ECL) model reflects future macroeconomic circumstances, and ensures recognition of credit losses when first signs of economic downturn appear. This means that banks recognize credit losses in a phase of high profits and become more capable of bearing losses which may occur in the phases of economic and financial cycle downturn.

The impact of implementing the standard on allocations and capital adequacy

During the transition period for implementing IFRS9, there is an important issue regarding the increase in allocations resulted from changing the credit losses recognition method and its impact on the regulatory capital and capital adequacy ratios. According to some studies, it is expected that this impact will be limited in the short run. Nevertheless, for some banks, the impact on capital adequacy ratios might be more significant. As for the medium and long term, IFRS9 will strengthen the soundness and solvency of banks through improving transparency and on-time recognition of credit losses compared to the international accounting standard No. 39 (IAS39), and through reducing cyclical fluctuations and their effect on the financial system.

Meanwhile, several recent studies conducted by supervisory authorities and some private companies estimated the transitionary effect of implementing IFRS9 on provisions, capital adequacy ratio, and high quality capital ratio (Common Equity Tier 1 "CET1") as follows:

- An increase in the allocations by a rate ranging between 13% to 25%.
- A reduction in high quality capital ratio (common equity tier 1 "CET1") by 45 to 50 basis points.
- A drop in the capital adequacy ratio by a rate ranging between 31 to 35 basis points.

The following table shows a comparison for the transitionary effect of implementing the standard for some geographic areas according to the aforementioned studies:

TABLE (8-1): COMPARING THE TRANSITIONARY EFFECT FOR IMPLEMENTING IFRS9 FOR SOME GEOGRAPHIC AREAS

Study	Area	Number of Banks	Impact on Provisions	Impact on High Quality Capital Adequacy Ratio(CET1)	Impact on Capital Adequacy Ratio
Barclays (2017)	Europe	27	+17%	-50 basis points	--
Deloitte (2016)	Europe, Middle East, Africa, Asia, Pacific, and Americas	91	+25%	-50 basis points	--
European Banking Authority (EBA)	Europe	49	+13%	-45 basis points	-35 basis points
Moody (2017)	Europe, Middle East, Africa, Asia, Pacific, and Americas	185	-	-50 basis points	--
European Central Bank Single Supervisory Mechanism (ECB SSM) (2017)	Europe	91	-	-50 basis points	--

8-3 THE IMPACT OF IMPLEMENTING IFRS9 ON BANKS OPERATING IN THE KINGDOM

The resulted impact of implementing the new standard IFRS9 on debt provisions and capital adequacy ratio on the banking sector level in Jordan was calculated. The results revealed the following:

- An increase in the allocations held by all banks in Jordan by 31%. The value of credit facilities impairment provisions as of December 31st, 2017 reached JD 721. 4 million, noting that the provisions will increase due to implementing the new standard by JD 222.9 million.
- A reduction in regulatory capital from JD 4,309 million to JD 4,086 million, declining by JD 223 million (5.2%).
- A decline in capital adequacy ratio from 17.8 % to 16.4 %.

Accordingly, the impact on capital adequacy ratio is a limited impact, as the rate will remain higher and by a comfortable margin than the minimum level required in Jordan standing at 12%. Noting that this impact is a transitional effect happening at the beginning of the implementation. However, on the medium and long term, as we clarified, it is expected that implementing the new accounting standard will reflect positively on strengthening soundness and solidity of banks as well as their capital adequacy level, and enhancing their capability to withstand risks.

The CBJ also issued instructions for implementing IFRS9 No.13/2018 dated June 6th, 2018 directed to all banks operating in the Kingdom and on all levels. These instructions included governance requirements for sound implementation for the requirements of IFRS9, in addition to the requirements of the three pillars covered by the IFRS9, which are (classification and measurement), (expected credit loss/ impairment) and (hedge accounting). The IFRS9 includes a methodology for managing risks in banks (in addition to the accounting framework), as we mentioned in chapter two of the report “the infra and legislative structures of the financial system”.

8-4 IFRS9 AND ITS RELATION WITH BASEL III

The accounting standard No.9 and Basel committee’s standards, specially the last Basel III standard, intersect with each other having a forward looking vision for risks. Both standards are heading towards more conservatism and increasing the soundness and solvency of banks and hedging against potential shocks. The additional provisions which may result from implementing the accounting standard No.9 specially in the beginning of implementation lifts up the banks’ capability of facing risks and represents additional protection for capital even if they lead, in the beginning of implementation, to reducing banks’ profits, thus bringing down their capital adequacy ratio. However, on the medium and long term, implementing this standard raises banks’ hedging against risks, through building provisions for hedging against expected losses from the first day of extending the loan, which in turn represents an additional hedging margin reducing the burden on capital and enhances banks’ solvency. According to international studies, implementing Basel III standard helps and prepares for the implementation of the accounting standard No.9 in a more flexible manner specially for the banks which use the advanced methodology for measuring credit risks (internal ratings-based approach “IRB”), as it was noticed that the impact of implementing IFRS9 standard on them is lower than the banks using the standard method, because the advanced methodology (IRB) largely intersects with the accounting standard No.9 through the inclusion of both standards for calculating expected losses (EL) which require estimating default probability (PD), loss given default (LGD) and the size of exposure at default (EAD). The expected loss is calculated through the following equation:

$$EL = PD * LGD * EAD$$

8-5 CONCLUSION

Based on the above, and despite the results revealing that capital adequacy ratio will slightly decline at the banks in Jordan affected by the increase in provisions at the beginning of the implementation of the accounting standard No.9 and their impact on profits. This standard will on the medium and long term enhance the soundness and solidity of the banks through improving transparency and the timely recognition of credit losses compared to the International Accounting Standard No. IA39. In addition, it will reduce the impact of cyclical fluctuations in the financial system. Further, the new standard No.9 also contributes to adding wider and more comprehensive concepts in risk management, which in turn requires sound governance structure and procedures, as well as technological accounting systems at the banks to ensure achieving sound implementation for concepts included in standard No.9.