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The Financial Stability Report (FSR) is a semi-annual report prepared by the Financial Stability Directorate. It is available in PDF format in the Publications and Data section at http://www.cbb.gov.bh.

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Preface

A key objective of the The Central Bank of Bahrain (CBB) is to ensure the continued soundness and stability of financial institutions and markets. As the single regulator for the Bahraini financial system, CBB attaches utmost importance in fostering the soundness and stability of the financial system. CBB recognizes that financial stability is critical to maintaining Bahrain's position as a regional financial centre and ensuring that the sector continues to contribute significantly to growth, employment and development in Bahrain.

> *Financial stability can be defined as a situation where the financial system is able to function prudently, efficiently and uninterrupted, even in the face of adverse shocks.*

This objective is the primary responsibility of CBB's Financial Stability Directorate, which conducts regular surveillance of the financial system to identify areas of concern and undertakes research and analysis on issues relating to financial stability. In pursuit of its objective of promoting financial stability, the CBB conducts regular financial sector surveillance, keeping a close watch on developments in individual institutions as well as in the system as a whole.

The Financial Stability Report (FSR) is one of the key components of CBB's financial sector surveillance framework. Produced semi-annually by the Financial Stability Directorate (FSD), its principal purpose is macro-prudential surveillance, assessing the safety and soundness of the financial system as a whole (intermediaries, markets and payments/settlement systems). The ultimate objective of such macro-prudential analysis is to identify potential risks to financial stability and mitigate them before they crystallize into systemic financial turbulence.

The FSR is prepared regularly for the CBB management, reviewing recent trends and identifying areas of concern which require supervisory and policy attention. Financial Soundness Indicators (FSIs) are used to monitor the financial sector on a continuous basis.

This new edition of the FSR is organized into seven chapters divided into three parts part as follows:

- Part I: looks at national and international developments:
  - Chapter 1 reviews recent international financial developments.
  - Chapter 2 examines the recent developments in Bahrain's financial sector and the household sector.
- Part II: looks at the developments in the banking sector:
  - Chapter 3 evaluates the financial condition and performance of conventinoal banks
  - Chapter 4 evaluates the financial condition and performance of Islamic banks.
- Part III: looks at the developments in equity market and payment and settlement systems.
  - Chapter 5 reviews recent trends on the equity market.

- Chapter 6 focuses on stability issues relating to the payment and settlement systems.
- Chapter 7 focuses on cyber risks and cybersecurity issues in relation to financial stability.

Unless indicated otherwise, Chapter 3 and Chapter 4 of the report analyzes data covering the period between end-September 2015 and end-March 2016.

Executive Summary

Global Macro Financial Environment Overview

The global economic and financial conditions have weakened and potential growth rates are being revised downward by major international organizations, i.e. the IMF, THE World Bank and OECD. Across major advanced economies, the recovery was strongest in the US, prompting the gradual removal of monetary policy stimulus. Concerns about the future of the UK and Europe after the separation on June 24th (Brexit) has amplified volatility, added further uncertainty and raised new concerns in the global financial markets. The recent OECD's data shows that since the fourth quarter of 2013, the Euro Area (19 countries) has been experiencing a positive and continuous growth. In the first quarter of 2016, Euro Area (19 countries) has achieved a growth by 1.7%. Similarly, the Eurozone (28 countries) had achieved 1.8% of growth in the first quarter of 2016 a bit lower than the previous three quarter where the growth rate was 1.9%.

The modest economic performance of the Eurozone economy and persistent uncertainty on the future of the UK within the Euro area have added some pressure on the European single currency. The Brexit will increase the challenges faced by the governments of France, Germany, the Netherlands and elsewhere in the continent notably in the Nordic countries and will add more uncertainty about Britain's future relationship with the EU, its largest trading partner on the future of the Eurozone and its currency and also uncertainty.

Despite the continuing uncertainty in the global economy, the GCC economies experienced growth at a level of 3.3% in 2015.Despite the trouble in the MENA region and the drop in oil prices, the member states of the GCC have been on a stable growth path. The ongoing economic performance in GCC countries is currently facing the challenge of oil price which declined by 50% since June 2014 and which will impact the authorities 'spending power.

The Non-Financial Sector Overview

Bahrain has emerged as a major regional financial center. This has been essential to the development of its economy and the financial sector has come to play a significant role in economic activity and employment creation. The insurance industry has progressed effectively during the past few years, which has grown into a regional hub. Insurance contribution increased remarkably from over the decade. The boom in Islamic banking and Islamic financial services make Bahrain a very attractive destination for Islamic finance.

The Bahraini financial and banking sector are still performing well and represent 17.1% of GDP in 2015. In Bahrain, the retail banking sector has continued to expand. The assets of the retail banking sector rose from BD 18.6 billion in 2007 to BD 31.22 billion in the first quarter of 2016. Despite an improvement in the volume of total assets in the wholesale banking sector during the six months of 2015, the volume became of USD 109 billion as of end April 2016.

Outstanding personal loans used as a proxy for household borrowing shows that the household debt increased throughout the period from May 2015 to March 2016. Personal loans as a percentage of GDP increased steadily reaching 29.8% in March 2016 until October 2015 and outstanding business loans reached 36.2%.

Conventional Banks

The financial soundness indicators show that for conventional retail banks the capital adequacy ratio decreased slightly to reach 18.1% in March 2016 compared to 18.7 in September 2015. Capital adequacy ratio for locally-incorporated wholesale banks decreased from 19.6% to 19.4% over the same period. Loan delinquencies have increased for conventional retail banks to 4.0% and for wholesale banks decreased to 5.1% at end of March 2016. Loan concentration remains for conventional retail and wholesale banks despite some decrease in some sectors.

As at end-March 2016, return-on-assets (ROA) decreased to 0.4% for conventional retail banks between March 2015 and March 2016. Return-on-equity (ROE) for locally-incorporated retail banks was 3.8% in March 2016 compared to 4.4% in March 2015. ROA for the conventional wholesale banking sector was at 0.3% in March 2016, a decrease from the 0.2% in March 2015. ROE for local wholesale banks decreased from 2.8% to 1.1% over the same period. For conventional retail banks liquid assets as proportion of total assets decreased to 25.3% while it increased for conventional wholesale banks to reach 22.7% over the same period.

Islamic Banks

The financial soundness indicators show that capital positions increased for Islamic retail to reach 15.8% while it decreased for Islamic wholesale banks to reach 19.5% in March 2015.

Non-performing facilities (NPFs) for Islamic retail banks increased to 12.4% in March 2016 from 11.7% in March 2015. Islamic wholesale banks also increased to reach 4.9% over the same period.

The earnings picture looks the same for Islamic retail banks with ROA unchanged at 0.1% in March 2016 and ROE increasing from 1.0% in March 2015 to 1.1% in March 2016. ROA and ROE for wholesale Islamic banks increased to 0.5% and 3.6% over the same period, indicating positive earnings. Moreover, Islamic retail banks liquid assets decreased to reach 10.5%, while they increased for Islamic wholesale banks to reach 20.2% at end of same period.

Performance of Equity Markets

A look at *year-on-year* data shows that the Bahrain All Share Index decreased by 249.5 points (18.2%) between June 2015 and June 2016. In the same period, the index scored its highest point in June 2015 when it was at 1367.83 points. As at end-June 2016, market capitalization of the Bahrain Bourse stood at BD 6.6 billion. This level of market capitalization is 10.7% lower than the level attained in June 2015 and 17.5% lower *year-on-year*.

The bulk of the value of shares traded in June 2016 was the "Services" sector whose traded shares (by value) represented 44.67% of total shares traded up from 12.7% in December 2015. The bulk of the volume of shares traded in June 2016 was the "Commercial banks" sector representing 40.67% of the total volume of shares traded. The majority of the number of transactions in June 2016 (873 transactions and a 15.74% decrease compared to December 2015) was attained by the "Services" sector at 361 transactions (41.36% of all transactions.

The GCC equity markets tumbled in 2016 amid low oil price. The price of a barrel of oil collapsed from $105.8 in June 2014 to $63.26 in June 2015 to $37.28 in December 2015 and to $49.68 in June 2016.

Payments and Settlement System

The various components of Bahrain's payments and settlement framework continue to function efficiently. The payment system in Bahrain can be classified as retail and wholesale payments. Retail payments include cheques, credit transfers, and debit and credit card transactions. Wholesale payments refer to the real time gross settlement system to process inter-bank payments.

By Jun 2016, the average daily volume of cheques processed through the Automated Cheque Clearing System (ACS) had a year-on-year decrease of 4.2% and the average daily value of cheques had a year-on-year decrease of 4.5%. The number of withdrawal transactions processed through the ATM Clearing System had a year-on-year growth of 15.6% and in value terms the withdrawals processed had a year-on-year growth of 17.6%. The average daily volume of transfers decreased by 59.3% year-on-year. In value terms, the average daily value of transfers had a 2.0 % year-on-year increase.

Cyber Risk

Cyber risk is steadily evolving into a main threat to all industries. Its impact however on the financial services industry is growing into an individually recognised risk by all financial institutions.

As part of The Central Bank of Bahrain's ongoing initiatives to assess the growing cyber risk in the financial services industry, a survey was issued for the first time by the Financial Stability Directorate in June 2016 to understand retail banks' perception of cyber risk. The survey indicated that only 0-35% of operational risk incidents recoded over the past year were cyber security related. According to the responses received, the only risk categorized by the majority of retail banks, as a moderately serious cyber threat (by almost 52.2%) is in the instance that a bank receives fraudulent emails, purportedly from customers, seeking to direct transfers of customer funds or securities.

The Financial Stability Board (FSB) conducted a study in which the FSB's Analytical Group on Vulnerabilities conducted an exercise where respondents were to give their assessment of macro-financial implications associated with some operational risk scenarios. The scenarios consisted of shocks that impair different parts of the financial system.

Part I:

Developments in the International and Domestic Financial Markets

1. Developments in the International Financial Markets

Chapter 1

Key Points

- Since the February 2016 Financial Stability Report, the global economy does not return to a sustainable path to recovery
- The ECB eased policy further at its March meeting to address concerns about low inflation
- The U.S. dollar continued to appreciate against many major and emerging market currencies amid divergent monetary policy expectations
- The Brexit has amplified volatility, added further uncertainty and raised concerns in global financial markets.

1.1 Overview

Global growth, currently estimated at 3.1% in 2015, is projected at 3.4% in 2016 and 3.6% in 2017. The pickup in global activity is projected to be more gradual than in the October 2015 World Economic Outlook (WEO), especially in emerging market and developing economies. Three key transitions continue to influence the global outlook:

1) The gradual slowdown and rebalancing of economic activity in China away from investment and manufacturing toward consumption and services,

(2) Lower prices for energy and other commodities, and

(3) A gradual tightening in monetary policy in the United States in the context of a resilient U.S. recovery as several other major advanced economy central banks continue to ease monetary policy.

During the previous six months, the global economic and financial condition was marked by some important events in advanced countries and emerging market economies as well. These events could be summarized as the following:

- Growth in advanced economies is projected to rise by 0.2% in 2016 to 2.1%, and hold steady in 2017. Overall activity remains resilient in the United States, supported by still-easy financial conditions and strengthening housing and labor markets, but with dollar strength weighing on manufacturing activity and lower oil prices curtailing investment in mining structures and equipment.

- In the Euro Area, the bloc grew a seasonally-adjusted 0.5% in Q1 over the previous quarter, which was slightly below the 0.6% reported in the new estimate. It is expected that Euro area economy will slow down in the coming quarters as Brexit will hit the current performance of some countries like Germany and France.

- China is striving to develop along similar lines and transform from an export-capital investments-driven economy into one based on domestic consumption and services. Long-term IMF forecasts predict a significant slowdown in China's growth in the coming years, to just over 6%. Brazil is mired in the longest recession in a hundred years. Its economy is shrinking at an alarming pace: current forecasts hold that the country will lose five years of real GDP growth by the end of this year. The recovery process is likely to be long and painful, as Brazil limps along at a less than 1% predicted annual growth rate until 2020.

- Growth in Japan is also expected to firm in 2016, on the back of fiscal support, lower oil prices, accommodative financial conditions, and rising incomes. Revised data show that the Japanese economy avoided recession in 2015—negative growth in the second quarter was followed by positive growth in the third quarter.

- The overall situation in the Middle East and North Africa (MENA) seems to have taken a turn for the worse at the start of 2016. Oil prices are still low and this is hurting oil-producing countries' reserves, while geopolitical risks, subdued global demand and challenging domestic conditions are putting a dent in MENA's growth.

- GCC countries are a central bloc of the MENA region; they have recorded strong economic performances boosted by large infrastructure projects and improvement in non-oil sector growth. This performance has strengthened the positions of GCC banks which remain well capitalized and profitable.

- In Bahrain, banks remain quite profitable and well capitalized, and their reported non-performing loan ratios remain low. However, the recent sharp drop in the prices of oil and some other commodities, should it become persistent, will weigh on the overall GCC economy.

In the following section, we analyze recent trends in the global economy and look at the evolution of major financial and economic indicators during the previous six months.

1.2 Global Macro-financial Environment

After a short period of prosperity, the global economic and financial conditions have weakened and potential growth rates are being revised downward by major international organizations, i.e. the IMF, THE World Bank and OECD.

Financial market sentiment remained positive with high equity prices, and spreads on Credit Default Swaps have continued to decline and yields on 10 Year Sovereign Bonds remain low relative to historical norms. However, global risk appetite increased, but market volatility was generally moderate and under controls.

1.3 Recent Trends in the Global Economy

A. Economic Performance

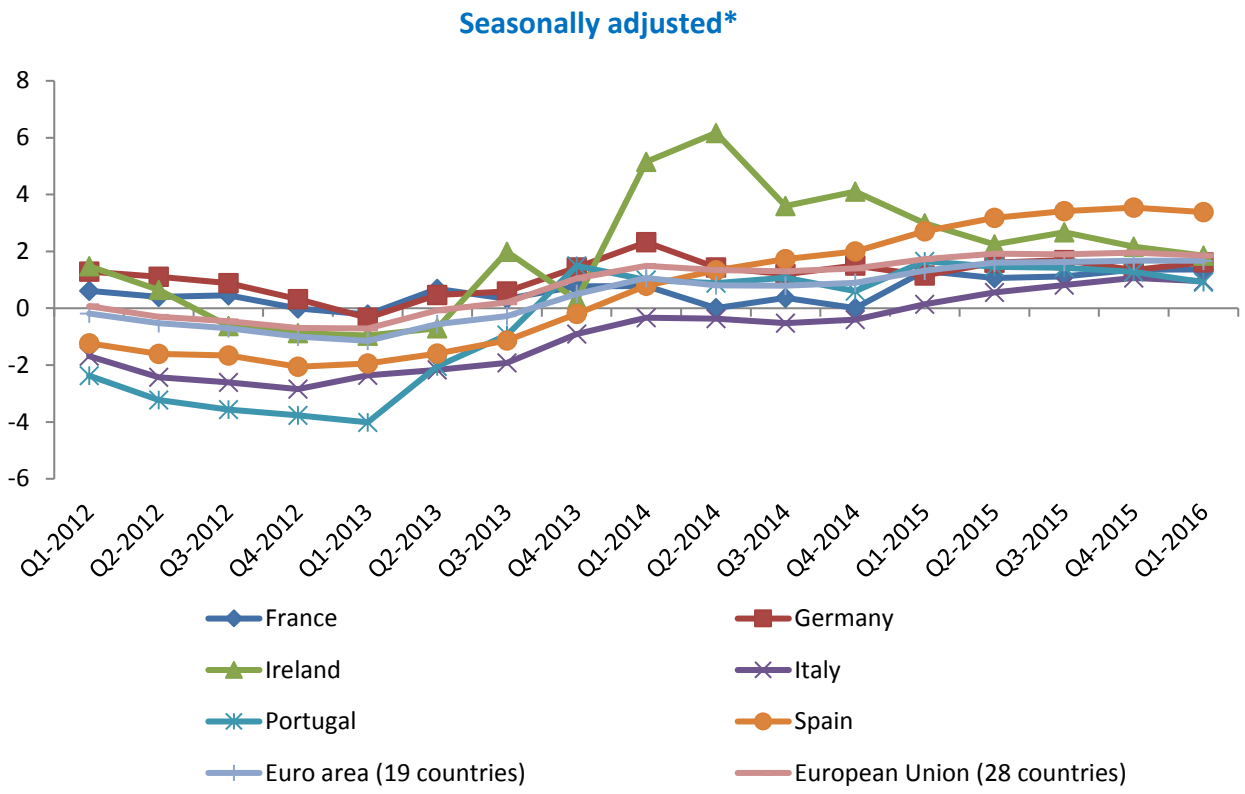
Since the previous edition of the Financial Stability Report, global economic activity slowed slightly but it remained subdued and growth remained uneven across countries and regions as well. Across major advanced economies, the recovery was strongest in the US, prompting the gradual removal of monetary policy stimulus. Similarly, the Australian, Canadian and UK economies had shown courageous signs of recovery during the recent period.

In contrast, the recovery in Europe remains fragile. Economic activity in the Euro area stalled since the second quarter with weaknesses in some Euro economies and increased geopolitical tensions. The recent OECD's data shows that since the fourth quarters of 2013, the Euro Area (19 countries) has been experiencing a positive and continuous growth. In the first quarter of 2016, Euro Area (19 countries) has achieved a growth by 1.7%. Similarly, the Eurozone (28 countries) had achieved 1.8% of growth in the first quarter of 2016 a bit lower than the previous three quarter where the growth rate was 1.9%.

At a country level study, Spain has surprisingly achieved the highest best performance as GDP growth reached 3.4% in the first quarter of 2016. Ireland has also achieved and outstanding economic growth in the first quarter of 2016 as growth rate was 1.9%; also the highest since the subprime crisis. Turning now to Italy, it finally realized a positive growth for the fifth consecutive quarter after a long period of recession.

Regarding the two most important economic powers in the Eurozone, France has realized a positive growth moving to 1.4% of growth in the first quarter of 2016 from 0% in the last quarter of 2014 and Germany, the largest economy in the Eurozone has experienced a better economic activities in the beginning of 2016 with GDP growth standing at 1.6 % in the first quarter of 2016 from 1.3% in the last quarter of 2015.

Chart 1-1: Real GDP Growth in Selected Europeans countries (Quaterly%)



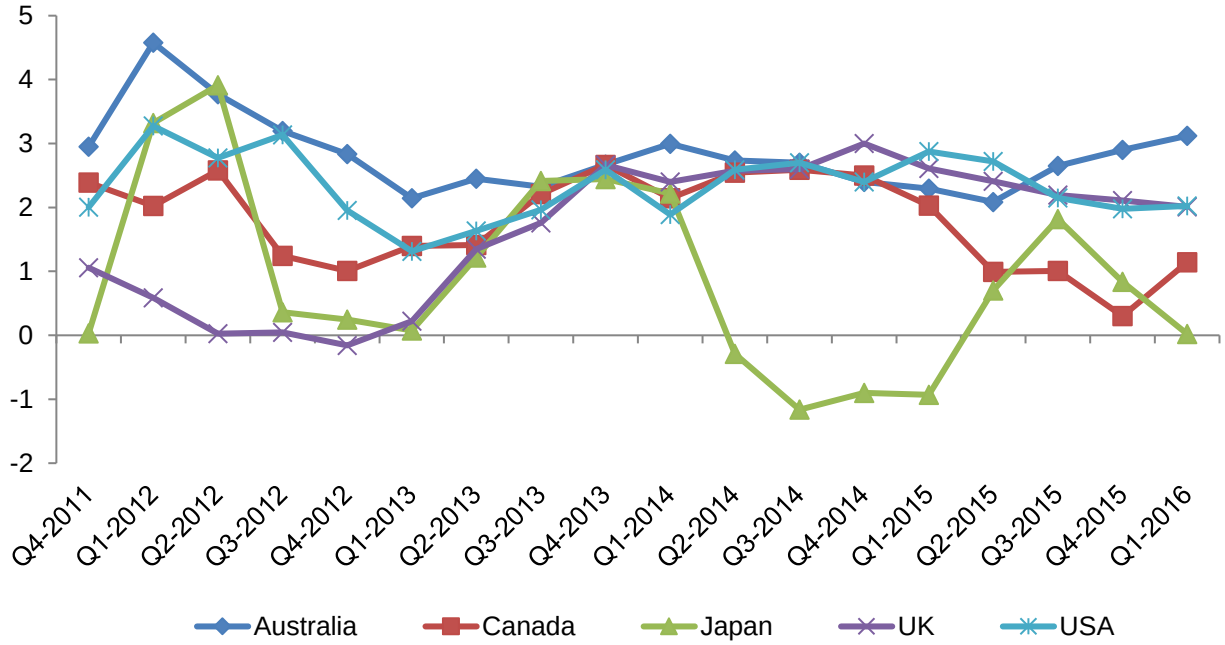
Growth rate compared to the same quarter of previous year, seasonally adjusted
Source: OECD Quarterly National Accounts

Regarding non-European countries (Chart 1-2), the economic conditions improved slightly, especially in the Australia, which recorded a positive GDP growth of 3.1% in the first quarter of 2015 where economic activity has remained robust. Similarly, the US economy has shown good sign of strong recovery as it recorded a growth rate of 2% in the first quarter of 2016. This good performance was supported by strong private consumption and business investment along with a continued progress in the labour market and the housing sector. Following the rate hike of January 2016, monetary policy is expected to remain highly accommodative during the rest of 2016, while fiscal policy will be less restrictive than in the previous year. The external conditions for the United States economy are expected to improve, but only slightly, as foreign demand from major trade partners is expected to remain relatively weak.

In the UK, GDP grew by 2% in the first quarter of 2016, supported by The Bank of England quantitative easing programs. Recently, the Monetary Policy Committee (MPC) indicated that as the economic conditions improved and that Bank Rate was likely to rise only progressively and to a level below its pre-crisis average.

For Japan, after an outstanding performance in end-2013 and a 1.8% of GDP growth realised in the second quarter of 2015, the country economic performance remains fragile as it realised zero economic growth in the first quarter of 2016.

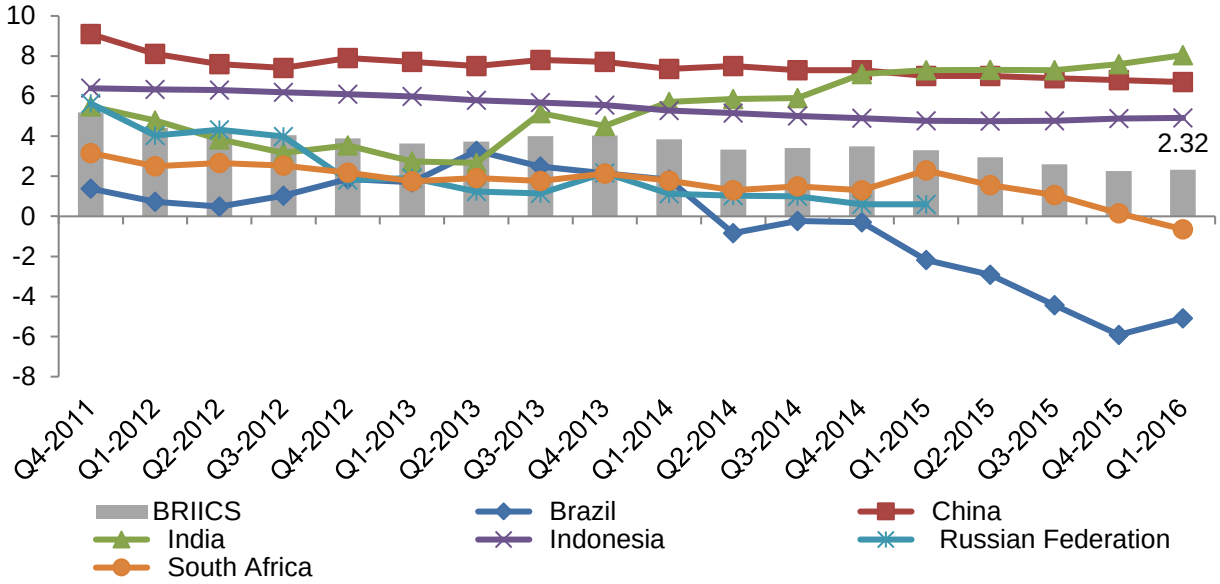
Chart 1-2: Real GDP Growth in Advanced Economies (Quaterly%)*



** Growth rate compared to the same quarter of previous year, seasonally adjusted*
Source: OECD Quarterly National Accounts

As for emerging economies (Chart 1-3), they have experienced a fairly broad-based slowdown since the first quarter of 2014. In the first quarter of 2016, the BRICS countries' (Brazil, Russia, India, China, and South Africa) growth was positive (2.3%) but it is far from its previous levels (10.8% in 2007). The Russian economy has witnessed slowdown in economic activities due to the decrease of oil prices in which the country relies. While India's economy continues to perform well, Brazil's economic performance slowed since the second quarter of 2014 and the country fell into recession for the eighth consecutive quarter. In China, the interactions among the ongoing correction in real estate markets, the highly indebted local governments, and the financial sector continue to pose a significant downside risk but economic growth in China remains high in the first quarter of 2016 (6.7%).

Chart 1-3: Quaterly Real GDP Growth in BRIICS (Quaterly%)*

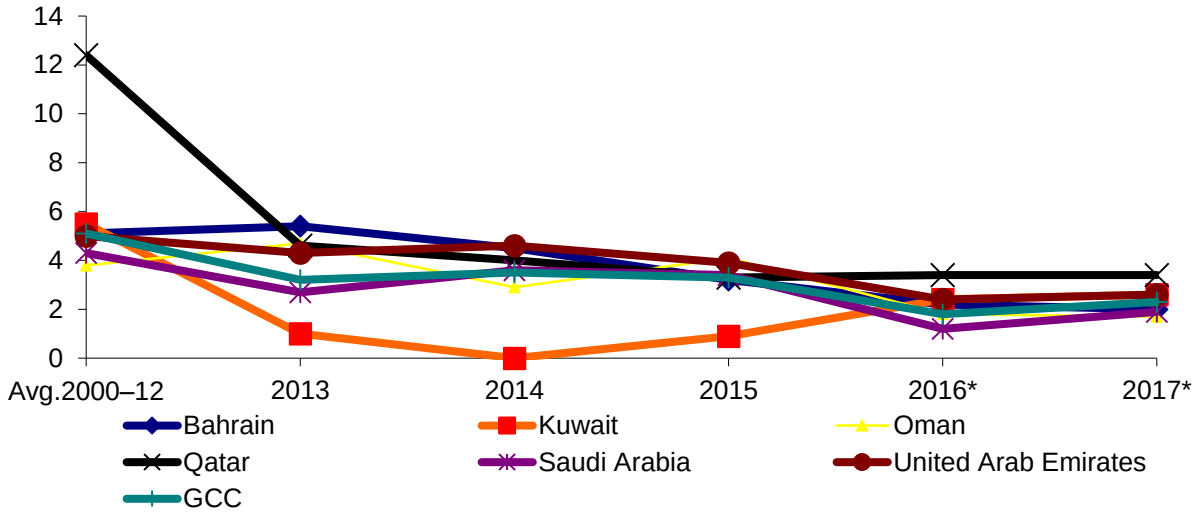


**Growth rate compared to the same quarter of previous year, seasonally adjusted*

Source: OECD Quarterly National Accounts

Despite the continuing uncertainty in the global economy, the GCC economies experienced growth at a level of 3.3% in 2015. The projections for 2016 show that the regional economy will continue to grow at a moderate rate of growth of 1.8% but it will increase mildly in 2017 to reach the level of 2.3%. The decrease of oil price and the economic slowdown of some emerging market economies are the main reasons explaining the moderate performance of GCC countries.

Chart 1-4: Real GDP Growth in GCC Countries (Annual% change)



**Denotes forecast.*

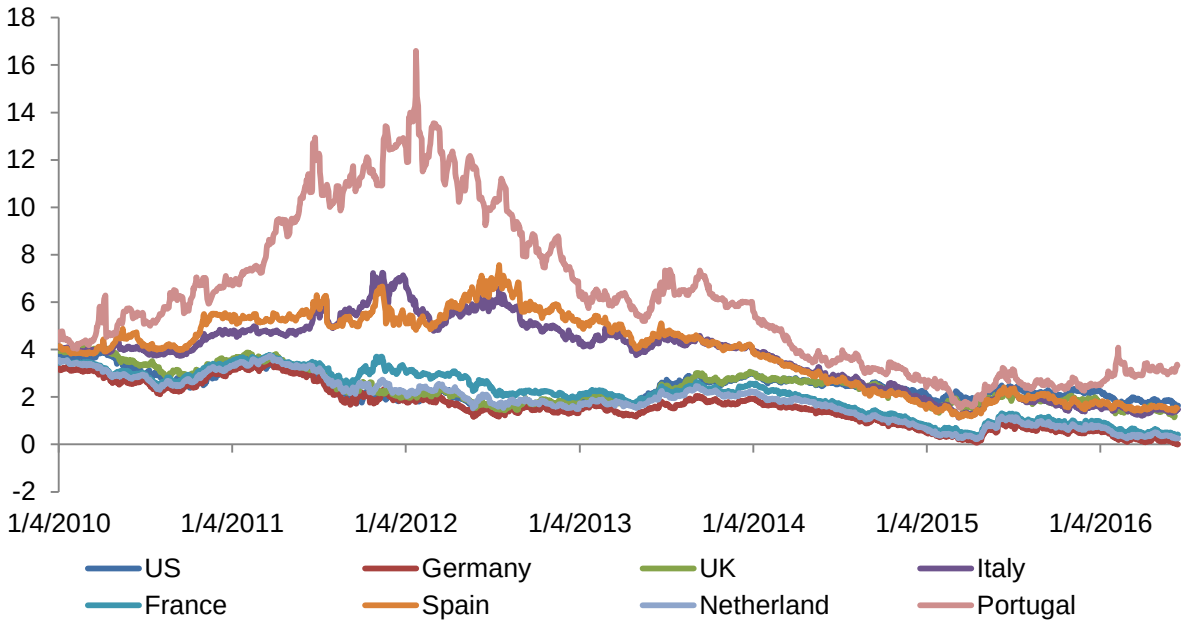
Source: IMF MENAP Regional Economic Outlook, May 2016

Despite the trouble in the MENA region and the drop in oil prices, the member states of the GCC have been on a stable growth path. The ongoing economic performance in GCC countries is currently facing the challenge of oil price which declined by 50% since June 2014 and which will impact the authorities 'spending power. However, the massive foreign reserves accumulated during the past few years are expected to be used to mitigate some of the impact on growth due to significant losses of oil revenues.

B. Financial Markets

During the first semester of 2016, yields decreased to historical levels. As we can see in Chart 1-5, at a ten-year maturity, Spanish and Italian government bond yields have fallen to their lowest level in Euro area history, while yields on Portuguese bonds increased mildly in the past quarter. Spreads on yields of ten-year bonds over the Bund have fallen three-year lows for Spain and Italy. The fall in Yield is the result of the highly accommodative monetary policy (quantitative easing program) by major central banks that have calmed the volatility of stock market and reduced the systemic risk.

Chart 1-5: Yields on 10 Year Sovereign Bonds



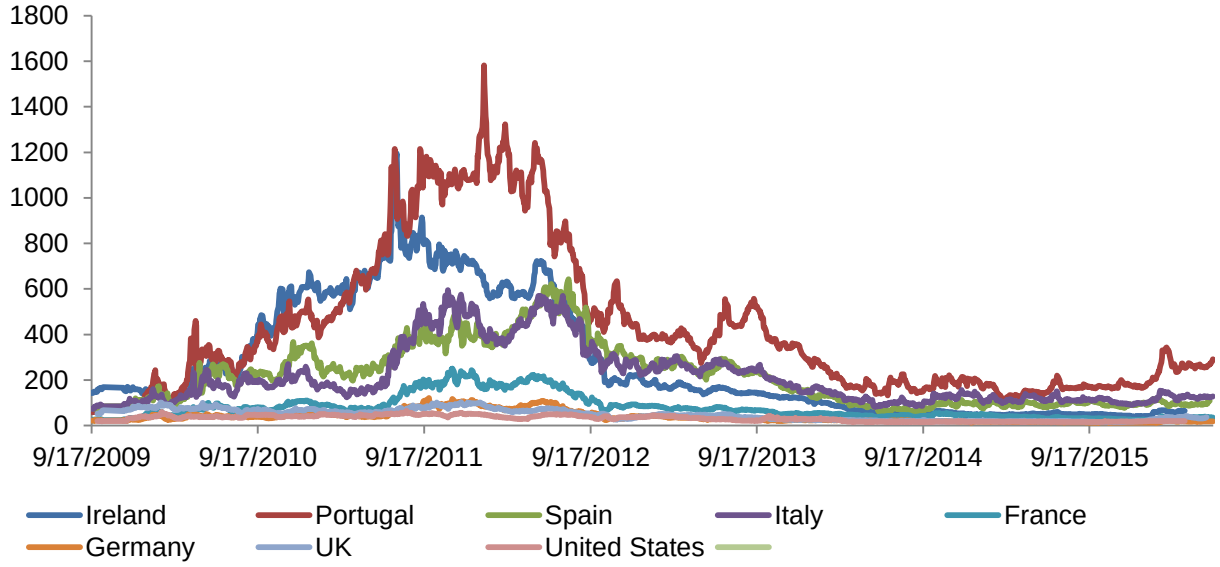
Source: Bloomberg

CDS spreads are a fundamental metric of default risk. Broadly, a higher spread on the CDS implies a greater risk of default for the reference entity. Chart 1-6 provides information as to how financial markets perceive the risk of default on corporate and sovereign debt. It illustrates spreads on five-year CDS in some European countries and the US since 2009.

In the US, UK, Germany and France spreads on Credit Default Swaps remained low since 2009 despite public debt levels that are comparable to or above those of southern Euro area

member states. However, during the past quarter, CDS spread default swaps increased slightly in Portugal reflecting growing investor anxiety about the health of Portuguese's banks and highly indebted companies, feeding into concerns over the fall in oil prices and turmoil in global equity markets. Currently, the CDS market is also suffering from a pro-cyclical effect. As bank debt comes under pressure, investors seek to protect positions by buying CDS

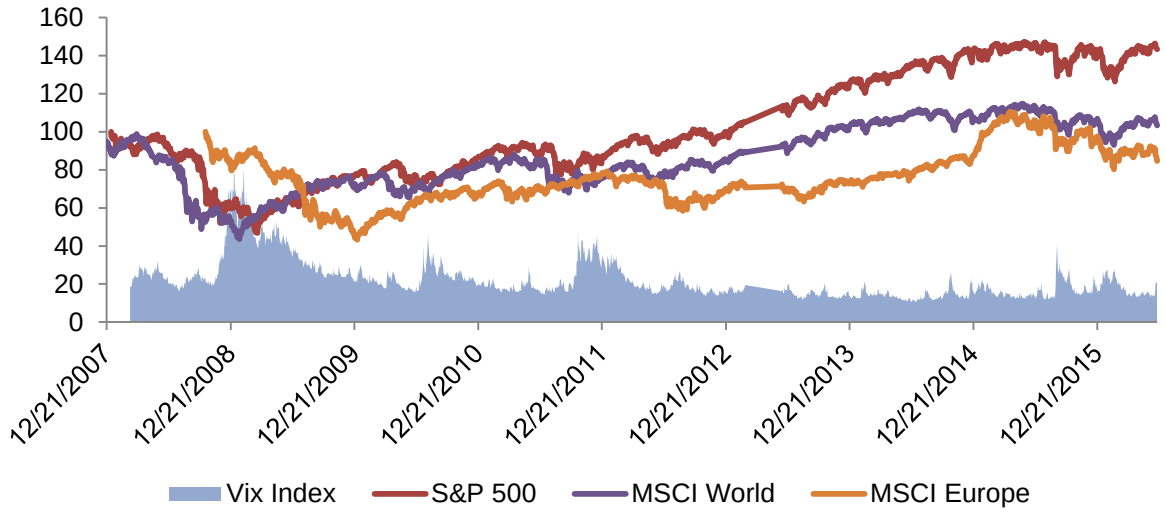
Chart 1-6: Five Year Spreads on Credit Default Swaps



Source: Bloomberg

Regarding global equity markets, chart 1-7 shows that following a period of uncertain sentiments during the summer 2013; optimism returned to global equity markets. This is due to exceptional policy measures and quantitative easing programs undertaken in some advanced economies that had an immediate impact on equity markets.

Chart 1-7: Global Equity Market Indices (Re-indexed to January 2008)



Source: Bloomberg

C. Volatility of the major currencies

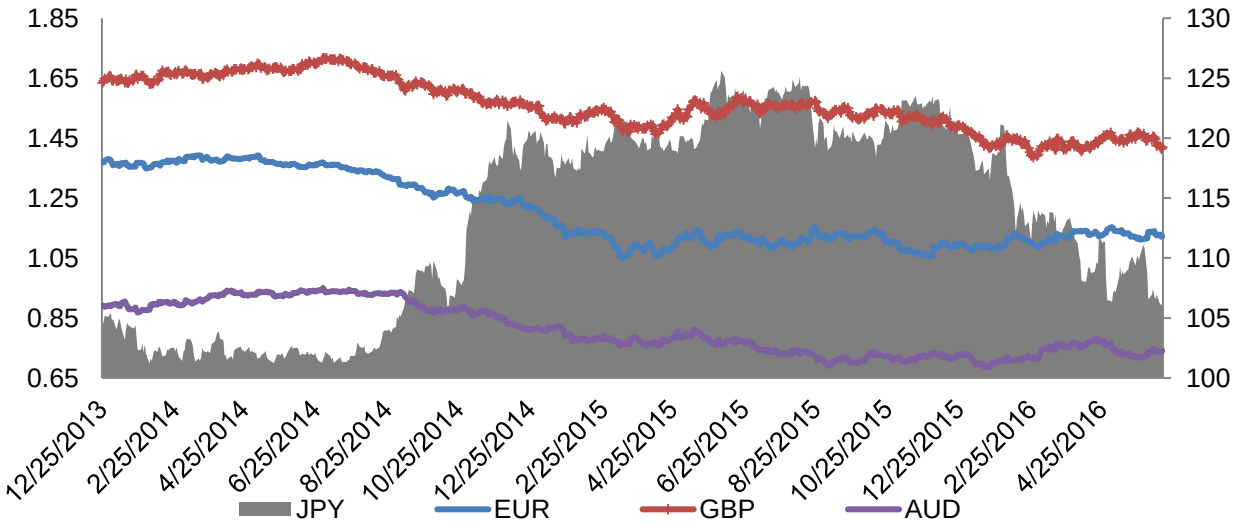
The Euro (EUR) continues to fell to lowest level against the US Dollar (USD) reaching 1.081 USD on the interbank market in January 2016. Recently, the single currency appreciated slightly against the US dollar to reach its highest level of 1.1527 USD in March 2016 but it depreciated to stay around 1.2 USD.

Since our February report, the British pound (GBP) was very volatile against the US Dollar. While the UK pound has appreciated by around 5 per cent against the US dollar since its trough in late February, it remains around 15 per cent lower than its peak in mid-2014.

In the first semester of 2016, Japanese yen (JPY) appreciated slightly by 12 % against the US dollar partly reflecting speculation by market participants that the BoJ may be approaching its limit to ease policy further.

Finally, Australian dollar appreciated slightly during the past six months, it was traded at 0.71 USD in January 2016, and it is at 0.74 USD in mid-June 2016.
To conclude, the stronger U.S. dollar is the result of a mixture of factors including relative interest rates, balance of trade, and perceived safe-haven status.

Chart 1-8: Various Currencies Against US dollar



Source: Bloomberg

2. Developments in Bahrain's Financial and non-Financial Sector

Chapter

2

Key Points

- The volume of credit regains momentum and reached BD7.930 million in April 2016
- The Bahraini financial sector performed effectively with no major financial stability concerns
- The wholesale banking sector has witnessed a drop in its total assets from USD196.3 billion in 2007 to USD109.14 million as end of April 2016.
- Household debt ratio increased.
- Business debt ratio stable.

2.1 Overview

The aim of this chapter is to assess the recent development of the Bahraini financial sector during the past few months and to appraise whether the local banking and financial sector remains resilient since the last evaluation (January 2016). The assessment of financial stability requires an evaluation of the financial condition and performance of non-financial entities: households, business enterprises, as well as the construction and real estate sector. Households and business enterprises are the major customers of financial institutions. Not only are they sources of deposits, they represent major sources of demand for financial sector products and services.

The financial condition and performance of financial institutions therefore depend to a large extent on the financial condition of their customers (households and enterprises) and their vulnerabilities to changes in the economic environment.

The construction and real estate sector receives special attention because this sector is usually highly sensitive to developments in macroeconomic conditions and financial institutions in Bahrain have direct and indirect exposures to the sector.

2.2 Bahrain's Banking sector

Over the past decades, Bahrain emerged as a major regional financial center. This has been essential to the development of its economy and the financial sector has come to play a significant role in economic activity and employment creation.

In April 2016, the banking sector in Bahrain was made up of 103 banks, categorized as follows:

- 28 retail banks (including 6 Islamic retail banks); 13 locally incorporated and 15 branches of foreign banks
- 75 wholesale banks (including 19 Islamic wholesale banks)

There are also 300 non-banking financial institutions operating in Bahrain, including investment business firms, insurance companies (including Takaful and Re-Takaful firms), and specialized licenses.

The insurance industry has progressed effectively during the past few years, which has grown into a regional hub. Insurance contribution increased from 1.9% to 2.5% of GDP over the decade. Particularly strong growth over the last five years has been in medical insurance (which now accounts for 15% of total premiums). Long-term insurance (life and savings products) has also grown rapidly. The insurance market in Bahrain now comprises 25 locally-incorporated firms and 11 overseas firms carrying out insurance, reinsurance, takaful and retakaful. These institutions offer all basic and modern insurance services such as medical and health insurance, long-term insurance (life and savings products). The expansion in the takaful sector (Sharia compliant insurance) has been particularly impressive, with gross contributions rising from $5 million in 2001 to more $110 million in 2013.

In Bahrain, the first Islamic commercial Bank, Bahrain Islamic Bank, was established in 1979 and since that, Bahrain has become the home to the Accounting and Auditing Organization for Islamic Financial Institutions, International Islamic Financial Market, Liquidity Management Centre and Islamic International Rating Agency, and the Bahrain Institute of Banking and Finance. In 2014, the Global Islamic Finance Report (GIFR) reveals that Bahrain was ranked fourth over 40 countries by Islamic Finance Country Index (IFCI).

2.2.1 The size of the banking sector

Bahrain's banking sector represented 13.5 times of GDP in 2007. Despite the global financial turmoil, the size remained large and amounted to 11.5 times of GDP from 2008 until 2010. In 2013, the size of the banking sector fell by almost 50% to become 5.9 times of GDP.

According to the table below, the wholesale banking sector has witnessed the largest drop moving from 8.1 times of GDP in 2010 to 3.2 in the fourth quarter of 2014 and to 3.38 times of GDP in Q1/2016. Further, Table 2-1 shows that the size of the retail banking sector decreased slightly during the same period and it recorded an increase in the first quarter of 2016 to become 2.57 times the GDP.

Despite the contraction in the banking size, the Bahraini financial and banking sector are still performing well and represent 17.1% of GDP in 2015 (CIO Bulletin). There are no major or minor effects of the drop of the overall size of the banking sector in the economy of Bahrain. This shows that the weight of wholesale banks in Bahrain is less compared to domestic banks and that retail banks in Bahrain are the main driver of financial sector growth in the Kingdom.

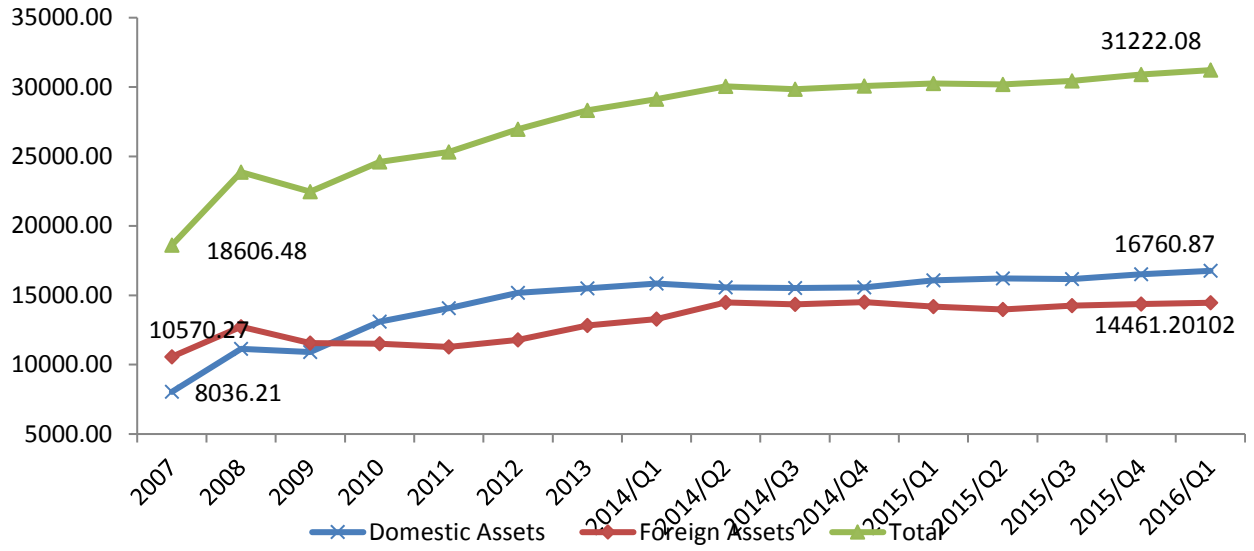
Table 2-1: Evolution of the size of the Banking sector in Bahrain since 2007

	2007	2010	2013/Q4	2014/Q4	2015/Q4	2016/Q1
Size of the Banking sector (times GDP)	13.4	11.5	5.9	5.58	5.92	5.96
Consolidated Balance Sheet of Retail Sector (USD billion)	49.5	65.4	75.3	80.0	82.18	83.03
As times of GDP	2.69	3.38	2.3	2.36	2.54	2.57
Consolidated Balance Sheet of Wholesale Sector (USD billion)	196.3	157.7	116.7	109.28	108.80	109.14
As times of GDP	10.7	8.1	3.6	3.22	3.37	3.38

Source: CBB Statistical Bulletin

Bahrain's financial sector has faced a number of shocks over the past seven years from the sub-prime crisis to the recent political events. The banking sector managed to perform well despite these financial, social and economic shocks. In Bahrain, the retail banking sector has continued to expand. The assets of the retail banking sector rose from BD 18.6 billion in 2007 to BD 31.22 billion in the first quarter of 2016 (see Chart 2-1).

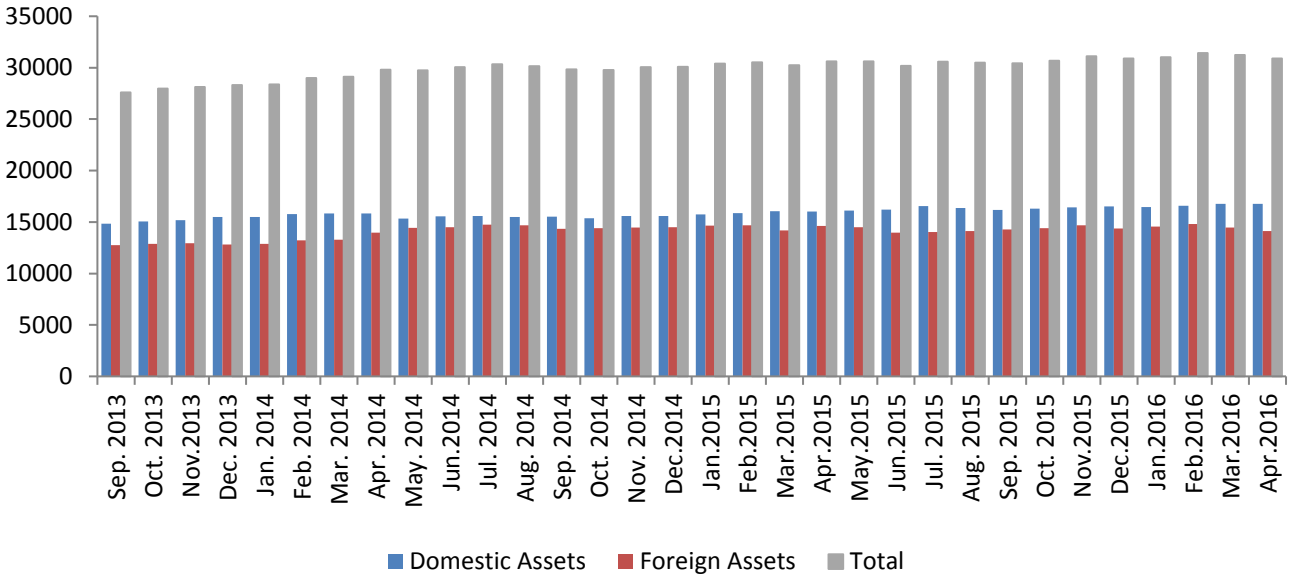
Chart 2-1: Retail Banks' Assets (BD million)



Source: Central Bank of Bahrain

It is worth mentioning that despite the global uncertainty and the troubles in MENA region, retail banking total assets continued growing since December 2012 moving from BD 26.9 billion to BD 27.5 billion as of end-September 2013 to reach BD 30.89 billion in April 2016 (see Chart 2-2). This increase in retail banking assets was driven by domestic assets which contributed to 54.251% of total assets at April 2016, up from 46.2% at end-September 2013.

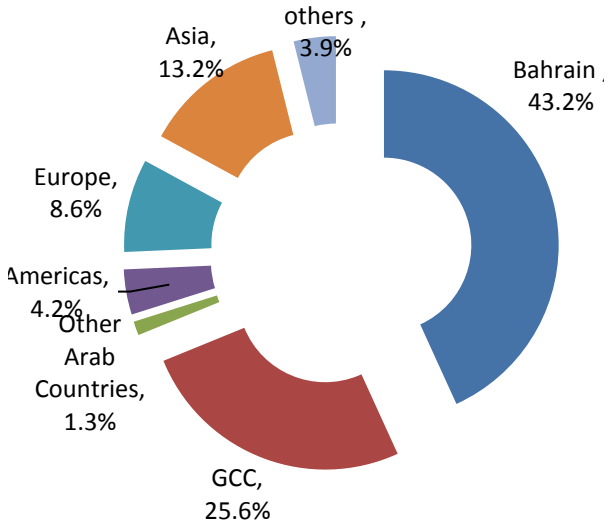
Chart 2-2: Categorization of Retail Banks' Assets (BD million)



Source: Central Bank of Bahrain

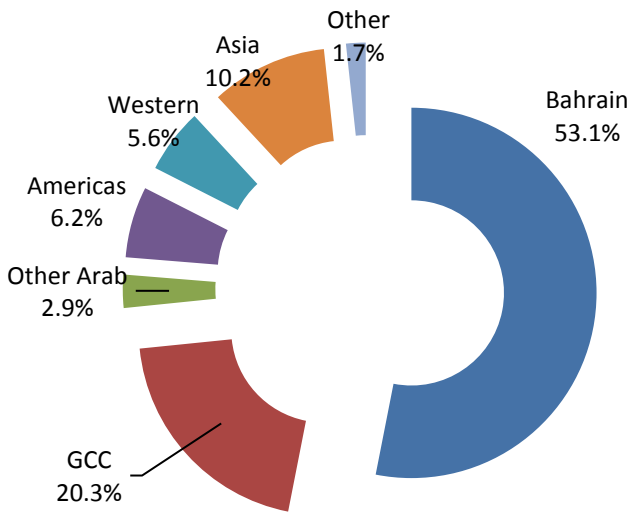
According to the charts below, it is crucial to notice that half of the 45.7% of foreign assets are GCC assets (20.68%). The level of Europe and American contribution in retail banking remains almost stable during the past eight years (+11.03%). This shows that the retail-banking sector in Bahrain is lightly exposed to foreign risk from U.S and Europe.

Chart 2-3: Retail Banks' Assets (%) by Geographical Classification (2007)*



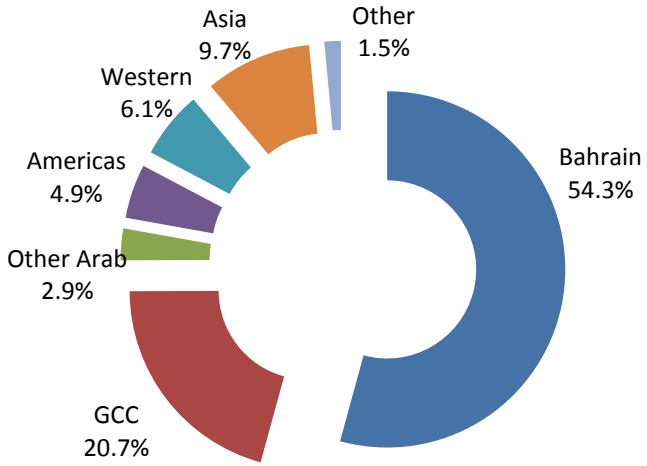
** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain

Chart 2-4: Retail Banks' Assets (%) by Geographical Classification (Nov2015)*



** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain

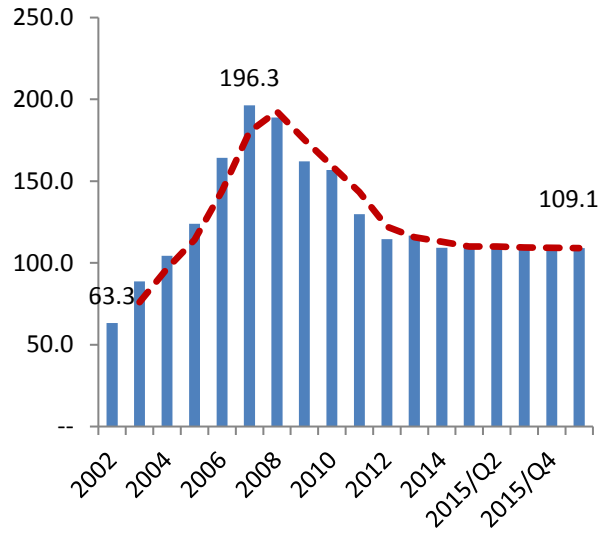
Chart 2-5: Retail Banks' Assets (%) by Geographical Classification (April 2016)*



** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain

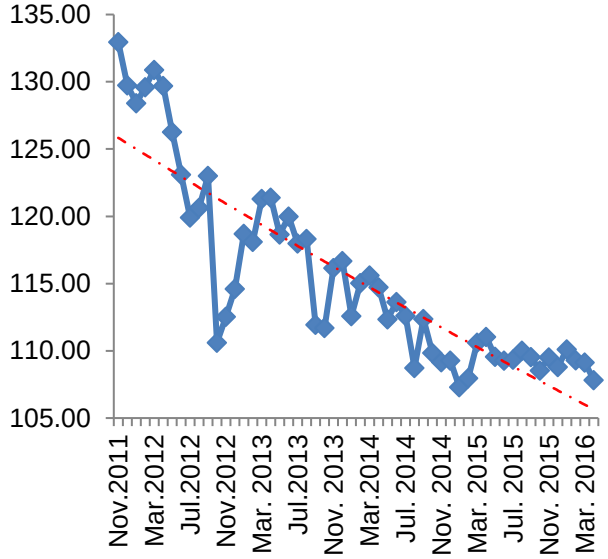
In contrast to the retail banking sector, the wholesale banking sector has witnessed a drop in its total assets from USD 196.3 billion in 2007 to USD 114.6 billion in 2012; hence a decrease of 41.6 %. Despite an improvement in the volume of total assets in the wholesale banking sector during the six months of 2015, the volume became of USD 109 million as of end April 2016 (See Charts 2-6 and 2-7).

Chart 2-6: Wholsale Banks' Assets (USD Billion)*



---. *Mouving average trendline*
** For conventional and Islamic wholesale banks*
Source: Central Bank of Bahrain

Chart 2-7: Wholsale Banks' Assets (USD Billion)*



--- *Linear Trendline*
** For conventional and Islamic wholesale banks*
Source: Central Bank of Bahrain

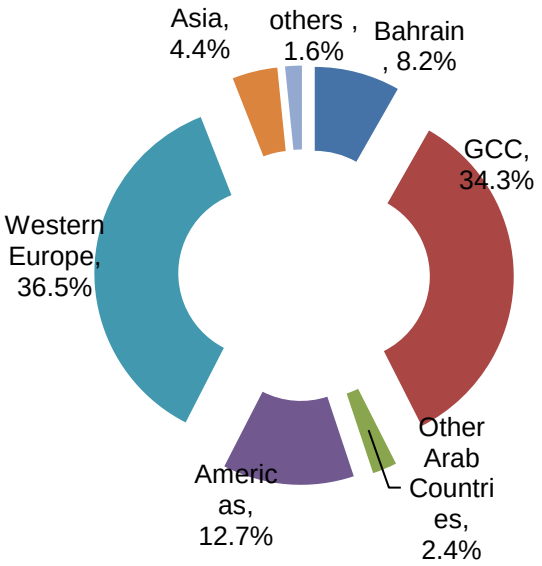
Looking at wholesale banking assets by geographical classification, it is important to note that the most significant drop is recorded in the GCC area, which fell from 34% in 2007 to 32% at end-October 2015 and but it increased to 33.19% in April 2016 (see Charts 2-8, 2-9 and 2-10).

According to the geographical classification of wholesale banks' assets, we can see the main evidences below:

- The share of America's total assets decreased considerably since 2007 but it recently improved slightly to move 9.31% in April 2016 from 8.69% of total assets in October 2015.
- The share of Europe's total assets is the most important share, and it almost remained stable and during the past eight years.
- There is a further increase of Asian assets which moved from 4.4% from 2007 till 2011 to 10.3% at end-April 2016.
- GCC total assets dropped during the past few years, but they still represent almost the third of the wholesale banking sector. It is worth mentioning that the share of GCC in

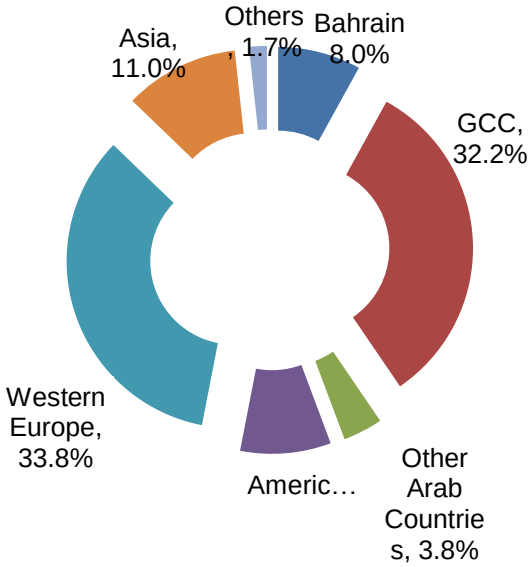
total assets mildly increased during the recent period moving 32.15% of total assets in end-October 2015 to 33.19% in April 2016.

Chart 2-8: Wholesale Banks Assets by: Geographical Classification (2007) *



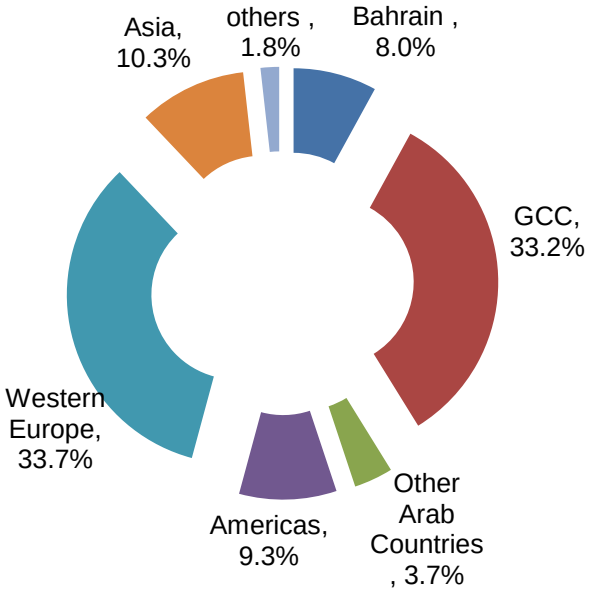
** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain

Chart 2-9: Wholesale Banks Assets by: Geographical Classification (Oct.2015)*



** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain

Chart 2-10: Wholesale Banks Assets by Geographical Classification (April 2016)*



** For conventional and Islamic retail banks*
Source: Central Bank of Bahrain.

2.2.2 Credit Developments

The volume of credit regained momentum and reached BD7,644.7 million in April 2016 (Chart 2-11). The high credit growth reveals the recovery of the economic activities and the restore of confidence in the kingdom of Bahrain.

Regarding banks' lending to the general government, it increased significantly during the first three quarter of 2015, moving from BD175 million at end-May 2015 to reach BD472.78 million at end-October 2015 and then decreased to reach BD279.14 million at end-April 2016.

Chart 2-11: **Loans to the Private Sector (BD Million)***

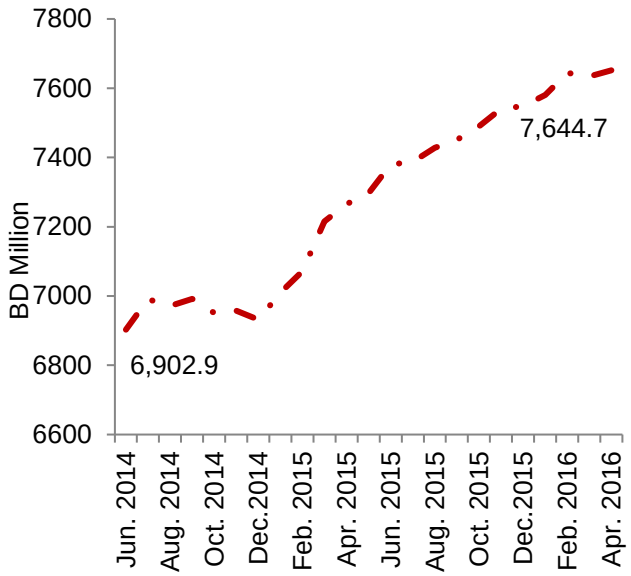
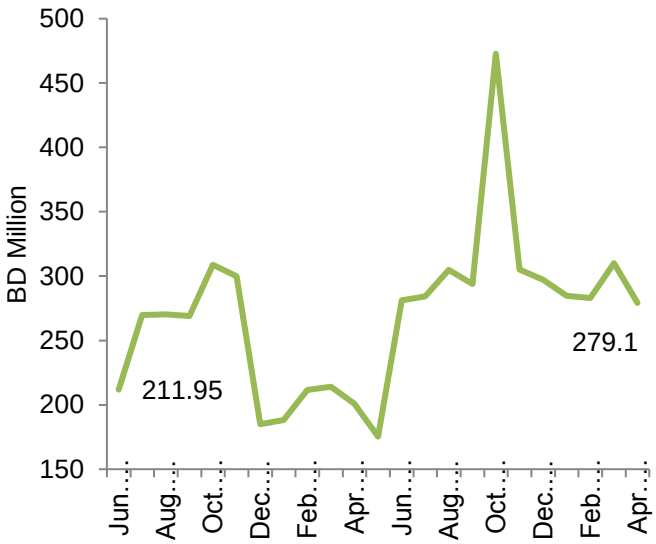


Chart 2-12: **Loans to General Government (BD Million)***



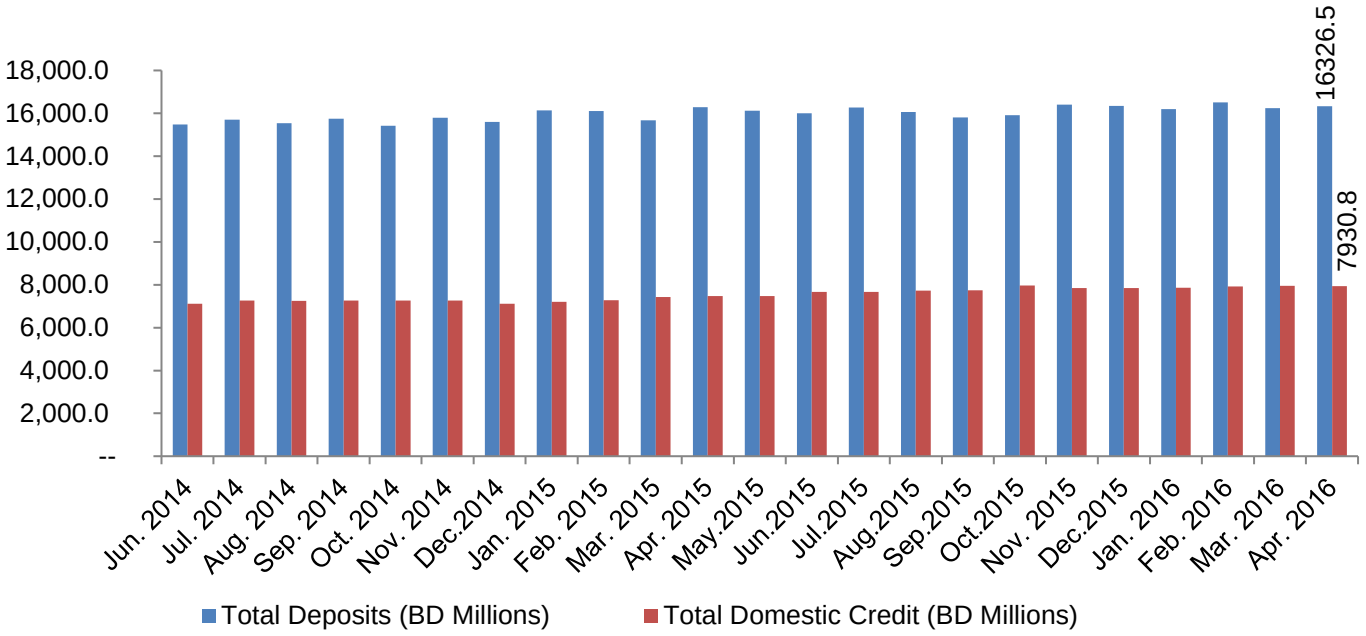
Source: Central Bank of Bahrain

*Excluding securities

Regarding total deposits, they reached BD16,326.46 million in April 2016, where 56.6% of them are total local deposits. Interestingly, this was followed by an increase in total domestic credits which moved from around BD7,845.41 million at end-November to 7930 in April 2016 (chart 2-13).

Despite the high availability of liquidity, total domestic Credit remains moderate in Bahrain; it represents only 65.5 % of GDP as of the first quarter of 2016.

Chart 2-13: Total Deposits and total Domestic Credit (BD Million)

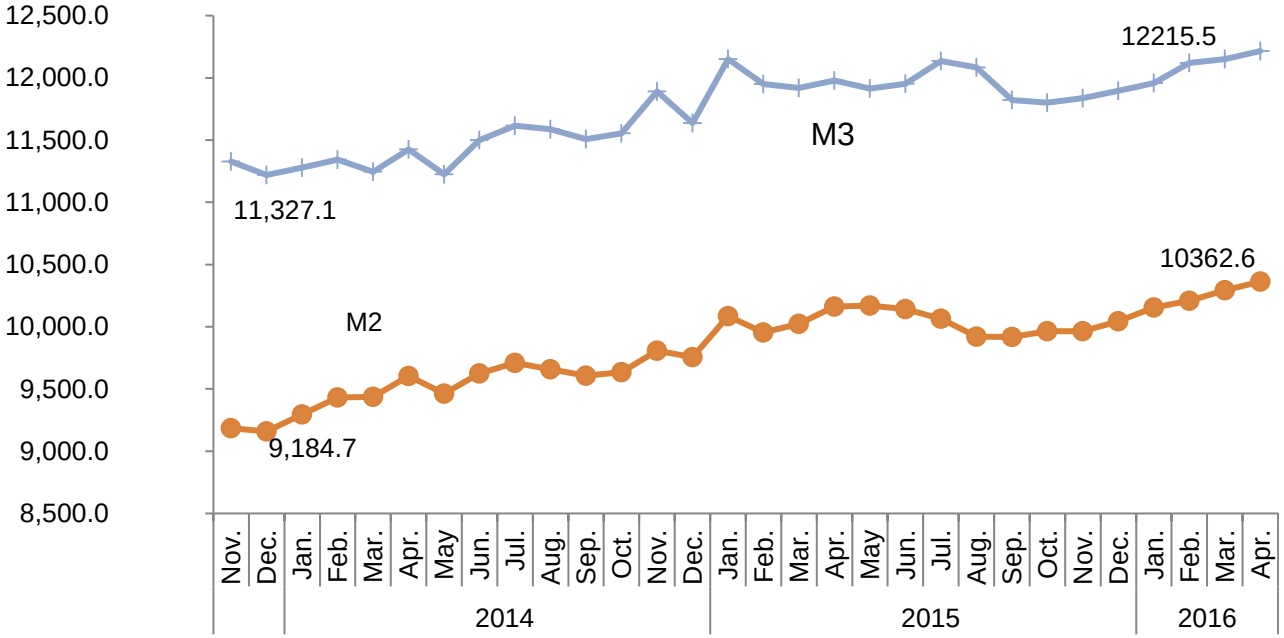


Source: Central Bank of Bahrain

2.3 Monetary indictors

Money supply has continued to grow since the second quarter of 2013. M2 stood at BD 10,362.6 million in end-April 2016, 3.9% higher than its value of October 2015. M3 was BD 12215.5 million in end-April 2016, 3.5% higher than in October 2015(Chart 2-14).

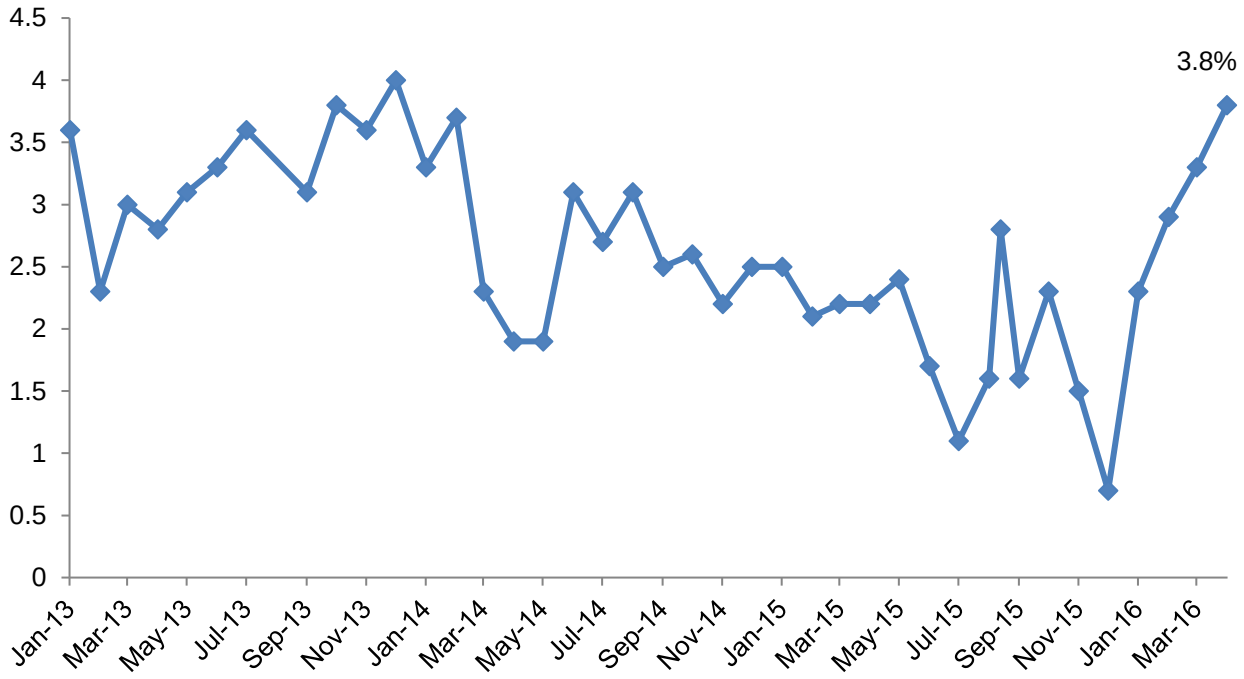
***Chart 2-14*: Money Supply (BD Billion) from May 2013 to October 2015**



Source: Central Bank of Bahrain

Generally speaking, the inflation rate in consumer prices has always been stable in Bahrain, moving from 2 to 3.5%. In the beginning of 2015, inflation in Bahrain was moderate. According to CIO (2016), inflation moved from 2.3% in January 2016 to 3.8% in April 2016. We need to state the main reasons for the increase not the decrease.

Chart 2-15: Monthly Inflation in 2013-2016 (CPI%)*



**Growth rate compared to the same month of previous year, seasonally adjusted*
Source: CIO Bahrain.

2.4 The Bahraini Households Sector

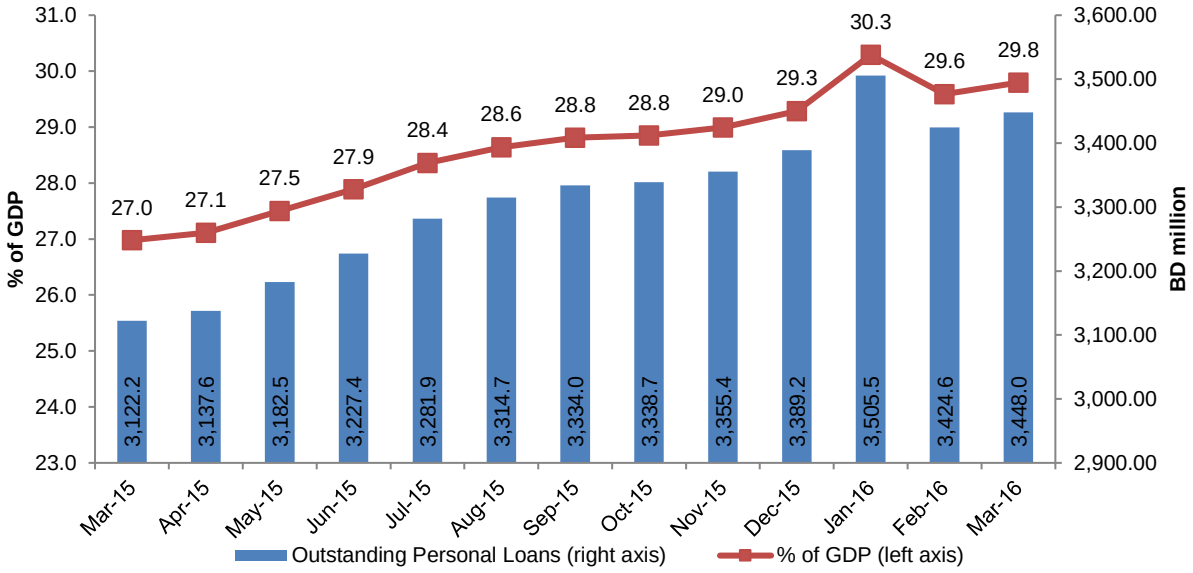
The household sector plays an important role in financial stability and the overall economy. The household sector can allocate funds to financial assets through bank deposits and securities, and to non financial assets from land and other fixed assets. It can also receive funds from financial and non financial institutions.

The construction and real estate sector plays a huge importance on economic developments and is a good indicator of macroeconomic conditions in the country.

2.4.1 Household Debt Ratio

Outstanding personal loans, used as a proxy for household borrowing, for the period shows that the household debt was increasing throughout the period between March 2015 and January 2016, decreasing slightly in Febrary 2016 and increasing in March 2016 (Chart 2-16).

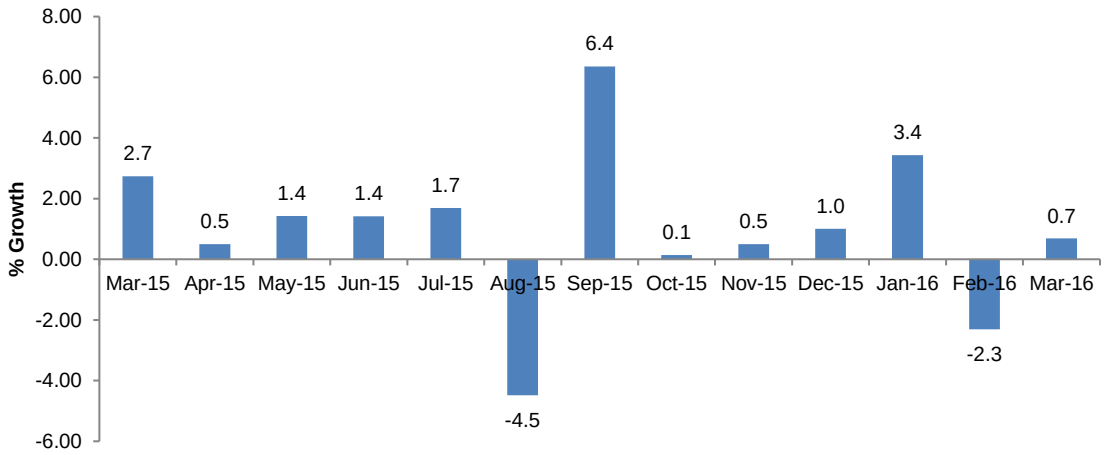
Chart 2-16: Personal Loans and Advances (Volume and % of GDP)



**Using 2015 GDP*
Source: Central Bank of Bahrain

Personal loans as a percentage of GDP increased steadily from March 2015 to January 2016. Starting at 27.0% (BD 3,122.2 million) in March 2015 and capping at 30.3% in January 2016 (BD 3,505.5 million) before decreasing slightly in Febuary and March 2016 due to a decrease in outstanding personal loans in these last two months. Year-on-year increases in outstanding personal loans ending in March 2016 was 10.4%. The increase from October 2015 until March 2016 was 3.3%.

Chart 2-17: Growth Rate of Total Personal Loans and Advances (%)



**Using 2015 GDP*
Source: Central Bank of Bahrain

The growth in personal loans that occured on a monthly basis were mainly due to an increase in personal loans secured by property mortgage as seen in Table 2-2. The two main contributors to personal loans as seen in chart 2-18 were personal loans secured by property mortgages which make around 50.4% of the total personal loans followed by personal loans

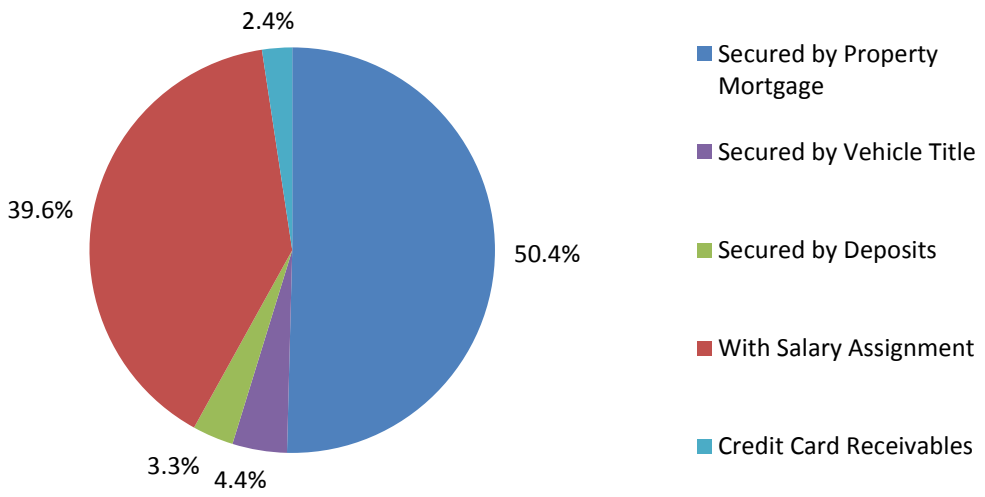
secured with salary assignments which make around 39.6% of total personal loans as end of March 2016.

Table 2-2: Personal Loans Breakdown

Type (BD million)	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016
Total	**3,334.0**	**3,338.7**	**3,355.4**	**3,389.2**	**3,505.5**	**3,424.6**	**3,448.0**
Secured by Property Mortgage	1,052.9	1,056.3	1,061.3	1,058.3	1,508.3	1,425.9	1,433.3
Secured by Vehicle Title	119.2	118.7	125.2	124.4	124.2	123.8	123.7
Secured by Deposits	62.8	58.7	57.5	54.0	54.2	53.3	93.4
With Salary Assignment	1,213.1	1,215.3	1,220.9	1,230.4	1,150.4	1,154.6	1,124.6
Credit Card Receivables	67.3	67.2	68.4	69.0	66.9	68.8	68.1

Source: Central Bank of Bahrain

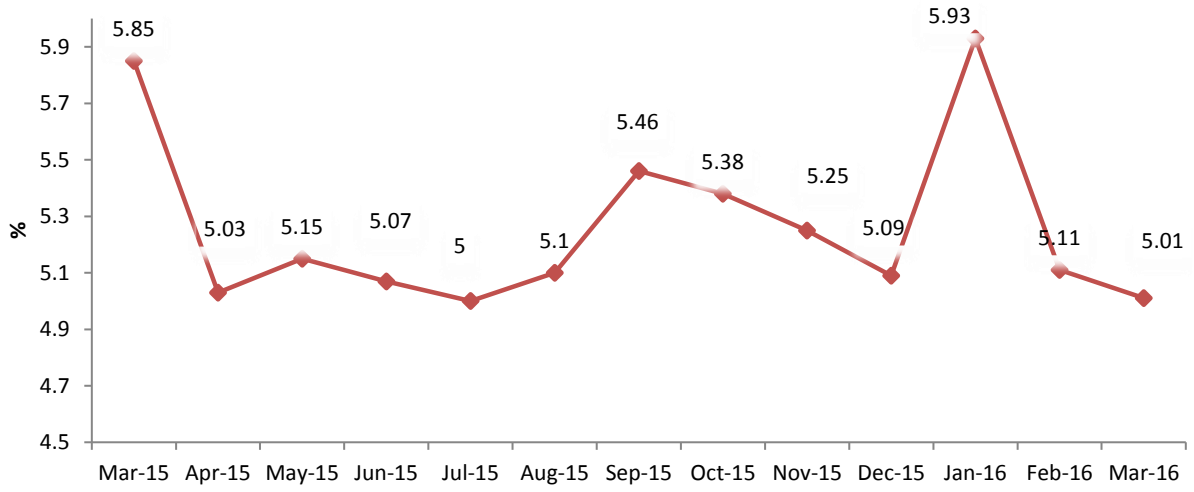
Chart 2-18: Personal Loans Breakdown (March 2016)



Source: Central Bank of Bahrain

Interest rates on personal loans fluctuated throughout this period. Interest rates on loans was its lowest in July 2015 at 5.0% and reached its peak at 5.93% in January 2016 (Chart 2-19). There was a sharp decreace in rates after January 2016 to 5.01% in March 2016. Interest rates on secured and unsecured loans were constant throughout this period.

Chart 2-19: Retail Banks- Average Interest Rates on Personal Loans (%)

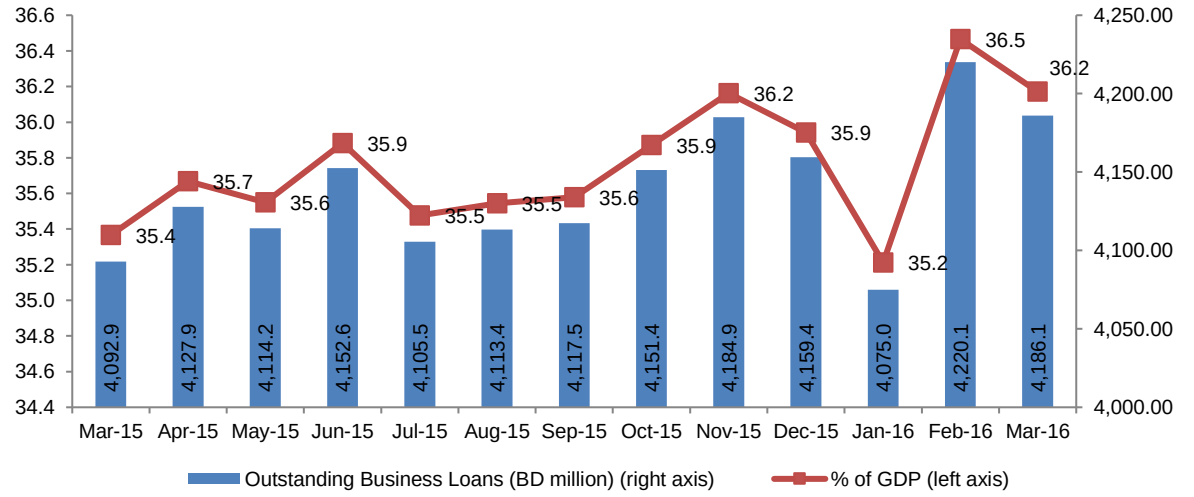


Source: Central Bank of Bahrain

2.4.2 The Bahraini Corporate Sector

Business loans and advances have seen a drop from November 2015 to January 2016 and then rose from January to February 2016 before showing a slight decline in March 2016 (Chart 2-19). Outstanding business loans increased from 35.4% as a % of GDP in March 2015 to 36.2% in March 2016.

Chart 2-20:: Business Loans and Advances (Volume and % of GDP)



Source: Central Bank of Bahrain

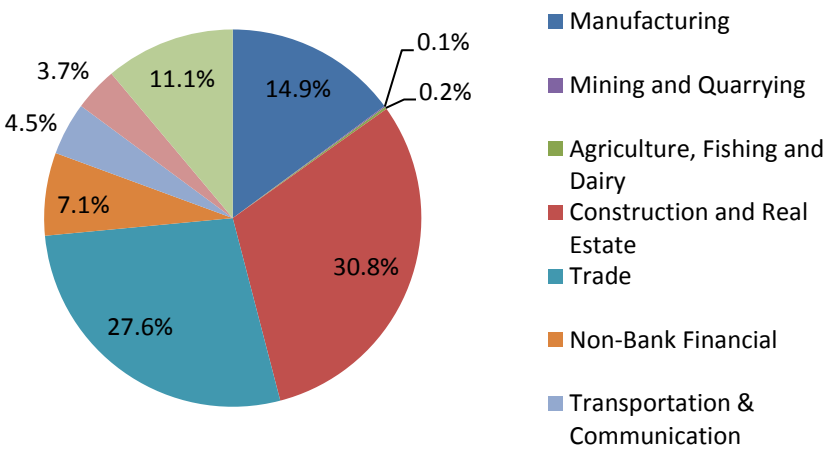
For the past few months, the main contributor to the increase in business loans was the loans to the construction and real estate sector. The trade sector also contributed to some of the increases in business loans that happened earlier this year (Table 2-3). The biggest contributors to business loans are the construction and real estate sector (30.8%) followed by trade (27.6%) and then manufacturing (14.9%) (Chart 2-21).

Table 2-3:Business Loans By Sector

Sector (BD million)	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016
Total	**4,117.5**	**4,151.4**	**4,184.9**	**4,159.4**	**4,075.0**	**4,220.1**	**4,186.1**
Manufacturing	588.3.6	598.1	610.5	630.4	616.1	635.2	623.0
Mining and Quarrying	5.2	5.0	4.4	4.2	4.5	4.4	4.2
Agriculture, Fishing and Dairy	7.8	7.2	8.2	6.4	7.4	7.9	8.0
Construction and Real Estate	1,356.4	1,361.5	1,355.6	1,343.7	1,319.1	1,311.3	1,288.0
Trade	1,076.5	1,104.2	1,136.6	1,114.3	1,039.3	1,156.1	1,153.9
Non-Bank Financial	256.0	263.5	263.0	274.3	281.3	288.2	297.1
Transportation & Communication	213.5	212.7	210.8	195.3	195.1	192.8	189.5
Hotels & Restaurants	137.6	135.5	141.5	138.9	143.3	156.2	156.9
Other Sectors	476.2	463.7	454.3	451.9	468.9	338.4	465.5

Source: Central Bank of Bahrain

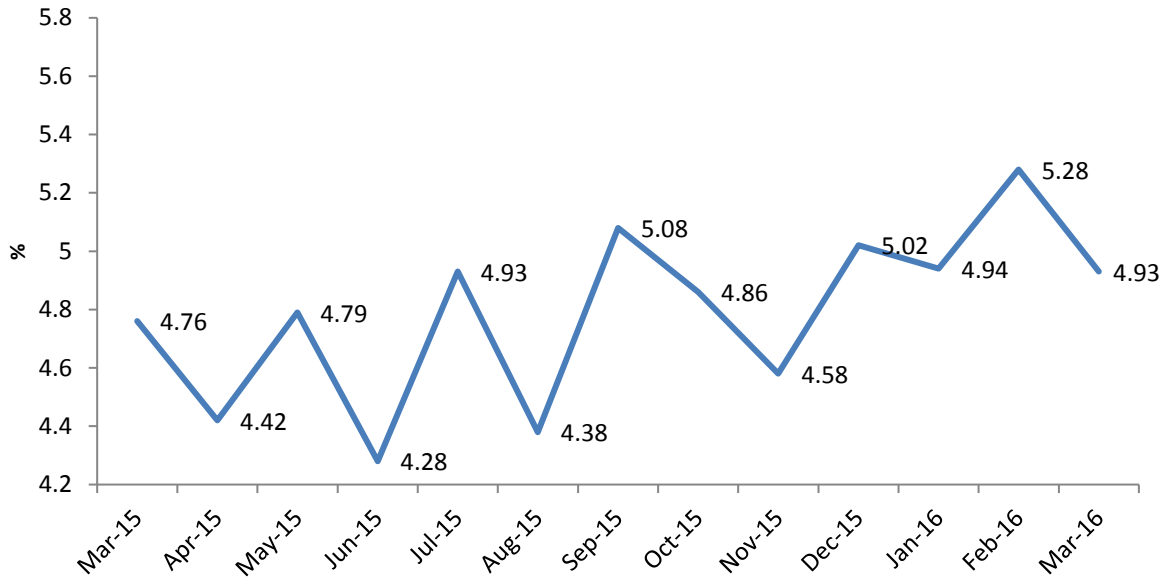
Chart 2-21: Business Loans by Sector (March 2016)



Source: Central Bank of Bahrain

Average interest rates on business loans fluctuated throughout the period. It was at its peak in February 2016 at 5.28% and was at its lowest rate in June 2015 at 4.42% (Chart 2-22).

Chart 2-22:: Retail Banks- Average Interest Rates on Business Loans (%)



Source: Central Bank of Bahrain

2.5 Overall assessment of the Bahraini Financial sector and non-Financial Sector

Despite the global uncertainty and weak economic condition in emerging markets, all the indicators presented and analyzed above reveal that the Bahraini banking sector is performing efficiently during the first semester of 2016. Bank loans continue their recovery and credit growth is expected to grow further pace in the coming year. Overall funding conditions have improved and demand for loans has accelerated in Bahrain.

Banks operating in Bahrain are well capitalized, funding and liquidity buffers are well above minimum required standards, and non-performing loans continue to drop. Regulatory changes in recent years have helped to improve prudential standards for retail and wholesale banks (conventional and Islamic). All these changes have been beneficial for financial stability and will further strengthen the position of Bahrain as a financial center.

In the following chapters, the performance of the Bahraini banking sector (retail, wholesale, conventional and Islamic) will be analysed in, Bahrain Bourse, as well as the developments in e-payment activities during the previous semester.

Part II:

Performance of the Banking Sector

3. Conventional Banks

Chapter 3

Key Points

- A decrease in capital positions of conventional retail banks and slight decrease for conventional wholesale banks.
- Non-performing loans (NPLs) for conventional retail banks increased while NPLs for conventional wholesale banks decreased.
- Loan portfolios in conventional retail and wholesale banks remain concentrated despite the decrease in some sectors.
- Decrease in earnings for Conventional retail banks and an increase conventional wholesale banks.
- Slight decrease in liquidity for conventional retail banks and an increase conventional wholesale banks.

3.1 Overview

This chapter analyses the banking sector under the following categories: conventional retail banks (section 3.2), conventional wholesale banks (section 3.3). Section 3.4 provides an overall assessment of the conventional banking industry. Unless specified otherwise, the analysis in this chapter is based on consolidated financial data (Bahraini and non-Bahraini operations), as at end- September 2015 and compared with end-March 2016.

This chapter offers macroprudential analysis of the conventional banking sector based on a set of selected Financial Soundness Indicators (FSIs).[1]

Annex 1 presents selected *Financial Soundness Indicators* (FSIs) for the different banking segments. Annex 2 presents selected graphs showing the development of selected indicators over time.

[1] This chapter does not contain a section on stress testing. Stress Testing exercises are performed separately in an internal report to obtain information on the potential quantitative impact of hypothetical scenarios on selected Bahraini Systemically-Important Banks (SIB's).

3.2 Conventional Retail Banks

Decrease in capital adequacy [2]

Capital adequacy ratios for conventional retail banks decreased from 18.7% in September 2015 to 18.1% in March 2016. The core capital ratio (ratio of Tier 1 capital to risk-weighted assets) showed a decrease from 16.9% in September 2015 to 16.3% in March 2016. The leverage ratio (ratio of assets over capital) showed a slight increase of 0.3% from 7.4% in September 2015 to 7.7% in March 2016. The ratio of non-performing loans (NPLs) net provisions to capital decreased to reach 7.4% in March 2016 from 7.9% in September 2015.

Table 3-1 Capital Provisions Ratios for Local Conventional Retail Banks

Indicator	Sep. 2015	March 2016
Capital Adequacy Ratio	18.7	18.1
Tier 1 Capital Adequacy Ratio	16.9	16.3
Leverage (assets/capital)(times)	7.4	7.7
NPLs net of provisions to capital	7.9	7.4

Source: Central Bank of Bahrain

Increases in non-performing loans

Non-performing loans increased from 3.6% in September 2015 to 4.0% in March 2016. The specific provisions as a proportion of NPLs showed an increase to 53.9% in March 2016 from 52.3% in September 2015. The net NPLs of net loans slightly increased from 1.8% in September 2015 to 1.9% in March 2016. For *local retail banks*, the NPLs decreased to 4.1% in March 2016. For *overseas retail banks*, the NPLs increased to 3.6% in March 2016.

Table 3-2: NPL Figures for Conventional Retail Banks

Indicator	Sep. 2015	March 2016
NPL's (% Gross)	3.6	4.0
NPL's Local Banks (% Gross)	4.4	4.1
NPL's Overseas Banks (% Gross)	2.1	3.6
Specific provisions (% of NPLs) *	52.3	53.9
Net NPL's (% of net loans)	1.8	1.9

Source: Central Bank of Bahrain

** Specific provisions as a percentage of NPL's are calculated as specific provisions divided by gross impaired loans minus interest in suspense.*

Available data on the sectoral breakdown of impaired loans [3] shows most sectors experiencing an increase in impairment, while some experience a decrease and others remaining unchanged (Table 3-3 and Chart 3-1). The highest increase was in "Manufacturing" by 3.3% and the highest decrease was in "transport" by 3.5%.

[2] The capital adequacy ratio relates total capital to risk-weighted assets. The discussion excludes overseas retail banks, which do not have prescribed capital levels or ratios.

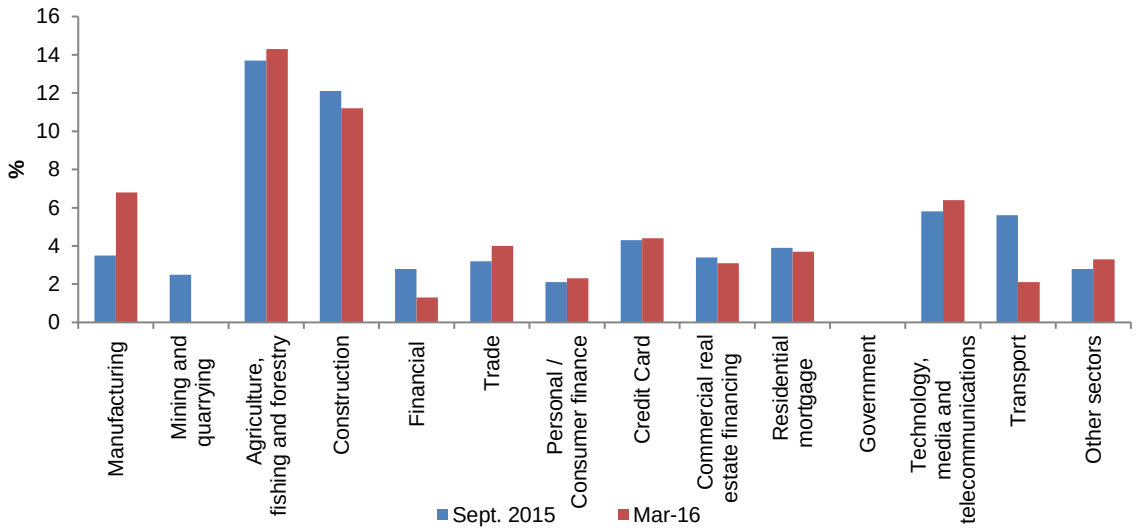
[3] Impaired loans include NPLs on which payments of interest or repayments of principal are 90 or more days past due and all loans and advances on which specific provisions have been made.

Table 3-3: Conventional Retail Banks' Impaired Loan Ratios by Sector (% of gross loans per sector)

	Sep. 2015	March 2016	Change
Manufacturing	3.5	6.8	3.3
Mining and quarrying	2.5	0.0	(2.5)
Agriculture, fishing and forestry	13.7	14.3	0.6
Construction	12.1	11.2	(0.9)
Financial	2.8	1.3	(1.5)
Trade	3.2	4.0	0.8
Personal / Consumer finance	2.1	2.3	0.2
Credit Card	4.3	4.4	0.1
Commercial real estate financing	3.4	3.1	(0.3)
Residential mortgage	3.9	3.7	(0.2)
Government	0.0	0.0	0.0
Technology, media and telecommunications	5.8	6.4	0.6
Transport	5.6	2.1	(3.5)
Other sectors	2.8	3.3	0.5

Source: Central Bank of Bahrain

Chart 3-1: Conventinoal Retail Banks' Impaired Loans by Sector (% of gross loans per sector)



Source: Central Bank of Bahrain

Loan portfolios remain concentrated

The loan portfolio of *retail banks* remains concentrated with the top recipient of loans being the "commercial real estate financing" sector accounting for 17.4% of total loans in March 2016, an increase from the 17.0% in September 2015. The "Manufacturing" sector represented 14.2% of total loans followed by the "personal/consumer finance" sector at 13.5% of total loans over the same period.

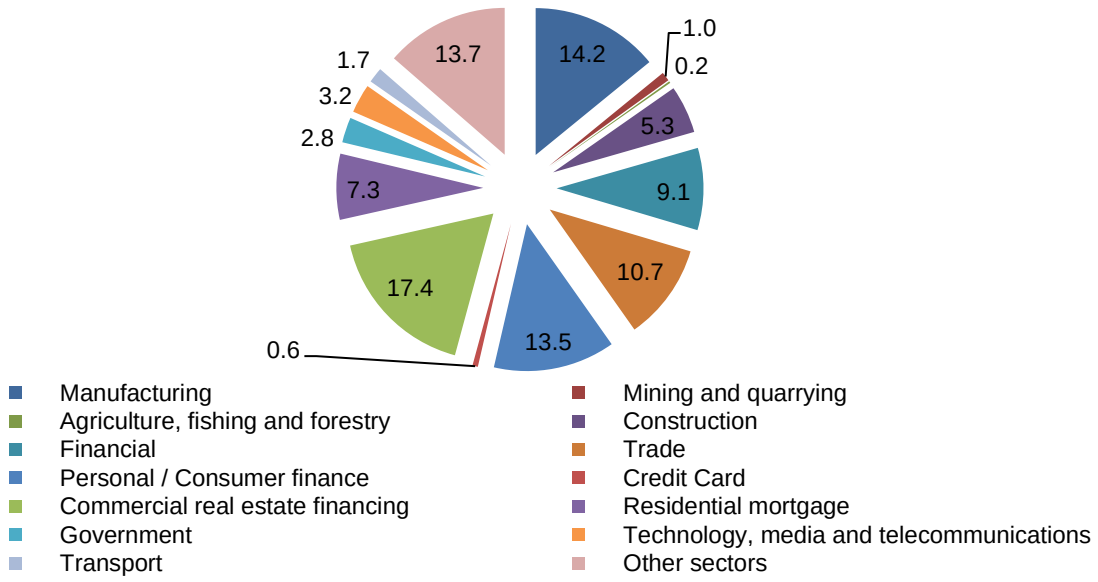
The top two recipient sectors "commercial real estate financing" and "Manufacturing" jointly represented 31.6% of loans in March 2016. Exposure to real estate/ construction was 30.0% of total lending in March 2016, an increase from the 29.6% registered in September 2015.

Table 3-4: Distribution of Conventional Retail Banks' Lending (% total loans)*

	Sep. 2015	March 2016	Change
Manufacturing	14.6	14.2	(0.4)
Mining and quarrying	1.1	1.0	(0.1)
Agriculture, fishing and forestry	0.2	0.2	0.0
Construction	5.2	5.3	0.1
Financial	9.1	9.1	0.0
Trade	10.0	10.7	0.7
Personal / Consumer finance	13.4	13.5	0.1
Credit Card	0.6	0.6	0.0
Commercial real estate financing	17.0	17.4	0.4
Residential mortgage	7.5	7.3	(0.2)
Government	2.8	2.8	0.0
Technology, media and telecommunications	3.5	3.2	(0.3)
Transport	1.7	1.7	0.0
Other sectors	13.4	13.0	(0.4)
Top two recipient sectors	**31.6**	**31.6**	**0.0**
Real Estate/ Construction Exposure**	**29.6**	**30.0**	**0.4**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 3-2: Distribution of Conventional Retail Banks' Lending (% of total loans)



Source: Central Bank of Bahrain

The loan portfolio of *locally incorporated retail banks* remains concentrated with the top recipient of loans being the "commercial real estate financing" sector accounting for 19.5% of total loans in March 2016, an increase from the 19.2% in September 2015. The "personal/consumer finance" sector represented 12.5% of total loans up from 12.3% followed by the "Manufacturing" sector at 12.4% of total loans over the same period.

The top two recipient sectors "commercial real estate financing" and "others"[4] jointly represented 33.2% of loans in March 2016, a decrease from the 33.4% in September 2015. Exposure to real estate/ construction was 35.3% of total lending in March 2016, an increase from the 34.9% registered in September 2015.

Table 3-5: Distribution of Local Conventional Retail Banks' Lending (% total loans)*

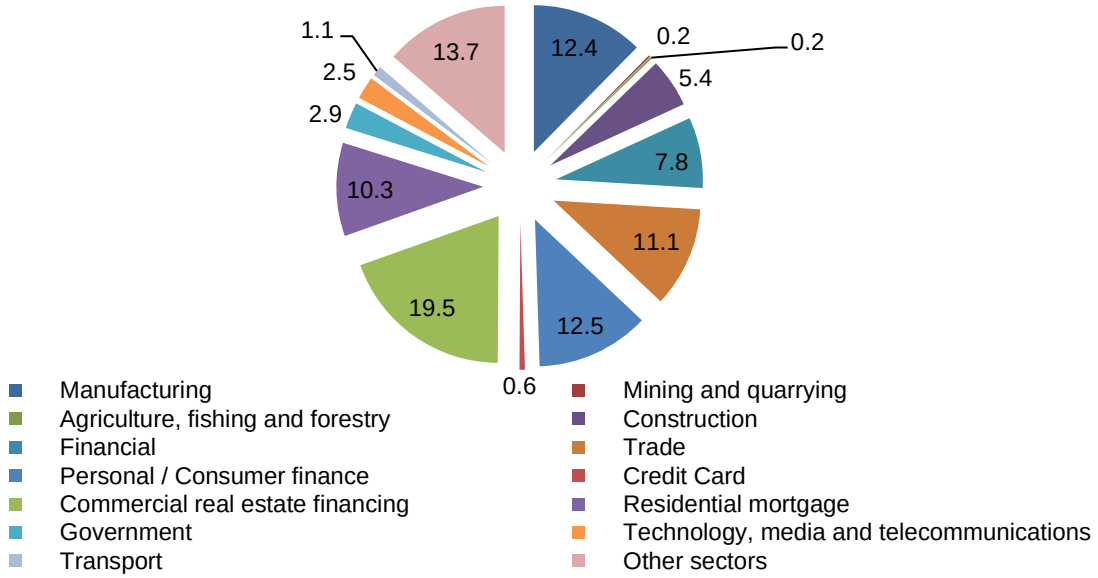
	Sep. 2015	March 2016	Change
Manufacturing	13.4	12.4	(1.0)
Mining and quarrying	0.3	0.2	(0.1)
Agriculture, fishing and forestry	0.3	0.2	(0.1)
Construction	5.1	5.4	0.3
Financial	7.0	7.8	0.8
Trade	10.5	11.1	0.6
Personal / Consumer finance	12.3	12.5	0.2
Credit Card	0.6	0.6	0.0
Commercial real estate financing	19.2	19.5	0.3
Residential mortgage	10.7	10.3	(0.4)
Government	2.7	2.9	0.2
Technology, media and telecommunications	2.6	2.5	(0.1)
Transport	1.2	1.1	(0.1)
Other sectors	14.3	13.7	(0.6)
Top two recipient sectors	**33.4**	**33.2**	**(0.2)**
Real Estate/ Construction Exposure**	**34.9**	**35.3**	**0.4**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

The numbers as of end-March 2016 continue to show high concentration of risk for *overseas retail banks* (Table 3-5 and Chart 3-3). The top recipient of loans was the "Manufacturing" sector with 18.0% of total loans in March 2016, an increase from the 17.0% in September 2015.

Chart 3-3: Distribution of Conventional Local Retail Banks' Lending (% of total loans)

[4] The "others sectors" category includes sectors such as "private banking", "services", "tourism", and "utilities".



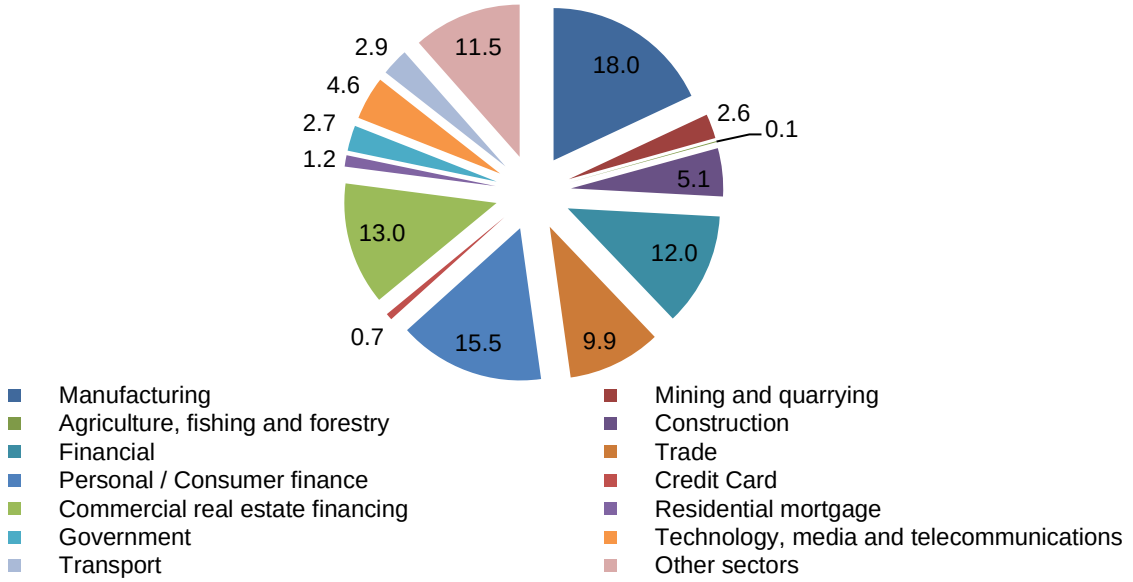
Source: Central Bank of Bahrain

Table 3-6: Distribution of Overseas Conventional Retail Banks' Lending (% total loans)*

	Sept. 2015	March 2016	Change
Manufacturing	17.0	18.0	1.0
Mining and quarrying	2.6	2.6	0.0
Agriculture, fishing and forestry	0.1	0.1	0.0
Construction	5.4	5.1	(0.3)
Financial	13.2	12.0	(1.2)
Trade	9.0	9.9	0.9
Personal / Consumer finance	15.5	15.5	0.0
Credit Card	0.7	0.7	0.0
Commercial real estate financing	12.5	13.0	0.5
Residential mortgage	1.1	1.2	0.1
Government	3.2	2.7	(0.5)
Technology, media and telecommunications	5.1	4.6	(0.5)
Transport	2.7	2.9	0.2
Other sectors	11.8	11.5	(0.3)
Top two recipient sectors	**32.5**	**33.5**	**1.0**
Real Estate/ Construction Exposure**	**19.1**	**19.3**	**0.2**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 3-4: Distribution of Conventional Overseas Retail Bank's Lending (% of toal loans)



Source: Central Bank of Bahrain

The top two recipients of loans ("manufacturing" and "personnel/Consumer finance") jointly accounted for 33.5% of total loans. Exposure to real estate/ construction was 19.3% of total lending in March 2016, an increase from the 19.1% in September 2015.

Decrease in retail bank profitability

As at end-March 2016, return-on-assets (ROA) decreased to reach 0.4%. ROA for *locally-incorporated banks* decreased from 0.5% in March 2015 to 0.4% in March 2016. For *overseas banks*, ROA decreased from 1.3% in 2015 to 0.4% in March 2016. Return-on-equity (ROE)[5] for *locally-incorporated banks* decreased from 4.4% in March 2015 to 3.8% in March 2016.

Net interest income (as a % of total income) increased from 67.4% in March 2015 to 73.5% in March 2016. In addition, operating expenses as a proportion of total income increased from 27.1% in March 2015 to 52.9% in March 2016.

Table 3-7: Profitability of Retail Banks (%)

	March 2015	March 2016
ROA *	0.7	0.4
ROA Locally Incorporated Banks	0.5	0.4
ROA Overseas Banks	1.3	0.4
ROE**	4.4	3.8
Net interest income (% total income)	67.4	73.5
Operating expenses (% total income)	27.1	52.9

Source: Central Bank of Bahrain
**ROA = ratio of net income to assets*
***ROE = ratio of net income to tier 1 capital (for locally incorporated banks only*

Liquidity position decreased

[5] We define equity in ROE as net profit over Tier 1 Capital.

Between September 2015 and March 2016, bank deposits increased while non-bank deposits decreased for retail banks. Bank deposits increased to 20.9% in March 2016. Non-bank deposits decreased to 79.1% over the same period. The overall loan-deposit ratio for the segment decreased from 72.2% in September 2015 to 71.1% in March 2016. Liquid assets as a proportion of total assets decreased over the period of September 2015 to March 2016 to reach 25.3%, respectively. Similarly, liquid assets as a proportion of the short-term liabilities presented a decrease from 40.2% to 37.9% over this period.

Table 3-8: Retail Banks' Liquidity Profile (%)

	Sep. 2015	March 2016
Liquid Asset Ratio	26.3	25.3
Loan-Deposit Ratio	72.2	71.1
Non-Bank Deposits as a % of total deposits	79.6	79.1

Source: Central Bank of Bahrain.

3.3 Conventional Wholesale Banks

Slight decrease in capital adequacy[6]

As at end-March 2016, the regulatory capital adequacy ratio for locally-incorporated wholesale banks was 19.4%, a slight decrease from the 19.6% registered in September 2015. The core capital ratio (ratio of Tier 1 capital to risk-weighted assets) decreased to 17.8% in March 2016 from the 17.9% registered in September 2015. On the other hand, the leverage ratio (ratio of assets over capital) remained at 6.6% from September 2015 to March 2016. The ratio of non-performing loans (NPLs) net of provisions to capital increased from 3.7% in September 2015 to 3.8%.

Table 3-9: Capital Provisions Ratios for Local Conventional Wholesale Banks

Indicator	Sep. 2015	Mar. 2016
Capital Adequacy Ratio (%)	19.6	19.4
Tier 1 Capital Adequacy Ratio (%)	17.9	17.8
Leverage (assets/capital)(times)	6.6	6.6
NPLs net of provisions to capital (%)	3.7	3.8

Source: Central Bank of Bahrain

Decrease in non-performing loans of wholesale banks

As at end-March 2016, loans classified as non-performing decreased to 5.1%. The NPLs of *Locally-incorporated wholesale banks* increased to reach 3.6%. In contrast, *overseas wholesale* banks witnessed a decrease in NPLs from 8.0% to 6.6% over the same period. Specific provisions as a proportion of NPLs witnessed an increase from 65.8% in September 2015 to 66.3% in March 2016. The net NPLs as of total loans decreased from 2.3% in September 2015 to 1.8% in March 2016.

Table 3-10: NPL Figures for Conventional Wholesale Banks

Indicator	Sep. 2015	Mar. 2016
NPL's (% Gross)	5.7	5.1
NPL's Local Banks	3.4	3.6
NPL's Overseas Banks	8.0	6.6
Specific provisions (% of NPLs) *	65.8	66.3
Net NPLs (% of net loans)	2.3	1.8

Source: Central Bank of Bahrain

** Specific provisions as a percentage of NPL's are calculated as specific provisions divided by gross impaired loans minus interest in suspense.*

[6] The capital adequacy ratio relates total capital to risk-weighted assets. The discussion excludes overseas wholesale banks, which do not have prescribed capital levels or ratios.

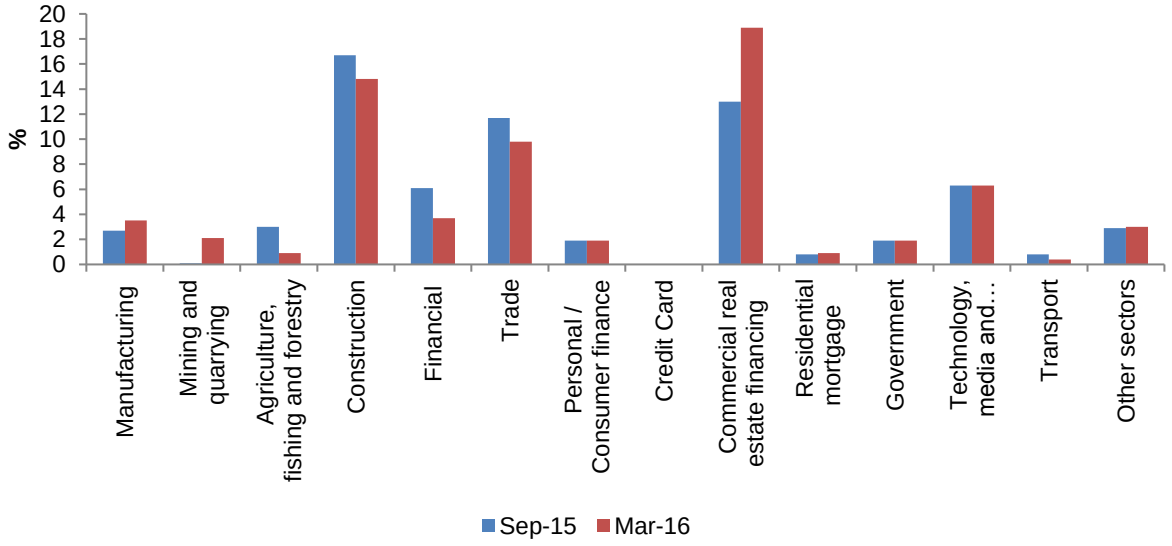
Available data on the sectoral breakdown of impaired loans shows that impairment in the "Commercial real estate financing" was the highest between all sectors at 18.9% followed by the "Construction" sector with an impairment of 14.8%. The biggest increases were in the "Commercial real estate financing" sector which increased by 5.9% followed by "Mining and quarrying" and "Manufacturing" which increased by 2.0% and 0.8% respectively. The largest decrease in impairment was found in the "Financial" sector which decreased by 2.4%.

Table 3-11: Conventional Wholesale Banks' Impaired Loan Ratios by Sector (% of gross loans to sector)

	Sep. 2015	Mar. 2016	Change %
Manufacturing	2.7	3.5	0.8
Mining and quarrying	0.1	2.1	2.0
Agriculture, fishing and forestry	3.0	0.9	(2.1)
Construction	16.7	14.8	(1.9)
Financial	6.1	3.7	(2.4)
Trade	11.7	9.8	(1.9)
Personal / Consumer finance	1.9	1.9	0.0
Credit Card	0.0	0.0	0.0
Commercial real estate financing	13.0	18.9	5.9
Residential mortgage	0.8	0.9	0.1
Government	1.9	1.9	0.0
Technology, media and telecommunications	6.3	6.3	0.0
Transport	0.8	0.4	(0.4)
Other sectors	2.9	3.0	0.1

Source: Central Bank of Bahrain

Chart 3-5: Conventional Wholesale Banks' Impaired Loans by Sector (% of gross loans to sector)



Source: Central Bank of Bahrain

Loan portfolios remains concentrated despite decreases in some sectors

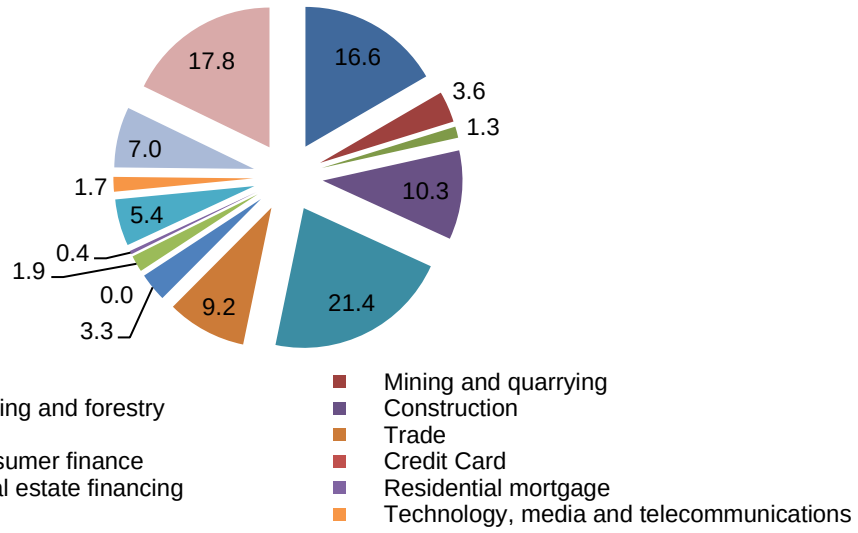
An examination of lending patterns as at end-March 2016 shows that, for conventional wholesale banks, the top recipient of loans remains the "Financial" sector, which accounted for 21.4% of total loans in March 2016 representing a decrease from the 23.3% in September 2015 (Table 3-12 and Chart 3-5).

Table 3-12: Distribution of Conventional Wholesale Banks' Lending (% total Loans)*

	Sep. 2015	Mar. 2016	Change
Manufacturing	17.2	16.6	(0.6)
Mining and quarrying	3.1	3.6	0.5
Agriculture, fishing and forestry	0.9	1.3	0.4
Construction	8.9	10.3	1.4
Financial	23.3	21.4	(1.9)
Trade	9.4	9.2	(0.2)
Personal / Consumer finance	3.4	3.3	(0.1)
Credit Card	0.0	0.0	0.0
Commercial real estate financing	2.7	1.9	(0.8)
Residential mortgage	0.3	0.4	0.1
Government	5.1	5.4	0.3
Technology, media and telecommunications	2.0	1.7	(0.3)
Transport	6.5	7.0	0.5
Other sectors	17.3	17.8	0.5
Top two recipient sectors	**40.6**	**39.2**	**(1.4)**
Real Estate/ Construction Exposure**	**11.9**	**12.6**	**0.7**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 3-6: Distribution of Conventional Wholesale Banks' Lending (% of total loans)



Source: Central Bank of Bahrain

Also, the top two sectors ("financial" and "other") accounted for 39.2% of total lending in March 2016 while real estate/ construction exposure slightly increased to 12.6% from 11.9%.

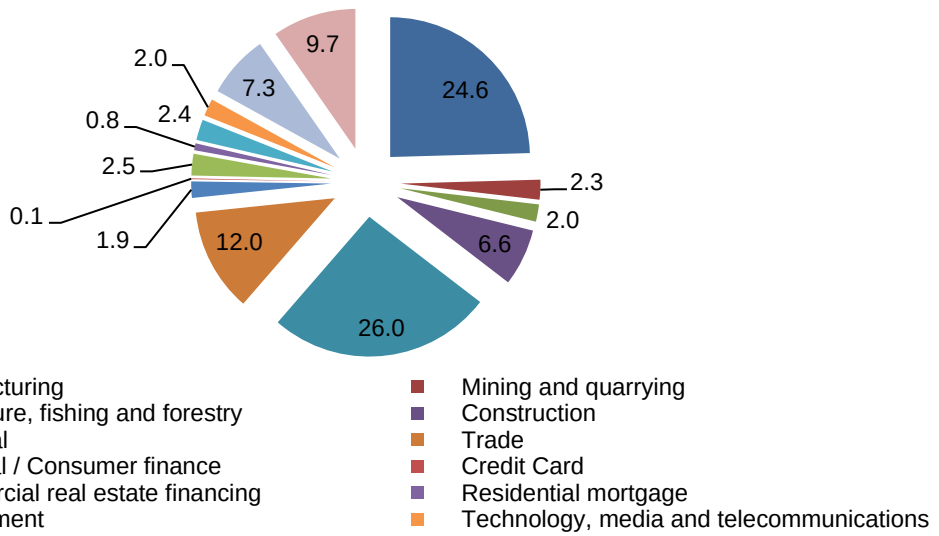
For *locally-incorporated wholesale banks,* the top recipient of loans is the "Financial" sector, which accounted for 26.0% of total loans in March 2016 representing an increase from the 23.5% in September 2015 (Table 3-13 and Chart 3-6). Also, the top two sectors ("financial" and "manufacturing") accounted for 50.5% of total lending in March 2016 while real estate/ construction exposure decreased to 9.8% from 11.3%.

Table 3-13: Distribution of Conventional Local Wholesale Banks' Lending (% total Loans)*

	Sep. 2015	Mar. 2016	Change
Manufacturing	25.6	24.6	(1.0)
Mining and quarrying	2.6	2.3	(0.3)
Agriculture, fishing and forestry	1.7	2.0	0.3
Construction	6.7	6.6	(0.1)
Financial	23.5	26.0	2.5
Trade	12.0	12.0	0.0
Personal / Consumer finance	2.0	1.9	(0.1)
Credit Card	0.1	0.1	0.0
Commercial real estate financing	3.9	2.5	(1.4)
Residential mortgage	0.7	0.8	0.1
Government	1.7	2.4	0.7
Technology, media and telecommunications	2.1	2.0	(0.1)
Transport	7.6	7.3	(0.3)
Other sectors	9.8	9.7	(0.1)
Top two recipient sectors	**49.1**	**50.5**	**1.4**
Real Estate/ Construction Exposure**	**11.3**	**9.8**	**(1.5)**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 3-6: Distribution of Conventional Local Wholesale Banks' Lending (% of total loans)



Source: Central Bank of Bahrain

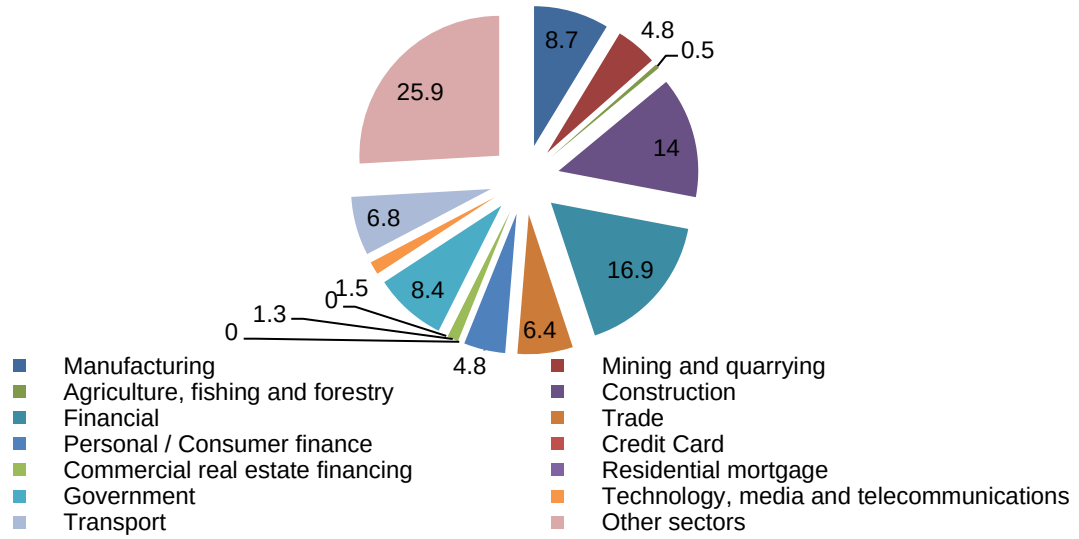
In *overseas wholesale banks*, the top recipient of loans in March 2016 remained the "Other" sector, with 25.9% of total loans which is an increase from 24.7% in September 2015, followed by the "financial" sector, with a decrease from 23.2% to 16.9% and the "manufacturing" sector with an increase to 14.0% from 11.0% (Table 3-11 and Chart 3-6). The top 2 sectors (financial and other) jointly represented 42.8% in March 2016. Real estate/construction exposure increased from 12.4% in September 2015 to 15.3% in March 2016.

Table 3-14: Distribution of Conventional Overseas Wholesale Banks' Lending (% total Loans)*

	Sept. 2015	March 2016	Change
Manufacturing	8.9	8.7	(0.2)
Mining and quarrying	3.5	4.8	1.3
Agriculture, fishing and forestry	0.1	0.5	0.4
Construction	11.0	14.0	3.0
Financial	23.2	16.9	(6.3)
Trade	6.8	6.4	(0.4)
Personal / Consumer finance	4.7	4.8	0.1
Credit Card	0.0	0.0	0.0
Commercial real estate financing	1.5	1.3	(0.2)
Residential mortgage	0.0	0.0	0.0
Government	8.4	8.4	0.0
Technology, media and telecommunications	1.9	1.5	(0.4)
Transport	5.4	6.8	1.4
Other sectors	24.7	25.9	1.2
Top two recipient sectors	**47.8**	**42.8**	**(5.0)**
Real Estate/ Construction Exposure**	**12.4**	**15.3**	**2.9**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 3-7: Distribution of Overseas Wholesale Banks' Lending (%)



Source: Central Bank of Bahrain

Stable earnings for wholesale banks

ROA for the conventional wholesale banking sector was at 0.3% in March 2016, an increase from the 0.2% in March 2015. The ROA for *local wholesale banks* decreased from 0.3% to 0.2% over the same period. ROA for overseas wholesale banks increased from 0.1% to 0.5% over the same period.

ROE for *local wholesale banks* decreased from 2.8% to 1.1%. Net interest income as a proportion of total income decreased from 52.9% to 42.2% in March 2016. Operating expenses as a proportion of total income showed a decrease from 60.2% in March 2015 to 52.0% in March 2016.

Table 3-15: Profitability of Wholesale Banks (%)

	Mar. 2015	Mar. 2016
ROA *	0.2	0.3
ROA Locally Incorporated Banks	0.3	0.2
ROA Overseas Banks	0.1	0.5
ROE**	2.8	1.1
Net interest income (% total income)	52.9	42.2
Operating expenses (% total income)	60.2	52.0

Source: Central Bank of Bahrain
**ROA = ratio of net income to assets*
***ROE = ratio of net income to tier 1 capital (for locally incorporated banks only*

Liquidity position increases

As at end-March 2016, Liquid assets for wholesale banks as a proportion of total assets increased to 22.7% from 20.8% in September 2015. *Locally incorporated wholesale banks* had a liquid asset ratio of 34.2% in March 2016 a decrease from the 31.0% in September 2015. Overseas wholesale banks had a ratio of 10.0 %, slightly lower than the 10.1% registered in September 2015. Liquid assets as a proportion of short-term liabilities increased to 33.3% in March 2016 from 30.5% in September 2015. The overall loan-deposit ratio for conventional wholesale banks stood at 67.8%, an increase from the 64.6% in September 2015. The loan deposit ratio for *local wholesale banks* increased to 69.1% in March 2016 from the 67.1% in September 2015. Over the same period, the loan deposit ratio for *overseas wholesale* bank increased from 62.2% to 66.5%. Lastly, the deposits from non-bank sources as a proportion of total deposits dropped to 44.8% from 45.8% in September 2015 and bank deposits increased to 55.2% from 54.2% over the same period.

Table 3-15: Wholesale Banks' Liquidity Profile (%)

	Sep. 2015	Mar. 2016
Liquid Asset Ratio	20.8	22.7
Loan-Deposit Ratio	64.6	67.8
Non-Bank Deposits as a % of total deposits	45.8	44.8

Source: Central Bank of Bahrain.

3.4 Overall Assessment of the Conventional Banking Sector

The financial soundness indicators show that conventional retail and wholesale banks witnessed a decrease in capital adequacy ratio reaching 18.1% and 19.4% respectively in March 2016. Non-performing loans have shown an increase between periods of September 2015 to March 2016 from 3.6% to 4.0%, for conventional retail banks. As for conventional wholesale banks, loans classified as non-performing were at 5.7% in September 2015 compared to 5.1% in March 2016. Loan concentration remains high for conventional retail and wholesale banks despite some decreases in some sectors.

As at end-March 2016, return-on-assets (ROA) decreased for conventional retail banks while it increased for conventional wholesale banks to stand at 0.4% and 0.3% respectively. Return-on-equity (ROE) for *local retail banks* decreased from 4.4% in March 2015 to 3.8% in March 2016. ROE for *local wholesale banks* decreased from 2.8% to 1.1% over the same period. For conventional retail banks, liquid assets as a proportion of total assets decreased over the period of September 2015 to March 2016 to reach 25.3%. On the other hand, Liquid assets for wholesale banks as a proportion of total assets increased from 20.8% in September 2015 to 22.7% in March 2016.

4. Islamic Banks

Chapter 4

Key Points

- Capital positions for Islamic retail banks increased while it decreased for wholesale banks.
- Increase in non-performing facilities (NPFs) for Islamic retail banks and wholesale banks.
- Concentration of facilities for both Islamic retail banks and Islamic wholesale Banks continues.
- Earnings remained positive and increased for Islamic retail and Islamic wholesale banks.
- Liquidity positions deteriorated for Islamic retail banks while it improved for Islamic wholesale banks.

4.1 Overview

This chapter analyzes the banking sector under the following categories: Islamic retail banks (section 4-2) and Islamic wholesale banks (section 4-3). Section 4.4 provides an overall assessment of the Islamic banking industry. Unless specified otherwise, the analysis in this chapter is based on consolidated financial data (Bahraini and non-Bahraini operations), as at end-September 2015 and compared with end-March 2016.

This chapter offers macroprudential analysis of the Islamic banking sector based on a set of selected Financial Soundess Indicators (FSIs).[7]

Annex1 presents selected *Financial Soundness Indicators* (FSIs) for the different banking segments. Annex 2 presents selected graphs showing the development of selected indicators over time.

[7]This chapter does not contain a section on stress testing. Stress Testing exercises are performed separately in an internal report to obtain information on the potential quantitative impact of hypothetical scenarios on selected Bahraini Systemically-Important Banks (SIB's).

4.2 Islamic Retail Banks

Increase in capital positions

The capital adequacy ratio of Islamic retail banks increased from 15.6% in September 2015 to 15.8% in March 2016. Tier 1 capital also increased from 13.6% in September 2015 to 13.7% in March 2016.

Table 4-1 Capital Provisions Ratios for Islamic Retail Banks

Indicator	Sep. 2015	Mar. 2016
Capital Adequacy Ratio	15.6%	15.8%
Tier 1 Capital Adequacy Ratio	13.6%	13.7%
NPFs net of provisions to capital	23.8%	26.5%

Source: Central Bank of Bahrain

The ratio of non-performing facilities (NPFs) net of provisions to capital increased from 23.8% to 26.5% for the same period.

Increase in non-performing facilities

Non-performing facilities (NPFs) increased to 12.4% in March 2016, compared to 11.7% in September 2015. Specific Provisoining increased from 36.8% in September 2015 to 40.8% in March 2016.

Table4-2: NPF Figures for Islamic Retail Banks

Indicator	Sep. 2015	Mar. 2016
NPFs (% Gross)	11.7	12.4
Specific Provisions (% of NPFs)	36.8	40.8

Source: Central Bank of Bahrain

A look at the non-performing facilities by sector indicates that the “Manufacturing” sector remained with the highest impairment of 27.3% in September 2015 (1.9% increase between September 2015 and March 2016) followed by “Agriculture, fishing and forestry” and “Contruction” with 23.2% and 21.8% respectively.

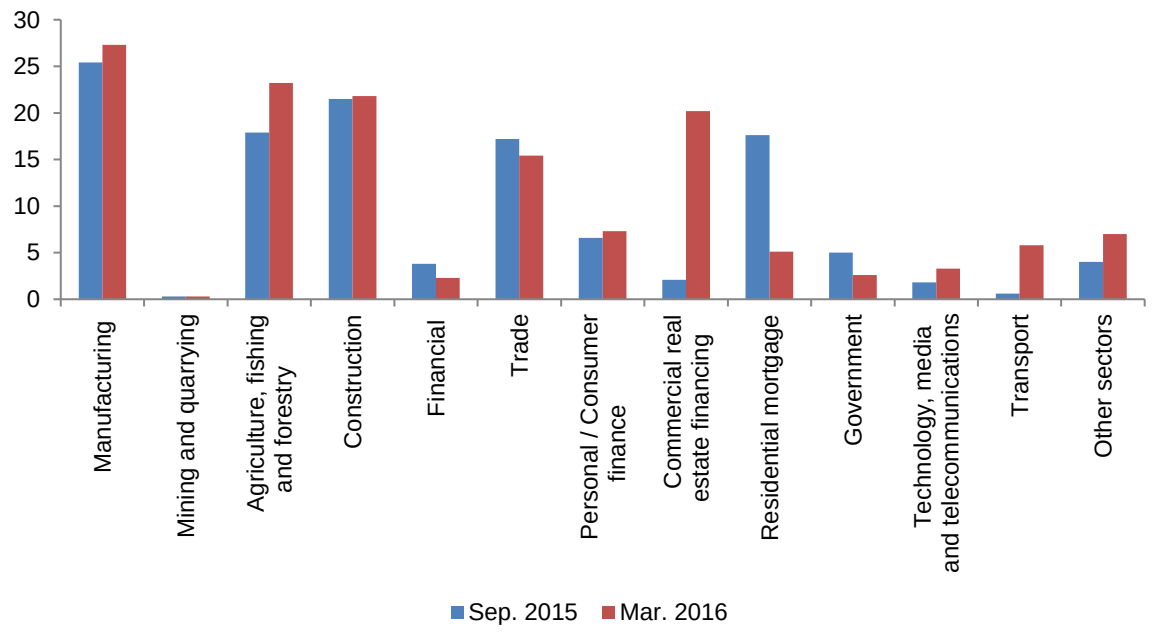
The biggest declines in NPF’s by sector was in the “Trade” Sector with a 1.8% decrease in NPFs from September 2015 to March 2016. The biggest increase in NPF’s was the “Agriculture, fishing and forestry” sector with an increase of 5.3%.

Table 4-3: Islamic Retail Banks' NPF Ratios by Sector (% of gross facilities per sector)

	Sep. 2015	Mar. 2016	Change
Manufacturing	25.4	27.3	1.9
Mining and quarrying	0.3	0.3	0.0
Agriculture, fishing and forestry	17.9	23.2	5.3
Construction	21.5	21.8	0.3
Financial	3.8	2.3	(1.5)
Trade	17.2	15.4	(1.8)
Personal / Consumer finance	6.6	7.3	0.7
Credit Card	2.1	6.2	4.1
Commercial real estate financing	17.6	20.2	2.6
Residential mortgage	5.0	5.1	0.1
Government	1.8	2.6	1.7
Technology, media and telecommunications	0.6	3.3	2.7
Transport	4.0	5.8	1.8
Other sectors	4.1	7.0	2.9

Source: Central Bank of Bahrain

Chart 4-1:Islamic Retail Bank's NPF's by Sector (% of gross facilities per sector)



Source: Central Bank of Bahrain

No significant change in asset concentration (loan portfolio)

There have been no significant changes in the asset concentration. At the end of March 2016, the top recipient of financing was "Personal / Consumer finance" at 20.8% down from 21.6% in September 2015. The top two recipients of financing ("Personal / Consumer finance" and "Commercial real estate financing") accounted for 35.7 of total facilities extended compared to 36.1% for the top two sectors in September 2015. Moreover, the share of "Government" sector declined from 9.0% in September 2015 to 6.7% in March 2016.

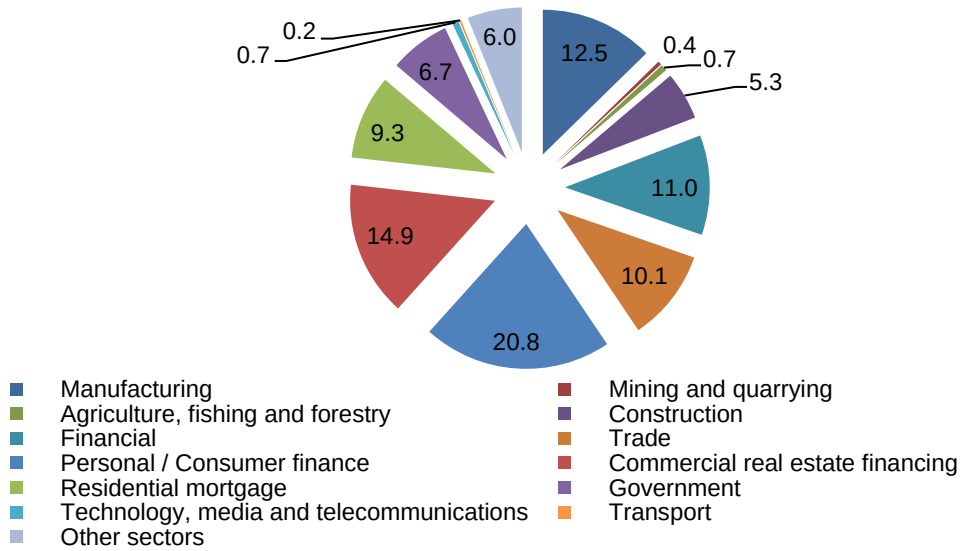
Table 4-4: Distribution of Islamic Retail Banks' Lending by Economic Activity (% of total facilities)*

	Sep. 2015	Mar. 2016	Change
Manufacturing	13.5	12.5	(1.0)
Mining and quarrying	0.5	0.4	(0.1)
Agriculture, fishing and forestry	0.9	0.7	(0.2)
Construction	4.8	5.3	0.5
Financial	7.1	11.0	3.9
Trade	10.3	10.1	(0.2)
Personal / Consumer finance	21.6	20.8	(0.8)
Credit Card	0.9	0.9	0.0
Commercial real estate financing	14.5	14.9	0.4
Residential mortgage	9.0	9.3	0.3
Government	9.0	6.7	(2.3)
Technology, media and telecommunications	0.8	0.7	(0.1)
Transport	1.0	0.8	0.2
Other sectors	6.0	6.0	0.0
Top two recipient sectors	**36.1**	**35.7**	**0.4**
Real Estate/ Construction Exposure**	**28.4**	**29.5**	**1.1**

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

"Real Estate/ Construction" exposure increased from 28.4% in September 2015 to 29.5% in March 2016.

Chart 4-2:Distribution of Islamic Retail Bank's Lending by Economic Activity (% of total facilities)



Source: Central Bank of Bahrain

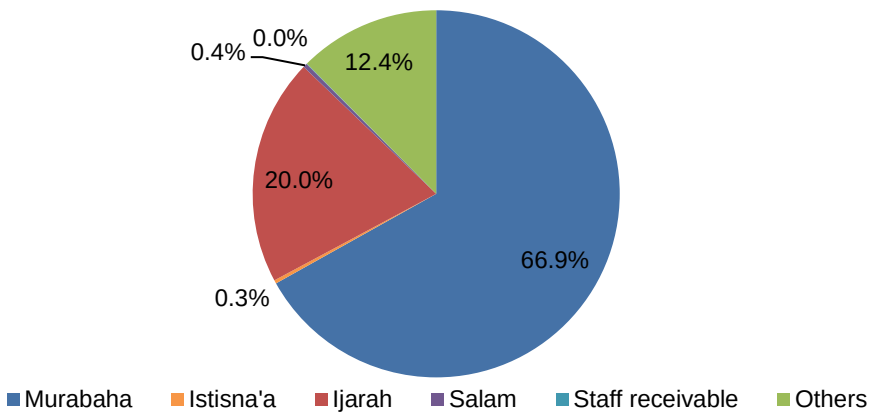
Lending distribution by Islamic instrument remained nearly unchanged over the past quarter. At the end of September 2015, the top recipient of finance was "Murabaha" at 70.2% in September 2015 down from 70.4% in March 2015. This was followed by "Ijarah" which increased from 18.6% to 18.9% in September 2015.

Table 4-5: Distribution of Islamic Retail Banks' Lending by Islamic Instrument (% of total facilities)*

	Sep. 2015	Mar. 2016	Change
Murabaha	70.2	66.9	-3.3
Istisna'a	0.4	0.3	-0.1
Ijarah	18.9	20.0	1.1
Salam	0.3	0.4	0.1
Staff receivable	0.0	0.0	0.0
Others	10.0	12.4	2.4

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*

Chart 4-3:Distribution of Islamic Retail Bank's Lending by Islamic Instrument (% of total facilities)



Source: Central Bank of Bahrain

No major change in earnings

The return on assets (ROA) for Islamic retail banks remained the same at 0.1% in March 2016 compared to March 2015. Return on equity (ROE) increased from 1.0% to 1.1% for the same period.

Table 4-6: Profitability of Islamic Retail Banks (%)

	Mar. 2015	Mar. 2016
ROA*	0.1	0.1
ROE**	1.0	1.1
Operating expenses (% total operating income)	72.8	77.2

Source: Central Bank of Bahrain
* ROA = ratio of net income to assets

**ROE = ratio of net income to tier 1 capital

Decrease in liquidity

The volume of liquid assets available to Islamic retail banks decreased from 11.2% of total assets in September 2015 to 10.5% in March 2016. The ratio of total facilities to deposits increased from 75.4% in September 2015 to 87.0% in March 2016.

Table 4-7: Liquidity Measures for Islamic Retail Banks

Indicator	Sep. 2015	Mar. 2016
Liquid Assets (% of total assets)	11.2	10.5
Facilities – deposits ratio (%)	75.4	87.0

Source: Central Bank of Bahrain

4.3 Islamic Wholesale Banks

Decline in capital positions

As at end-March 2016, the CAR for Islamic wholesale banks decreased from 19.4% in September 2015 to 19.1% in March 2016. Tier1 capital similarly decreased from 19.1% to 18.6% over the same period. However, the ratio of NPFs net of provisions to capital increased from 2.7 to 2.9% .

Table 4-8 Capital Provisions Ratios for Islamic Wholesale Banks

Indicator	Sep. 2015	Mar. 2016
Capital Adequacy Ratio	19.4	19.1
Tier 1 Capital Adequacy Ratio	19.1	18.6
NPFs net of provisions to capital	2.7	2.9

Source: Central Bank of Bahrain

Stable non-performing facilities (NPFs)

As of end-March 2016, NPFs for Islamic wholesale banks increased to 4.9% in March 2016 compared to September 2015. Provisioning for NPF's increased from 79.4% to 80.3% over the same period.

Table 4-9: NPF Figures for Islamic Wholesale Banks

Indicator	Sep. 2015	Mar. 2016
NPFs (% Gross)	4.7	4.9
Specific Provisioning (% of NPFs)	79.4	80.3

Source: Central Bank of Bahrain

The sector with the highest impairment was the "Technology, media and telecommunications" sector with 55.5% in March 2016, up from the 54.3% in September

2015. This was followed by the "Construction" and "Commercial Real Estate Financing" sectors.

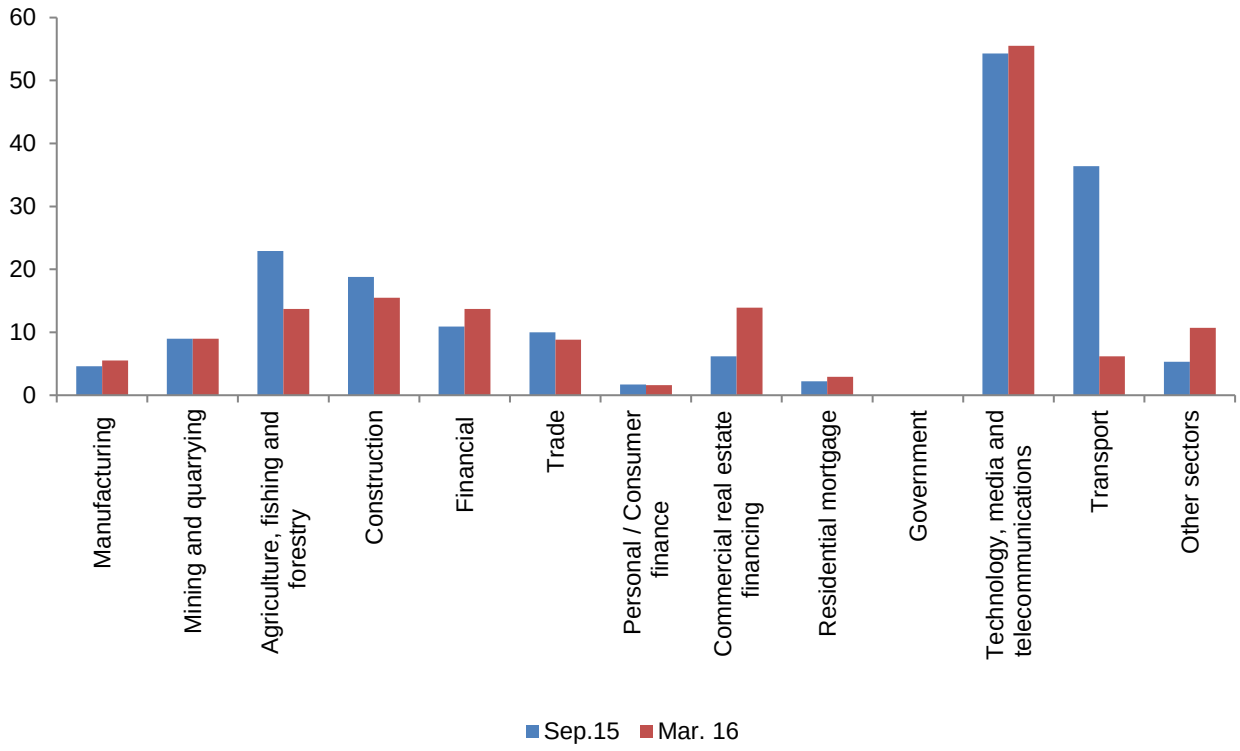
Available data on the sectoral breakdown of non-performing facilities shows that the biggest drop was in the Transport with a decrease of 30.2% from 36.4% in September 2015 to 6.2% in March 2016. The biggest increase was in the "Commercial real estate financing" sector with an increase of 7.7%.

Table 4-10: Islamic Wholesale Banks' NPF Ratios by Sector (% of gross facilities per sector)

	Sep. 2015	Mar. 2016	Change
Manufacturing	4.6	5.5	(0.9)
Mining and quarrying	9.0	9.0	0.0
Agriculture, fishing and forestry	22.9	13.7	(9.2)
Construction	18.8	15.5	(3.3)
Financial	10.9	13.7	2.8
Trade	10.0	8.8	(1.2)
Personal / Consumer finance	1.7	1.6	(0.1)
Commercial real estate financing	6.2	13.9	7.7
Residential mortgage	2.2	2.9	0.7
Government	0.0	0.0	0.0
Technology, media and telecommunications	54.3	55.5	1.2
Transport	36.4	6.2	(30.2)
Other sectors	5.3	10.7	5.4

Source: Central Bank of Bahrain

Chart 4-4: Islamic Wholesale Bank's NPF's by Sector (% of gross facilities per sector)



Source: Central Bank of Bahrain

Asset concentration remains high in some sectors

At end-March 2016, the "manufacturing" sector remained the top recipient of financing from Islamic wholesale banks, at 24.4%, surpassing "construction" at 17.3%. The financial Sector increased from 9.2% in September 2015 to 9.8% in March 2016.

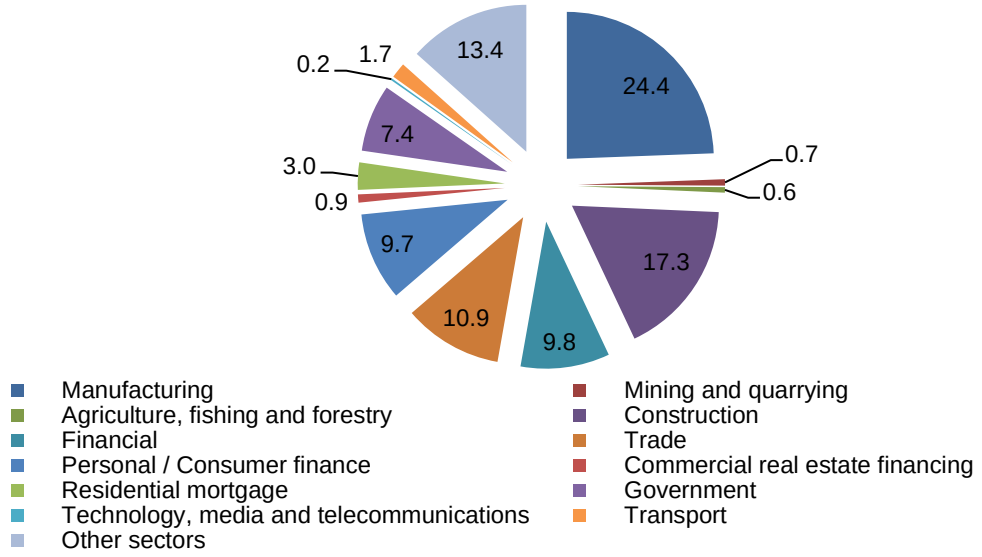
Table 4-11: Distribution of Islamic Wholesale Banks' Lending by Economic Activity (% total facilities)*

	Sep. 2015	Mar. 2016	Change
Manufacturing	24.0	24.4	0.4
Mining and quarrying	0.7	0.7	0.0
Agriculture, fishing and forestry	0.4	0.6	0.2
Construction	17.3	17.3	0.0
Financial	9.2	9.8	0.6
Trade	11.0	10.9	(0.1)
Personal / Consumer finance	9.8	9.7	(0.1)
Commercial real estate financing	0.9	0.9	0.0
Residential mortgage	3.3	3.0	(0.3)
Government	7.8	7.4	(0.4)
Technology, media and telecommunications	0.2	0.2	0.0
Transport	1.3	1.7	0.4
Other sectors	14.2	13.4	(0.8)

Top two recipient sectors	41.2	41.7	0.5
Real Estate/ Construction Exposure**	21.4	30.7	9.3

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*
*** Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*

Chart 4-5: Distribution of Islamic Wholesale Banks's Lending (% of total facilities)



Source: Central Bank of Bahrain

The top two recipient sectors in March 2016 ("Manufacturing" and "Construction") jointly represented 41.7% of total financing, up from 41.2% in September 2015. Real estate/ construction exposure increased to 30.7% in March 2016 from 21.4% in September 2015.

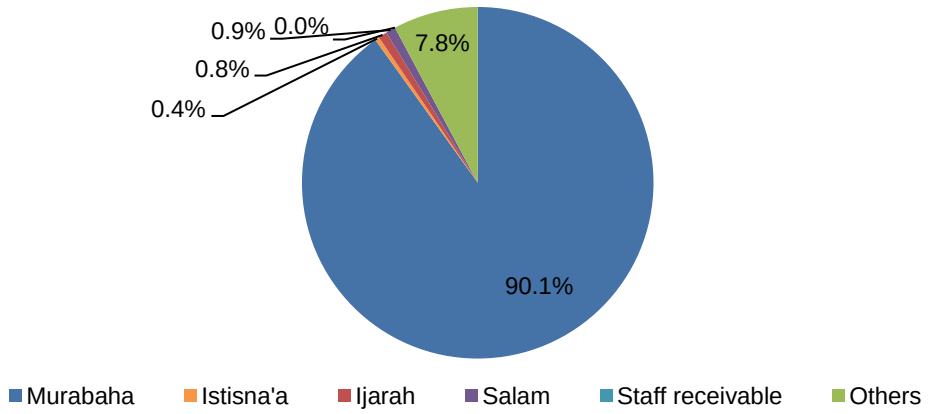
Lending distribution by Islamic instrument shows that at the end of March 2016, the top recipient of finance was "Murabaha" at 90.1%.

Table 4-12: Distribution of Islamic Wholesale Banks' Lending by Islamic Instrument (% of total facilities)*

	Sep. 2015	Mar. 2016	Change
Murabaha	90.5	90.1	(0.3)
Istisna'a	0.4	0.4	0.0
Ijarah	0.7	0.8	0.1
Salam	0.9	0.9	0.0
Staff receivable	0.0	0.0	0.0
Others	7.5	7.8	0.3

Source: Central Bank of Bahrain
**Figures may not add to a hundred due to rounding*

Chart 4-6: Distribution of Islamic Wholesale Bank's Lending by Islamic Instrument (% of total facilities)



Source: Central Bank of Bahrain

Increase in earnings

The earnings performance of Islamic wholesale banks increased over the period from March 2015 to March 2016. Return on assets (ROA) increased from 0.2 % in March 2015 to 0.5% in March 2016. Return on equity (ROE) increased as well from 1.0% to 3.6% in March 2016.Also, operating expenses (as % of total income) decreased from 61.5% in March 2015 to 55.2% in March 2016.

Table 4-13: Profitability of Islamic Wholesale Banks (%)

	March 2015	March 2016
ROA*	0.2	0.5
ROE**	1.0	3.6
Operating expenses (% total operating income)	61.5	55.2

Source: Central Bank of Bahrain
* ROA = ratio of net income to assets
**ROE = ratio of net income to tier 1 capital

Liquidity position improves slightly

As of end-March 2016, liquid assets of Islamic wholesale banks represented 20.2% of total assets, 0.3% higher than the 19.9% registered in September 2015. Additionally, the facilities deposit ratio increased from 60.9% to 62.1% in March 2016.

Table 4-14: Liquidity Measures for Islamic Wholesale Banks

Indicator	Sep. 2015	Mar. 2016
Liquid assets (% of total)	19.9	20.2
Facilities-deposit ratio	60.9	62.1

Source: Central Bank of Bahrain

4.4 Overall Assessment of the Islamic Banking Sector

The financial soundness indicators show that Islamic retail banks and wholesale banks' capital positions decreased during the period between September 2015 and March 2016 reaching 15.8% and 19.1% respectively.

Non-performing facilities increased for both Islamic retail and Islamic wholesale to reach to reach 12.4% and 4.9% respectively in March 2016. Facilities concentration has decreased in some sectors while increasing in others in retail Islamic banks and wholesale Islamic banks.

The earnings picture remains positive for Islamic retail banks while ROE and ROA increased for Islamic wholesale banks.

Islamic retail banks experienced some changes in its liquidity position as the liquid asset ratio decreased and facilities to deposits ratio increased. Islamic wholesale's liquidity positions showed an increase in liquid assets and facilities to deposit ratio.

Part III:

Developments in the Equity Market and Payment Systems

5. Performance of Equity Market

Chapter 5

Key Points

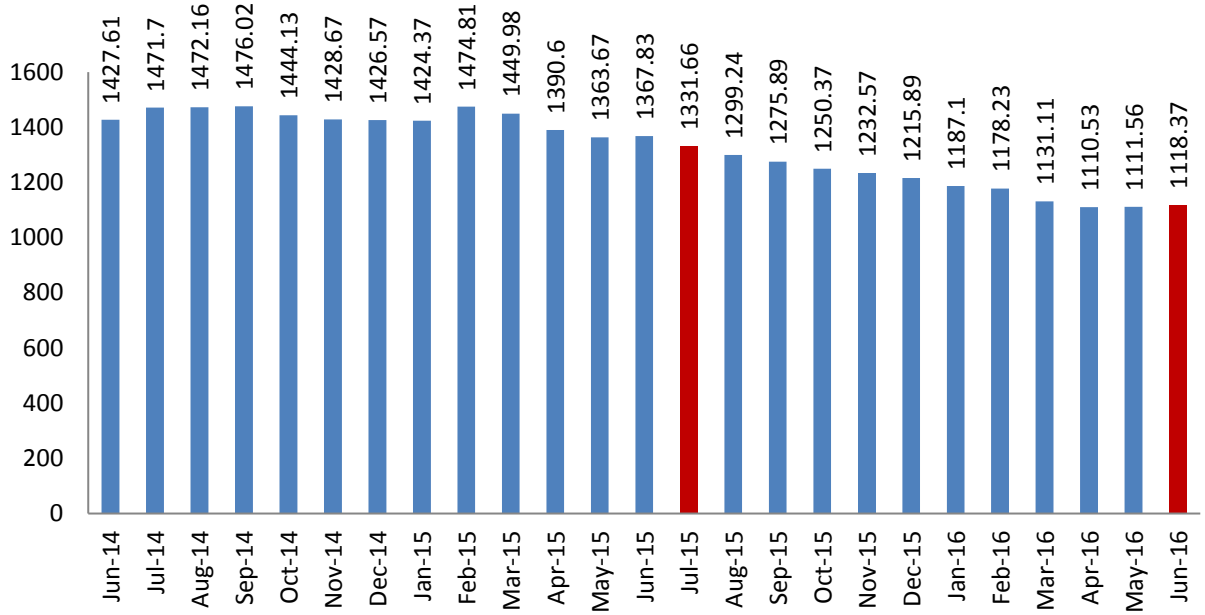
- Decrease in the Bahrain All Share index
- Year-on-year decline in market capitalization
- Year-on-year decline in price-earnings ratio
- GCC indices decline amid decreasing oil price

5.1 Bahrain Market Trends

Decrease in market index

A look at *year-on-year* data shows that the Bahrain All Share Index decreased by 249.5 points (18.2%) between June 2015 and June 2016 (Chart 5-1). In the same period, the index scored its highest point in June 2015 when it was at 1367.83 points. However, the index started gradually decreasing from June 2015 onwards until it reached its lowest point in April 2016 at 1110.53. Month on month basis, the index increased from 1111.56 in May 2016 to 1118.37 in June 2016 (0.61%). With oil prices expected to remain low in 2016 and higher interest rates, the index is unlikely to make big gains over the short to medium term.

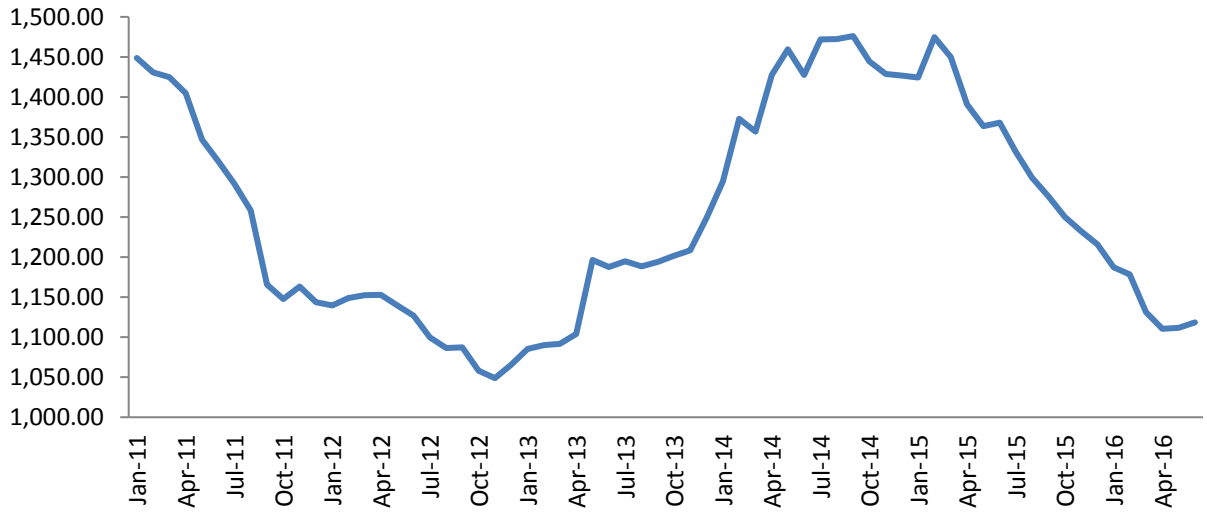
Chart 5-1: Recent Trends in the Bahrain All-Share Index, Jan 2014-June 2016.



Source of Data: Bahrain Bourse

Looking at the overall performance of the Bahrain All Share index for the four and half years (Chart 5-2), the index experienced some fluctuation levels between April 2014 and February 2015, however the index experienced gradual decreases afterwards. In year 2016 the index started scoring below 1200 points.

Chart 5-2: Bahrain All-Share Index, Jan 2014-June 2016



Source of Data: Bahrain Bourse

Decrease in market capitalization

As at end-June 2016, market capitalization of the Bahrain Bourse stood at BD 6.7 billion (Table 5-1). This level of market capitalization is 7.3% lower than the level attained in December 2015 and 17.5% lower *year-on-year*.

Table 5-1: Market Capitalization on the Bahrain Bourse

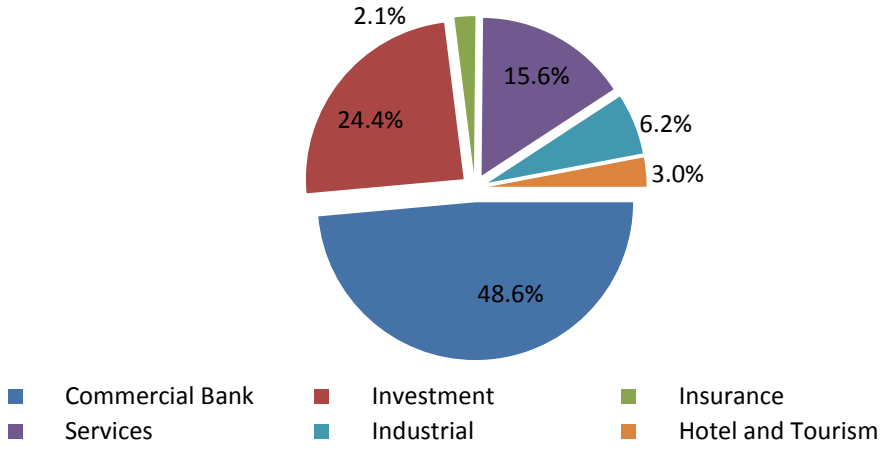
(BD)

Sector	Jun. 2015	Dec. 2015	Jun. 2016	Dec. 2015-June 2016 (% Change)	Jun. 2015-Jun. 2016 (% Change)
Commercial banks	3,664,820,365	3,483,477,135	3,230,784,925	(7.3)	(11.8)
Investment	2,121,193,355	1,723,042,243	1,626,074,000	(5.6)	(23.3)
Insurance	161,883,489	146,903,190	142,019,918	(3.3)	(12.3)
Services	1,156,482,718	1,096,383,238	1,039,701,020	(5.2)	(10.1)
Industrial	730,756,917	547,911,644	414,431,644	(24.4)	(43.3)
Hotel and Tourism	223,467,892	202,190,375	198,561,019	(1.8)	(11.1)
Total	**8,058,604,736**	**7,199,907,825**	**6,651,572,525**	(7.6)	(17.5)

Source: Bahrain Bourse

A breakdown of market capitalization by sector indicates that Industrial recorded the highest *year-on-year* decline in market capitalization (43.3%) followed by Investment (23.3%) and Insurance (12.3%). Services scored the lowest decreases among other market capitalization sectors with only 10.1% decrease.

Chart 5-3: Market Capitalisation by Sector, June 2016



Source: Bahrain Bourse

Decrease in price-earnings ratios

As June 2016, the price-earnings ratio (P-E ratio) for the stock market stood at 8.42, a decrease from the 9.83 attained last year in June 2015 and the 8.85 in December 2015. The Commercial Banks sector witnessed the highest decline in the P-E ratio between June 2015 and June 2016 followed by the Investment sector. All other sectors experienced declines in their p/e ratio compared to June 2015 except Insurance sector which experienced an increase of 13.01 in June 2016.

Table 5-2: Price-Earnings Multiples

Sector	Jun. 2015	Dec. 2015	Jun. 2016
Commercial banks	11.11	10.55	9.01
Investment	8.24	6.88	6.39
Insurance	9.65	8.74	13.01
Services	11.52	10.92	10.68
Industrial	7.43	5.57	6.74
Hotel and Tourism	11.84	10.63	11.81
Total Market	9.83	8.85	8.42

Source: Bahrain Bourse

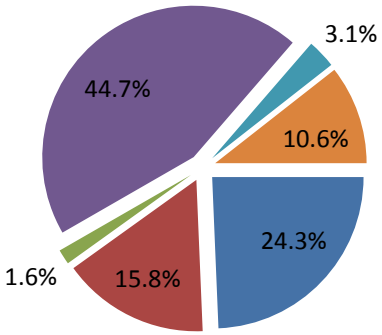
The bulk of the value of shares traded in June 2016 was the "Services" sector whose traded shares (by value) represented 44.7% of total shares traded up from 12.7% in December 2015. The "Commercial Banks" sector represented 24.34% of the total value of shares traded in June 2016, down from 75.5% in December 2015. The "Insurance" sector represented the lowest traded shares in June 2016 whose traded shares by value represented only 1.6% of total traded shares. (Table 5-3)

Table 5-3: Sectoral Distribution of Shares Traded by Value (% of all shares traded)

Sector	Jun. 2015	Dec. 2015	Jun. 2016
Commercial banks	45.1	75.5	24.3
Investment	1.3	6.6	15.8
Insurance	0.8	0.3	1.6
Services	45.9	12.7	44.7
Industrial	6.6	3.3	3.1
Hotel and Tourism	0.3	1.6	10.6

**Figures may not add to a hundred due to rounding*
Source: Bahrain Bourse

Chart 5-4: Sectoral Distribution of Shares Traded by Value (% of all shares traded) in June 2016



Commercial Bank · Investment · Insurance · Services · Industrial · Hotel and Tourism

Source: Bahrain Bourse

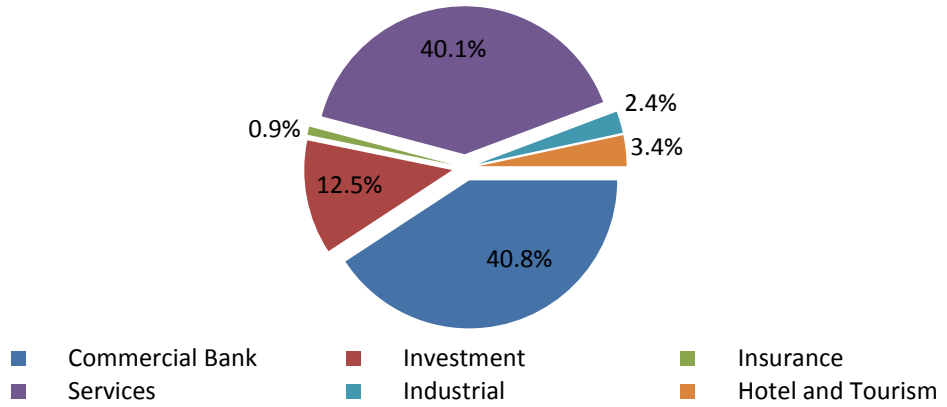
The bulk of the volume of shares traded in June 2016 was the "Commercial banks" sector representing 40.7% of the total volume of shares traded, followed by the "Services" sector at 40.0%. The lowest level was attained by the "Insurance" sector at 0.9%, up from 0.3% in December 2015. The volume of shares traded of the commercial banks was at 84.7% in December 2015 while the Services sector was at 6.9%.

Table 5-4: Sectoral Distribution of Shares Traded by Volume (% of all shares traded)

Sector	Jun. 2015	Dec. 2015	Jun. 2016
Commercial banks	73.4	84.7	40.7
Investment	2.0	5.0	12.4
Insurance	0.8	0.3	0.9
Services	19.9	6.9	40.0
Industrial	3.6	1.6	2.4
Hotel and Tourism	0.3	1.5	3.6

**Figures may not add to a hundred due to rounding*
Source: Bahrain Bourse

Chart 5-5: Sectoral Distribution of Shares Traded by Volume (% of all shares traded) in June 2016



Source: Bahrain Bourse

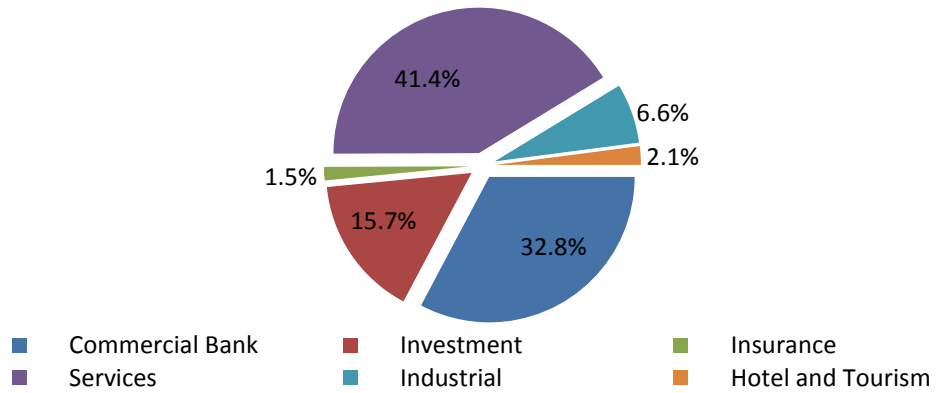
The majority of the number of transactions in June 2016 (873 transactions and a 15.74% decrease compared to December 2015) was attained by the "Services" sector at 361 transactions (41.4% of all transactions), followed by the "Commercial Banks" sector at 286 transactions (32.8%) and the "Investment" sector at 137 transactions (15.7%). Contrarily, in December 2015, the highest number of transactions was recorded by the commercial sector at 637 transactions, followed by the services sector at 186 transactions and the Investment sector at 116 transactions (Table 5-5).

Table 5-5: Number of Transactions by Sector

	Jun. 2015	Dec. 2015	Jun. 2016
Commercial Banks	399	637	286
Investment	48	116	137
Insurance	25	6	13
Services	216	186	361
Industrial	157	67	58
Hotels and Tourism	21	24	18
Total	866	1,036	873

Source: Bahrain Bourse

Chart 5-6: Sectoral Distribution of Number of Transactions Traded (% of all transactions traded) in June 2016



Source: Bahrain Bourse

5.2 GCC Market Trends

The GCC equity markets tumbled in 2016 amid low oil price. The price of a barrel of oil collapsed from $105.8 in June 2014 to $63.26 in June 2015 to $37.28 in December 2015 and to $49.68 in June 2016. As a result, all GCC indices recorded negative rates compared to June 2016. The highest decrease was experienced by the Tadawul Financial Market Index (Saudi), which decreased by 26.96% compared to the level attained in June 2015. On the other hand, the Abu Dhabi Index recorded the lowest decrease of 7.85% compared to other GCC equity markets over the same time period.

With oil prices expected to remain low in 2016, the GCC equity markets are forecasted to slowdown this year. However, many economists believe that the GCC countries have built up strong reserves over the years to support fiscal spending and keep the economies strong, in spite of declining oil prices.

Table 5-6: Stock Market Indices in GCC counties

Index	June 2015	Dec-2015	June 2016	December 2015-June 2016 (%)	Jun 2015-Jun 2016 (%)
Bahrain All Share Index	1,367.83	1,215.89	1,118.37	(8.0)	(18.2)
Tadawul All Share Index	9,086.89	6,911.76	6,637.70	(4.0)	(27.0)
Kuwait Market Index	6,202.95	5,615.12	5,408.54	(3.7)	(12.8)
Qatar Exchange Index	12,201.02	10,429.12	9,807.28	(6.0)	(19.6)
Dubai Financial Market Index	4,086.83	3,151.00	3,324.38	5.5	(18.7)
Abu Dhabi Index	4,723.23	4,307.26	4,352.62	1.1	(7.9)
Muscat Securities Market Index 30	6,424.60	5,406.22	5,826.46	7.8	(9.3)

Sources: Bloomberg

5.3 Overall assessment of the equity market

The performance of the Bahrain All Share Index was affected by the low oil price. The index decreased by 18.2% year- on- year, the market capitalization decreased by 17.5%, and the P/E ratio dropped from 9.8 in June 2015 to 8.4 in June 2016.

Moreover, the indices of the GCC equity markets have been temporarily decreasing given the decline in oil price. Markets in the GCC are very sensitive to oil price fluctuations. The oil price has reached a five-year low in December 2015, hovering around $37 per barrel. The overall market conditions should improve over the medium term, however, propped up by government spending on various projects.

6. Payments and Settlements Systems

Chapter 6

Key Points

- The various components of Bahrain's payments and settlement framework continue to function efficiently.
- Retail payments include cheques, credit transfers, and debit and credit card transactions.
- Year-on-year decrease in the volume and value of cheques processed through the ACS.
- Year-on-year rise in value and the number of ATM withdrawals.
- Year-on-year decrease in volume of transfers through the RTGS and in value.

6.1 Overview

Payments and settlement systems are central to the smooth operation of the financial sector and the efficient functioning of the economy at large. Not only do they facilitate trade in goods and services, they are also critical for transactions in financial assets. Hence, disruptions to payment systems have the capacity to transmit shocks and trigger widespread financial and economic disturbances. Therefore, an assessment of the safety and soundness of payment and settlement systems is important for the evaluation of risks to financial stability.

The current payments and settlement infrastructure in Bahrain comprises of five main components: i) the Real Time Gross Settlement System (RTGS); ii) the Automated Cheque Clearing System (ACS); iii) the ATM clearing system; iv) the Scriptless Securities Settlement System (SSSS); and v) the clearing, settlement and depository system for the Bahrain Bourse. Bahrain's payments and settlement framework continue to function efficiently. The RTGS in particular remains a robust framework for processing retail and wholesale payments in Bahrain. The launch of the ACS was a milestone to the Bahraini financial sector which raised efficiency and customer services. This section describes recent trends in the retail and wholesale payments system.

6.2 Retail Payments

In the Kingdom of Bahrain, households can carry out their cash and non-cash transactions with a wide range of instruments of payment. Cash payment instruments are basically based on paper money and coins. It is the most popular instrument in Bahrain and it is based on face-to-face or hand-on-hand operation. Non-cash payment instruments include: cheques, credit transfer, debit transfer and debit and credit cards. In this section we show the evolution of retail payment transactions based on paper money and e-payment channels.

6.2.1 Cheques and paper based instruments

Cheques are seen as the most popular instrument in use among non-banks in all types of payments. With the increasing usage of electronic means of payments, in particular debit cards and credit cards, the use of cheques in the Kingdom of Bahrain decreased drastically. Cheques are still used for retail and large-value payments in virtually all the national payments systems in the Kingdom and remain the principal instrument for large-value payments.

In 2013, the CBB has decided to improve the use of cheques in order to reduce their related risks. Therefore, it launched a new cheque clearing system based on the electronic transmission of images and payment information. The new procedure replaced the common paper-based procedure on May 2012. The Bahrain Cheque Truncation System (BCTS) was commenced in cooperation with the BENEFIT Company (BENEFIT) which also operates Bahrain's ATM service and point-of-sale systems. The Automated cheque clearing system (ACS) replaced the old paper based cheque clearing system in Bahrain. The main feature of the ACS is that it speeds up the clearing process and customers could process cheques on the same day.

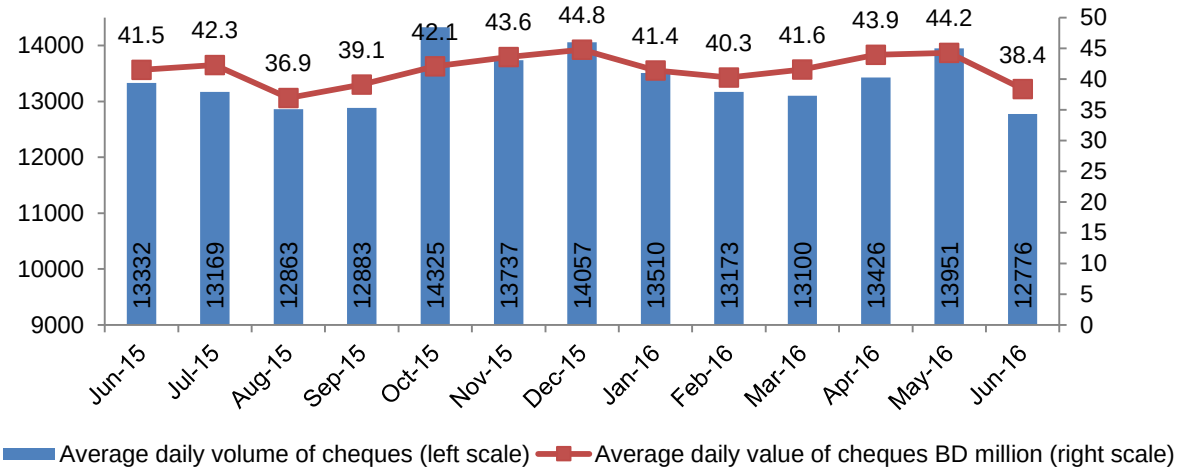
Year on year decrease in average daily volume and value of cheques through ACS

In the period between December 2015 and June 2016, the average daily volume of cheques processed through the Automated Cheque Clearing System (ACS) decreased by 9.1% from 14,057 in December 2015 to 12,776 in June 2016(year-on-year decrease of 4.2%) (Chart 6-1). The average daily value of cheques decreased by around 4.20% from BD 41.4 million in December 2015 to BD 38.4 million in June 2016 (year-on-year decrease of 4.5%).

The average daily volume kept fluctuating from December 2014 until December 2015; however the biggest increase was by 11.2% in October 2015. The average daily volume reached its peak in May 2015 at 14,401 average daily transactions.

The average daily value of cheques decreased in February 2016 before increasing until May 2016 before taking drop in June 2016. The highest value of cheques cleared since the beginning of the year was seen in May 2016 BD 44.2 million whereas the lowest value of cleared cheques occurred in June 2016. It has to be noted that cheques are now cleared in the Bahrain Cheque Truncation System (BCTS), which went live on 13th May, 2012 and there is no cap on the value of cheques cleared in the BCTS.

Chart 6-1: ACS System- Average Daily Volume and Value of Payments Processed, June 2014– June 2016



Source: Central Bank of Bahrain

6.2.2 E-Payment systems

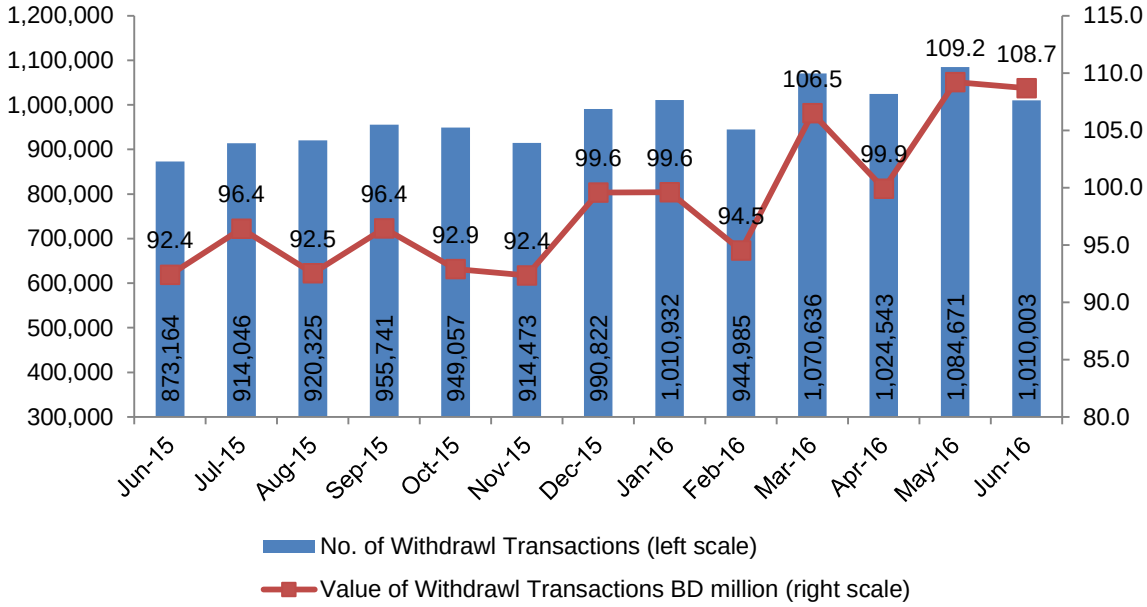
ATM clearing is based on a Deferred Net Settlement (DNS) system. The Benefit Company in Bahrain receives and processes all the ATM transactions. The GCC net, a leased line network across the GCC countries, provides for the communication backbone for the transmission of all the ATM transactions and settlement related electronic messages (source: Benefit website).

Year on year growth in number and value of ATM withdrawals

Between December 2015 and June 2016, the number of withdrawal transactions processed through the ATM Clearing System increased by 1.9% from 990,822 in December 2015 to 1,010,003 in June 2016 (year-on-year growth was 15.6%)(Chart 6-2). Similarly, in value terms, total withdrawals processed increased by 9.1% from BD 99.6 million to BD 108.7 million (year-on-year growth was 17.6%).

There have been minor up and down fluctuations in both the value and volume of transactions between December 2015 and June 2016. In that period May 2016 witnessed the highest number of ATM withdrawals with an increase of 5.9% from the previous month whereas the biggest decrease in the number of withdrawals took place in the month of April 2015 by almost 4.9%. Since December 2015, the highest value of withdrawals was witnessed was also in May 2016 at BD 109.2 million and the lowest value of withdrawals was in February 2016 by BD 94.5 million.

Chart 6-2: Number and Value of ATM Transactions, June 2014- June 2016



Source: The Benefit Company

With the widespread use of internet and mobile services in Bahrain, another payment solution was introduced by banks. Nowadays, Bahraini household started paying their bill online (e-bill) with both internet and mobile bill. Moreover, the government of Bahrain encouraged the use of internet ICT tools in all the government services. It launched the e-government portal which includes the most important services. In addition to the development of e-banking and internet banking, a number of banks in Bahrain offer mobile banking services to their customers. The purpose is to receive regular information on their balances accounts and their current transactions.

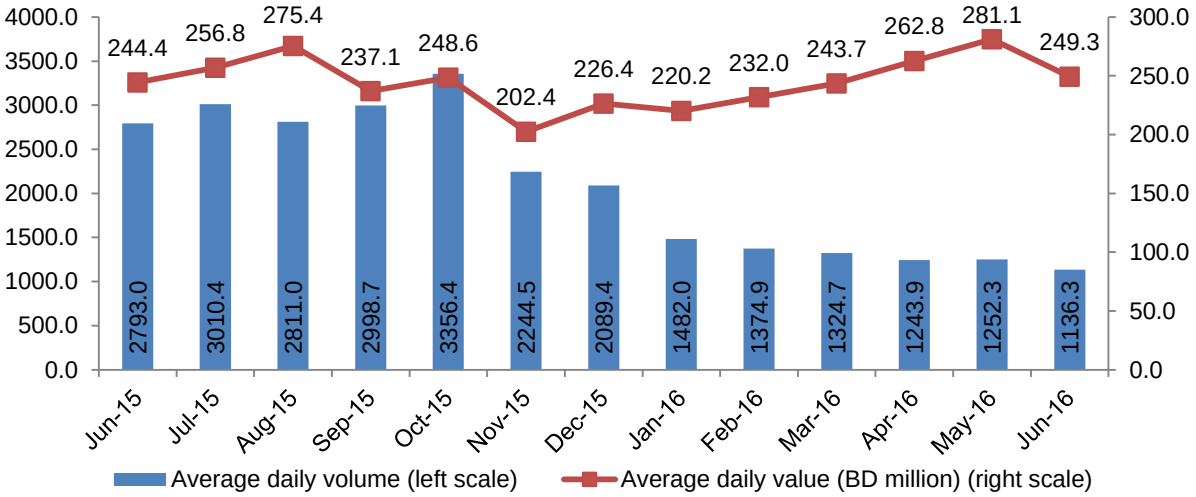
6.3 Wholesale Payments

Year on Year decrease in volume and increase in value of payments through RTGS

In Bahrain, wholesale transaction are made though the Real Time Gross Settlement (RTGS), which hinges on (real-time) which settles fund transfers, on solo basis when an order arises (without netting). The major difference is that it takes orders on spot rather than later. The RTGS is Bahrain's dedicated system for processing large-value, inter-bank payments. However, the RTGS also processes small-value retail payments for bank customers. The volume and value of payments passing through the RTGS system between December 2015 and June 2016 is seen in Chart 6-4 below.

Between December 2015 and June 2016, the *average daily volume of transfers* decreased by 45% from 2,089.4 to 1136.3 (59.3% year-on-year decrease). He decrease in the volume of transfers has been a trend since November 2015. . In value terms, the *average daily value of transfers* witnessed a 10.1% increase from BD 226.4 million in December 2015 to BD 249.3 million in June 2016 (2.0 % year-on-year increase).

Chart 6-3: RTGS System- Average Daily Volume and Value of Payments Processed, Dec 2014 – Dec 2015



Source: Central Bank of Bahrain

7. Cyber Risk

Chapter 7

Key Points

- Banks in Bahrain are now required to maintain up to date Payment Card Industry Data Security Standards (PCI-DSS) Certification
- Over the past year, only 0% to 35% of operational risk incidents were cyber security related for retail banks in Bahrain
- Almost 87% of retail banks in Bahrain report cyber security incidents to their Board of Directors.
- Retail Banks in Bahrain consider the risk of an employee or other authorized user engaging in misconduct that will result in compromise to the bank's network or data as the most serious of cyber threats.

7.1 Overview

Cyber risk is steadily evolving into a main threat to all industries. Its impact however on the financial services industry is growing into an individually recognised risk by all financial institutions. Given the innovations in information technology (IT) and financial institutions' increased reliance on IT channels, cyber security is no longer regarded as a technical issue. The Central Bank of Bahrain will therefore be addressing cyber risk as a recurrent chapter in its Financial Stability Report. The aim of the chapter is to actively spread awareness about Cyber Risk by warning the financial industry of the large operational, financial and security risks involved with cyber. The chapter will also present the latest initiatives undertaken by leading international organisations and central banks.

7.2 CBB Cyber Security Initiatives

A. Updates from the CBB TRMST (Technology Risk Manager Security Team) Committee

1- The CBB's TRMST Committee made changes to the Operational Risk Management Module (OM), which were issued as part of April updates. Banks are now required to maintain up to date Payment Card Industry Data Security Standards (PCI-DSS) certification. Additional ATM security measures are also now in place.

2- A circular to All Bank Licensees, Financing Companies, Card Processing and Payment Services Providers and Credit Information Bureaus was issued by the Executive Director of Banking Supervision (EDBS) on 1st June related to "Cyber Security Risk Management". The circular included requirements to comply with before the end of the year. Detailed IT security requirements are to be developed in future.

3- A circular to All Retail Banks and Financing Companies was issued by EDBS on 9th June related to "Outsourcing of Functions Containing Customer Information".

4- The TRMST Committee drafted e-banking guidelines. These guidelines are a statement of industry best practices and when finalized will be issued to financial institutions.

B. CBB Cyber Security Survey

I- Survey Scope & Objectives

As part of The Central Bank of Bahrain's ongoing initiatives to assess the growing cyber risk in the financial services industry, a survey was issued for the first time by the Financial Stability Directorate in June 2016 to understand retail banks' perception of cyber risk. The aim of the survey is to assess which cyber threats constitute the most serious of threats to Bahrain's Retail Banking system. The survey received an excellent response rate where the participation rate of retail banks reached almost 100%. In the first part of the survey, retail banks were asked to identify which proportion of their operational risk incidents were cyber security related over the past year. Respondents were asked to choose from three percentage groups (0 to 35%, 40-70%, 75-100%). In the second part of the survey, a list of hypothetical cyber security events were presented and respondents were asked to rank these incidents by the degree of seriousness according to each individual bank's risk perception. In the third part of the survey, respondents were asked a list of four questions that will help us understand whether retail banks are aware of the growing risk of cyber risk.

II- Key Survey Findings:

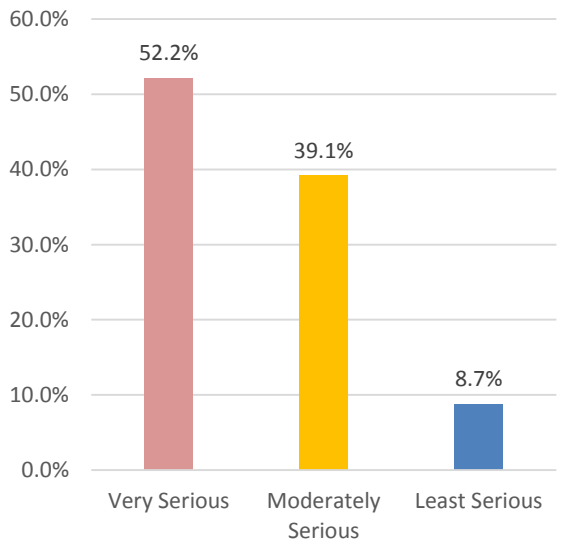
- The survey indicated that only 0-35% of operational risk incidents recoded over the past year were cyber security related.

- According to the responses received, the only risk categorized by the majority of retail banks, as a moderately serious cyber threat (by almost 52.2%) is in the instance that a bank receives fraudulent emails, purportedly from customers, seeking to direct transfers of customer funds or securities.
- The cyber threat with the highest classification of being very serious, with a rate of 87%, is in the instance that an employee or other authorized user of the bank's network engages in misconduct resulting in compromise to the bank's network or data.
- Almost 96% of retail banks have a designated IT Security Officer Position.
- Approximately 83% of retail banks regularly incorporate requirements relating to cyber-security into contracts with vendors/clients
- Almost 87% of retail banks conduct regular security awareness sessions to their employees.
- Almost 87% of retail banks report cyber security incidents to their Board of Directors.

III- Degree of Seriousness of Hypothetical Cyber Security Events

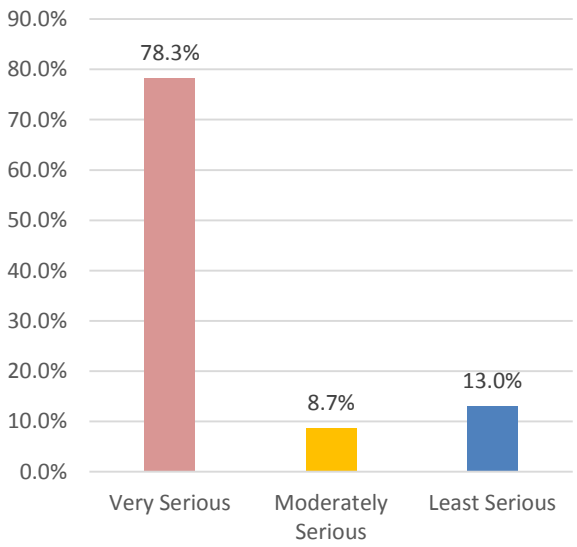
As Chart 7-1 below indicates, almost 52% of respondents classified the risk of detecting malware one or more of their bank's devices as a very serious risk. The other 39% of respondents found this to be a moderately serious threat, which means that they do have adequate policies and procedures in place that can help detect, contain and control the risk. The remaining respondents found this to be a less serious threat by almost 8.7%. Chart 7-2 on the other hand presents the perception of retail banks to the risk event of having the bank's network breached by an authorized user. The majority of retail banks (almost 78%) found this to be a very serious threat while 8.7% classified it as a moderately serious threat and the remaining 13% found this to be a less serious one.

Chart 7-1: Detection of Malware on one or more of the bank's devices



Source: Central Bank of Bahrain Survey

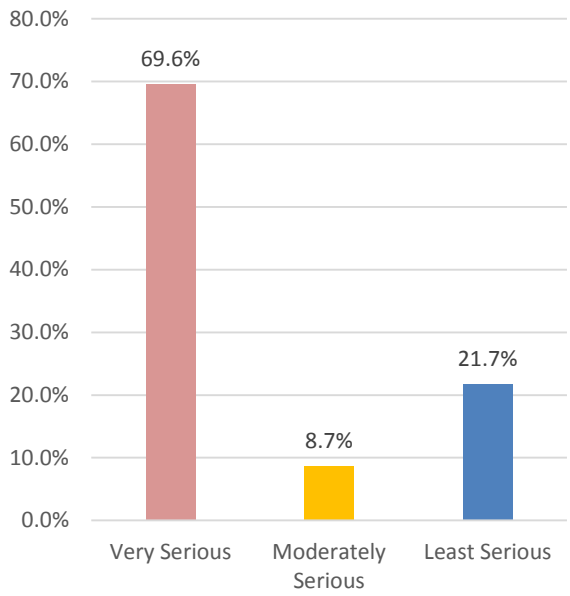
Chart 7-2: The bank's network was breached by an authorized user



Source: Central Bank of Bahrain Survey

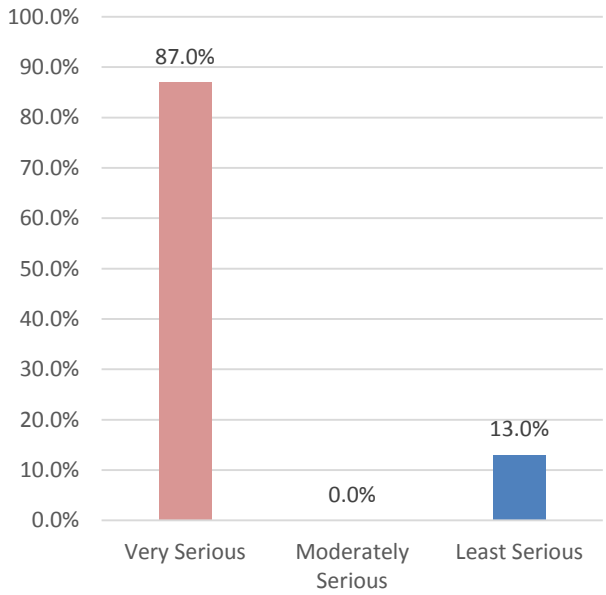
Chart 7-3 below indicates that the majority of retail banks find that fraudulent activity caused by the compromise of a vendor's computer that was used to remotely access the bank's network is a very serious threat according to 70% of the respondents. Whereas only 8.7% of retail banks find this to be a moderately serious threat and the remaining 21.7% regard this as a less serious one. Chart 7-4 ascertains that the majority of retail banks (87%) find that breach of the bank's network or data from an authorized user such as an employee is a very serious threat and only 13% find it to be a less serious one.

Chart 7-3: The compromise of a customer's or vendor's computer used to remotely access the bank's network resulted in fraudulent activity



Source: Central Bank of Bahrain Survey

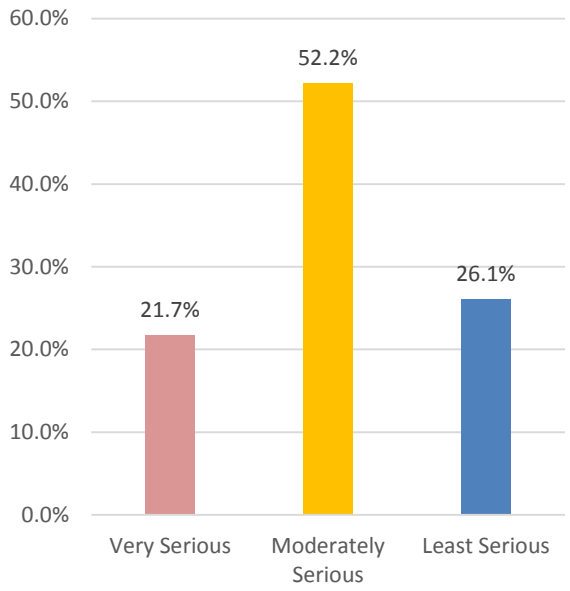
Chart 7-4: An employee or other authorized user of the bank's network engaged in misconduct resulting in compromise to the bank's network or data



Source: Central Bank of Bahrain Survey

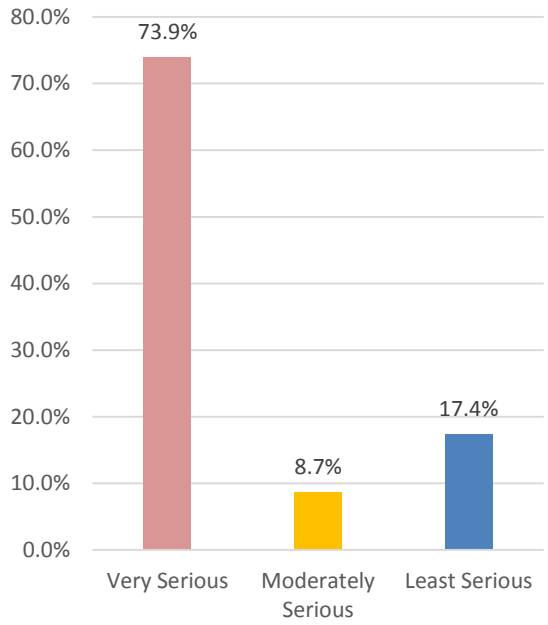
Chart 7-5 indicates that in the instance that a bank was subject to an extortion attempt by an individual or group, threatening to impair access to or breach the bank's data, properties, or networks, almost 74% of retail banks classified this as a very serious threat. However, the majority of retail banks categorized the risk of receiving fraudulent emails from customers instructing the bank to transfer funds or securities as a moderately serious threat since systems and authentication levels are already set in place by the majority of banks in Bahrain.

Chart 7-5: The bank was the subject of an extortion attempt by an individual or group threatening to impair access to or damage the bank's data, devices, network, or web services



Source: Central Bank of Bahrain Survey

Chart 7-6: The bank received fraudulent emails, purportedly from customers, seeking to direct transfers of customer funds or securities.

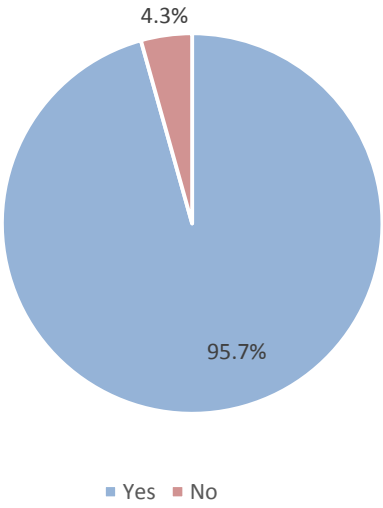


Source: Central Bank of Bahrain Survey

IV- Retail Banks' Awareness of the Growing Cyber Risk in the Financial Services Industry

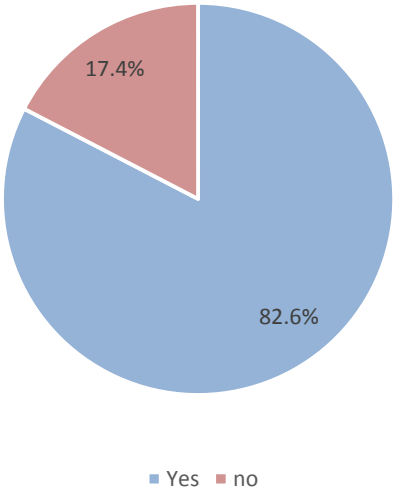
The availability of an Information Security Officer in the majority of retail banks in Bahrain indicates that banks do recognize the importance of the protection of data and networks along with detecting information security vulnerabilities and threats (as seen in Chart 7-7 below).

Chart 7-7: Information Security Officer



Source: Central Bank of Bahrain Survey

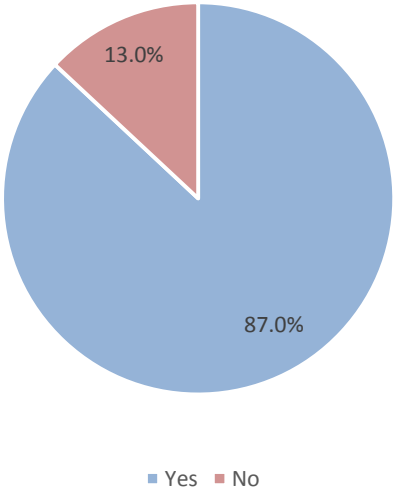
Chart 7-8: Requirements relating to cyber-security are regularly incorporated into contracts with vendors/clients



Source: Central Bank of Bahrain Survey

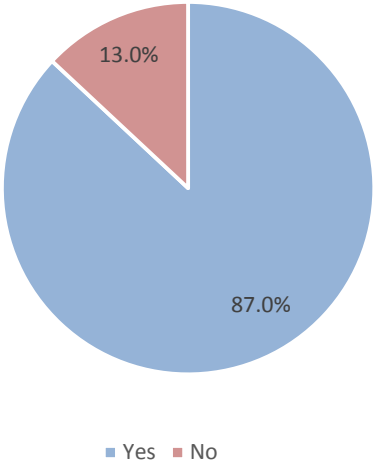
The survey indicates that retail banks are aware of the growing cyber risk in the banking and financial industry through their undertaken initiatives to educate their employees about cyber security and by reporting cyber incidents to the Board of Directors, as shown in Chart 7-9 and 7-9 below.

Chart 7-9: Regular cyber security awareness sessions are conducted to employees



Source: Central Bank of Bahrain Survey

Chart 7-10: Reporting cyber security incidents to banks' Board of Directors



Source: Central Bank of Bahrain Survey

7.3 Cyber Security Updates in the Global Financial Sector Industry

The Financial Stability Board (FSB) conducted a study in which the FSB's Analytical Group on Vulnerabilities conducted an exercise where respondents were to give their assessment of macro-financial implications associated with some operational risk scenarios. The scenarios consisted of shocks that impair different parts of the financial system.

The FSB mentioned in their study that it is very difficult to quantify these operational risks; however, most respondents suggested that for the specified scenarios, the effects would be "disruptive and costly". The FSB suggest that it is quite unlikely for these effects to cause a systemic event, however it could lead to financial system stress if some financial institutions do experience failure (particularly if the payment or settlement systems were affected). The scenarios assume that disruptive events will take place in idiosyncratic nature (where markets are functioning in their normal stance). The paper therefore examines some of the historical operational risk incidents, which highlight the importance of setting rules and guidelines to contain cyber and operational risk. Some of the most important historical operational incidents include:

Table 7-1: Important Historical Operational Risk Incidents

- In 1985, a computer problem at the Bank of New York prevented it from effecting the delivery of Treasury securities. The problem was not resolved until the following day, forcing the bank to borrow more than $20 billion from the Federal Reserve of New York overnight.

Terrorist attacks in the United States on 11 September 2001 caused massive disruptions. Amongst those, an average of $200 billion in daily interdealer settlement fails occurred for the week of September 13-19, and fails continued to be elevated into early October.

In 2014, there was an information attack on a large domestically systemically important bank5 where SMS messages were sent to depositors, which in turn provoked a bank run. A substantial loss in deposits took place over several days but the broader financial system impact was mitigated by the strong solvency position of the bank and significant collateralized liquidity assistance from the central bank.

Source: FSB, 2016

The FSB thus highlighted the key role played by central banks in mitigating the negative effects associated with the above events from spreading to other legs in the financial system. The scenarios presented in the study are depicted below:

Table 7-2: List of Scenarios

Affected entity/service	*Scope of assumed shock*	*Potential first round impacts*
Exchange	1) Inoperable for longer than 1 day 2) Opening/ Closing auctions at primary listing exchange are affected	Certain assets cannot be reliably priced and traded
Pricing Service	Inoperable for longer than 1 day	End of day pricing could be affected and validity of internal models and risk management questioned
Bond electronic trading platform	Inoperable for longer than 1 day	Liquidity in affected markets decline
CCP	1)Inoperable for longer than 1 day 2)Complete shut-down of operations 3)Time period covers a central bank interest rate decision	1) Unable to recalculate margins on existing trades 2) Delay in settling existing trades 3)Inability to clear new trades
Global or Domestic SIFI	1) Inoperable for longer than 1 day 2)Universal bank with prime brokerage, FX activities, correspondent-banking activities etc. 3) Core data system impaired such that collateral management ceases to function	4) Collateral transfer does not occur 5) Settlement of outstanding trades is delayed
Central Bank	1) Electronic auction systems inoperable 2) Recovery takes longer than 1 day	1) Policy rate could deviate significantly from target 2) Managing Bank balance sheet and cash management of the system affected
Payment Messaging Service	1)Time frame for standard recovery is greatly surpassed 2) Critical activities take place via contingency plans (to extent they are in place)	3) Large volume of payments do not take place, settlement is delayed, technical defaults occur throughout the system

Source: FSB, 2016

The scenarios shown in Table 2 above were classified into nodes by the respondents who participated in the FSB's study. Respondents were asked to classify the scenarios into power nodes from low to severe. A low power node means that a financial institution has low connectivity and can therefore be easily replaced. A high power node indicates that removing a financial institution or a specific service will result in losses and disruption to the entire

financial system. Critical nodes on the other hand mean that the impairment of certain financial institutions/ services will have a severe and significant impact on the functioning of the financial system/market. The classification of the different financial market functions into nodes are presented in Table 3 below:

Table 7-3: Importance of Financial Market Functions

Importance of different functions from members' responses		
Low Power Nodes	**High Power Nodes**	**Critical Power Nodes**
Bond Trading Platforms	CCP	Global SIB
Pricing Services	Stock Exchange	Payment system messaging service
Central Bank electronic auction system	Domestic SIFI	
	Independent Broker Dealer	

Source: FSB, 2016

The FSB paper finds that if banking services were delayed (especially interbank settlement), this would lead to increased credit exposure between banks that will result in a "cascade of defaults" in the event that one bank experiences a failure. This will also affect retail payments where customers will not be able to conduct important banking transactions. On the other hand, the longer-term impact will consist of decreased confidence in the economy and the financial system. Therefore, the FSB suggests that more work should be considered in the future to understand the broad system wide impact of operational risk incidents on the financial system.

Annex:

Financial Soundness Indicators And Selected Graphs

Annex 1: Financial Soundness Indicators

Annex1 Table 1:
Selected Financial Soundness Indicators—Conventional Retail Banks

(End of period)

	Mar-15	Sep-15	Mar-16
Capital Adequacy			
Total capital adequacy ratio (%) *	17.6	18.7	18.1
Tier 1 capital adequacy ratio (%) *	15.6	16.9	16.3
Leverage (assets/capital)(times)*	8.0	7.4	7.7
Non-performing loans net provisions to capital ratio (%)*	7.5	7.9	7.4
Asset Quality			
Non-performing loans (% of gross loans)	3.5	3.6	4.0
Specific provisions (% of NPLs)	55.6	52.3	53.9
Net non-performing loans (% of net loans)	1.6	1.8	1.9
Loan concentration (share of top-2 sectors) (%)	30.3	31.6	31.6
Real Estate/ Construction exposure (%) **	29.1	29.6	30.0
Earnings			
ROA retail banks (%)	0.7	1.2	0.4
ROA Local Retail banks (%)	0.5	1.3	0.4
ROA Overseas Retail banks (%)	1.3	1.1	0.3
ROE Local Retail banks (%)***	4.4	10.5	3.8
Net interest income (% of gross income)	67.4	71.9	73.5
Net fees & commissions (% of gross income)	17.8	15.9	14.9
Operating expenses (% of gross income)	27.1	42.9	52.9
Liquidity			
Liquid assets (% of total assets)	26.6	26.3	25.3
Liquid assets (% of short-term liabilities)	40.9	40.2	37.9
Loan-deposit ratio (%)	69.6	72.2	71.1
Deposits from non-bank sources (% of total deposits)	78.2	79.6	79.1

** Locally-incorporated banks only*
*** Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*
**** ROE is defined as net profit over Tier 1 Capital.*
Source: Central Bank of Bahrain

Annex1 Table 2:
Selected Financial Soundness Indicators—Conventional Wholesale Banks

(End of period)

	Mar-15	Sep-15	Mar-16
Capital Adequacy			
Total capital adequacy ratio (%) *	21.4	19.6	19.4
Tier 1 capital adequacy ratio (%) *	19.0	17.9	17.8
Leverage (assets/capital)(times)*	8.7	6.6	6.6
Non-performing loans net provisions to capital ratio (%)*	2.3	3.7	3.8
Asset Quality			
Non-performing loans (% of gross loans)	6.0	5.7	5.1
Specific provisions (% of NPLs)	70.6	65.8	66.3
Net non-performing loans (% of net loans)	1.9	2.1	1.8
Loan concentration (share of top-2 sectors) (%)	41.4	40.6	39.2
Real Estate/ Construction exposure (%) **	11.9	11.9	12.6
Earnings			
ROA Wholesale banks (%)	0.2	0.4	0.3
ROA Local Wholesale banks (%)	0.3	0.3	0.2
ROA Overseas Wholesale banks (%)	0.1	0.5	0.5
ROE Local Wholesale banks (%)***	2.8	2.5	1.1
Net interest income (% of gross income)	52.9	81.1	42.2
Net fees & commissions (% of gross income)	56.6	32.1	39.1
Operating expenses (% of gross income)	60.2	63.2	52.0
Liquidity			
Liquid assets (% of total assets)	24.9	20.8	22.7
Liquid assets (% of short-term liabilities)	39.7	30.5	33.3
Loan-deposit ratio (%)	63.3	64.6	67.8
Deposits from non-bank sources (% of total deposits)	45.8	45.8	44.8

** Locally-incorporated banks only*
***Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total lending.*
**** ROE is defined as net profit over Tier 1 Capital.*
Source: Central Bank of Bahrain

Annex1 Table 3:
Selected Financial Soundness Indicators—Islamic Retail Banks

(End of period)

	Mar-15	Sep-15	Mar-16
Capital Adequacy			
Total capital adequacy ratio (%) *	16.1	15.6	15.8
Tier 1 capital adequacy ratio (%) *	13.9	13.6	13.7
Leverage (assets/capital)(times)*	6.6	6.8	6.7
Non-performing facilities net provisions to capital ratio (%)*	19.7	23.8	26.5
Asset Quality			
Non-performing facilities(% of gross facilities)	11.0	11.7	12.4
Specific provisions (% of NPFs)	42.3	36.8	40.7
Net non-performing facilities (% of net facilities)	6.0	7.1	7.1
Facilities concentration (share of top-2 sectors) (%)	35.4	36.1	35.7
Real Estate/ Construction exposure (%) **	28.6	28.4	29.5
Earnings			
ROA (%)	0.1	0.4	0.1
ROE (%)***	1.0	3.2	1.1
Net income from own funds, current accounts and other banking activities (% of operating income)	69.7	64.7	59.9
Net income from jointly financed accounts and Mudarib fees (% of operating income)	20.4	23.5	30.1
Operating expenses (% of gross income)	72.8	74.6	72.0
Liquidity			
Liquid assets (% of total assets)	13.4	11.2	10.3
Facilities-deposit ratio (%)	77.4	75.4	87.5
Current accounts from non-banks (% of non-capital liabilities, excl. URIA)	24.9	26.5	27.5

** Locally-incorporated banks only*
***Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total financing.*
**** ROE is defined as net profit over Tier 1 Capital.*
Source: Central Bank of Bahrain

Annex1 Table 4:
Selected Financial Soundness Indicators—Islamic Wholesale Banks

(End of period)

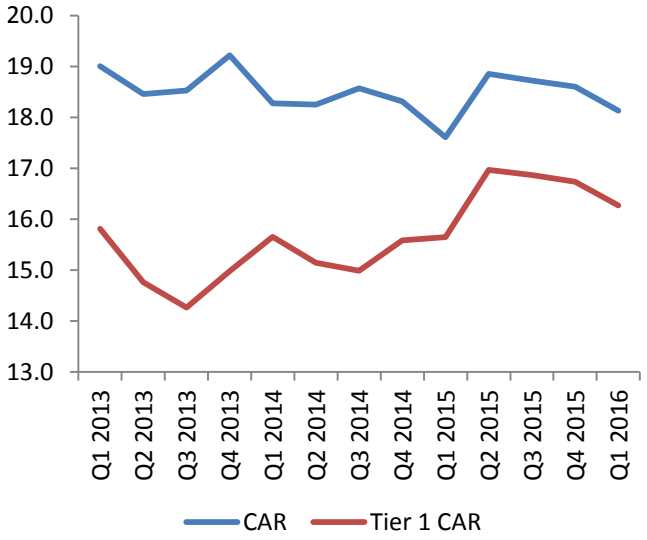
	Mar-15	Sep-15	Mar-16
Capital Adequacy			
Total capital adequacy ratio (%) *	20.5	19.4	19.1
Tier 1 capital adequacy ratio (%) *	20.2	19.1	18.6
Leverage (assets/capital)(times)*	6.1	6.4	6.7
Non-performing facilities net provisions to capital ratio (%)*	3.0	2.7	2.9
Asset Quality			
Non-performing facilities(% of gross facilities)	4.7	4.7	4.8
Specific provisions (% of NPFs)	76.6	79.4	80.3
Net non-performing facilities (% of net facilities)	1.1	1.0	0.9
Facilities concentration (share of top-2 sectors) (%)	42.4	41.2	41.7
**Real Estate/ Construction exposure (%) ** **	20.8	21.4	21.2
Earnings			
ROA (%)	0.2	-0.1	0.1
ROE (%)***	1.0	-0.7	1.0
Net income from own funds, current accounts and other banking activities (% of operating income)	61.9	56.7	57.5
Net income from jointly financed accounts and Mudarib fees (% of operating income)	37.8	42.2	42.2
Operating expenses (% of gross income)	61.5	63.3	62.8
Liquidity			
Liquid assets (% of total assets)	19.5	19.9	19.1
Facilities-deposit ratio (%)	63.3	60.9	64.7
Current accounts from non-banks (% of non-capital liabilities, excl. URIA)	40.1	40.6	43.3

** Locally-incorporated banks only*
***Real Estate/ Construction exposure is calculated as the share of the Construction, Commercial real estate financing and Residential Mortgages sectors of total financing.*
**** ROE is defined as net profit over Tier 1 Capital.*
Source: Central Bank of Bahrain.

Annex 2: Selected Graphs

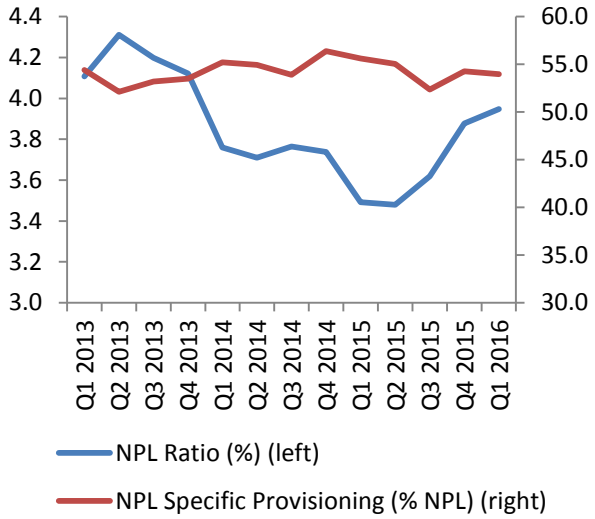
A. Conventional Retail

Annex 2 Graph 1: CAR



Source: Central Bank of Bahrain

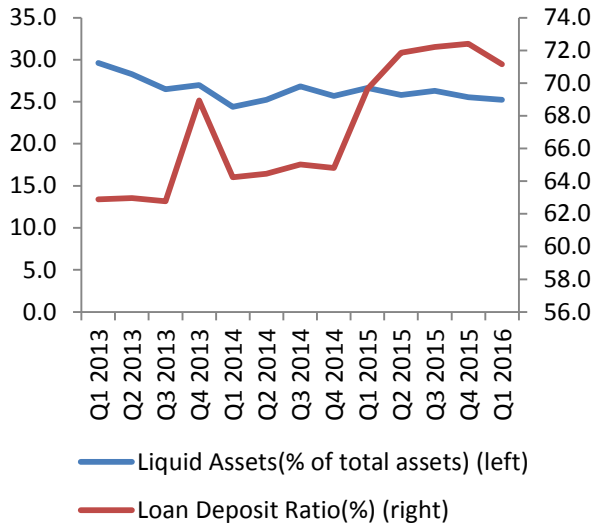
Annex 2 Graph 2: NPL and Provisioning



Source: Central Bank of Bahrain

Annex 2 Graph 3: Profitability

Annex 2 Graph 4: Liquidity

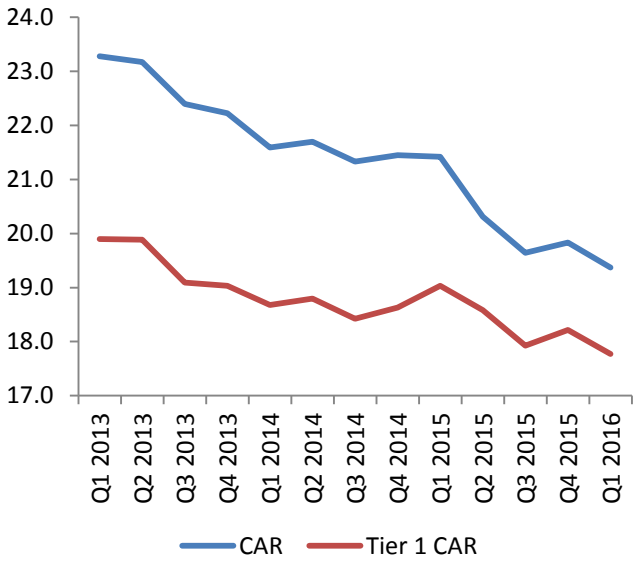


Source: Central Bank of Bahrain

Source: Central Bank of Bahrain

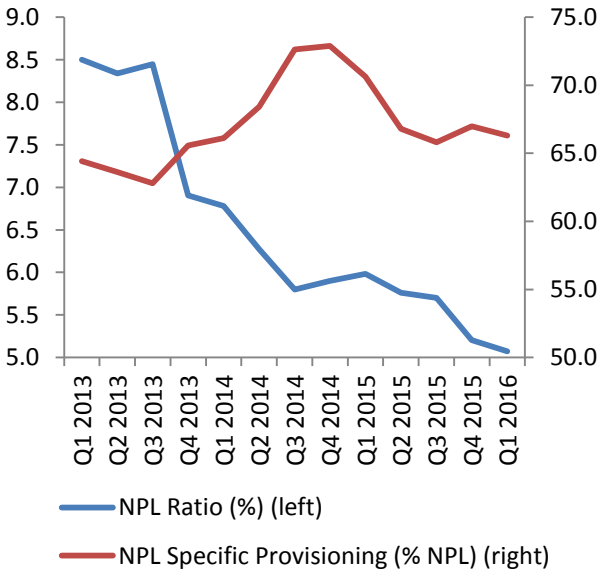
B. Conventional Wholesale

Annex 2 Graph 5: CAR



Source: Central Bank of Bahrain

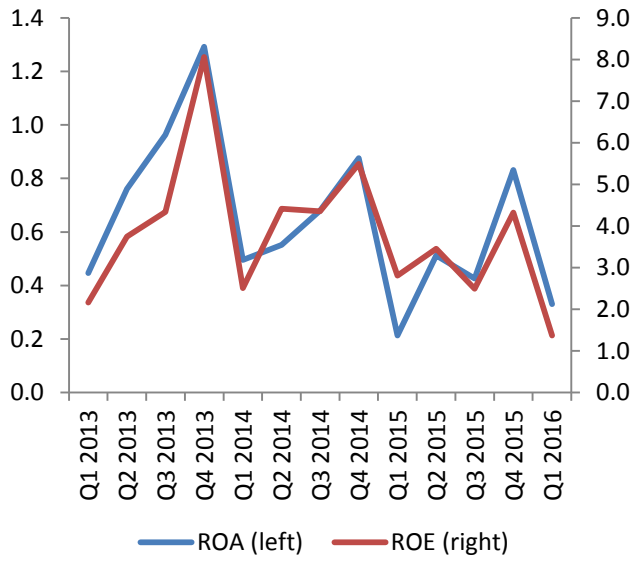
Annex 2 Graph 6: NPL and Provisioning



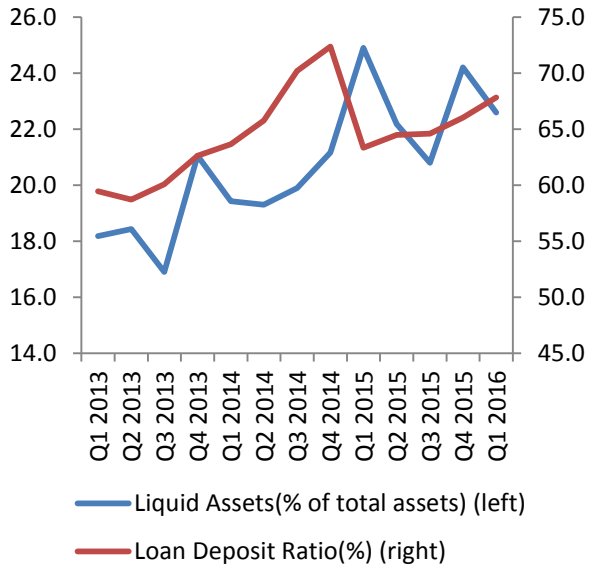
Source: Central Bank of Bahrain

Annex 2 Graph 7: Profitability

Annex 2 Graph 8: Liquidity



Source: Central Bank of Bahrain

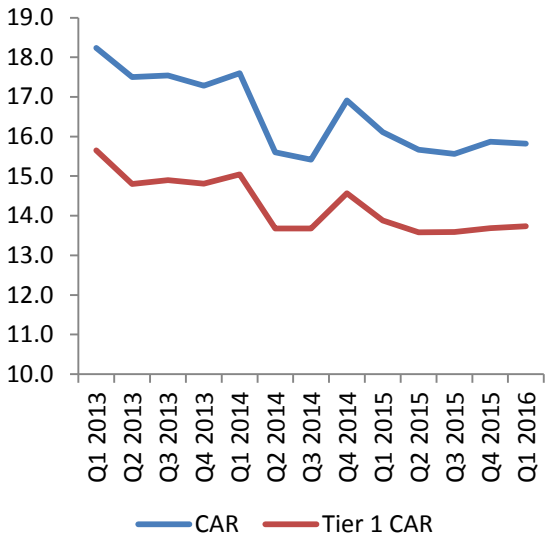


Source: Central Bank of Bahrain

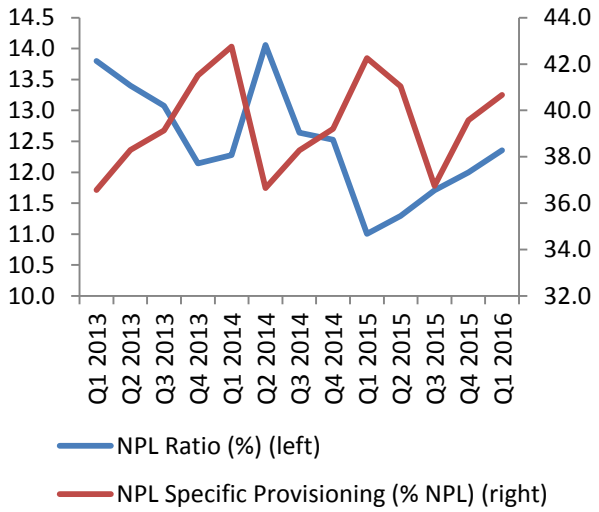
C. Islamic Retail

Annex 2 Graph 9: CAR

Annex 2 Graph 10: NPL and Provisioning

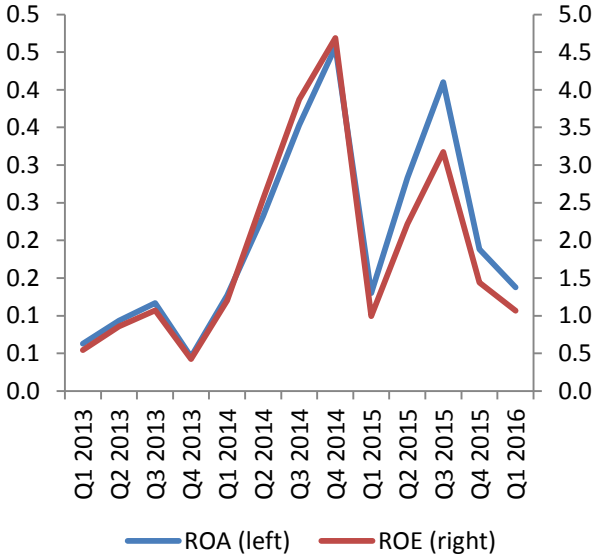


Source: Central Bank of Bahrain



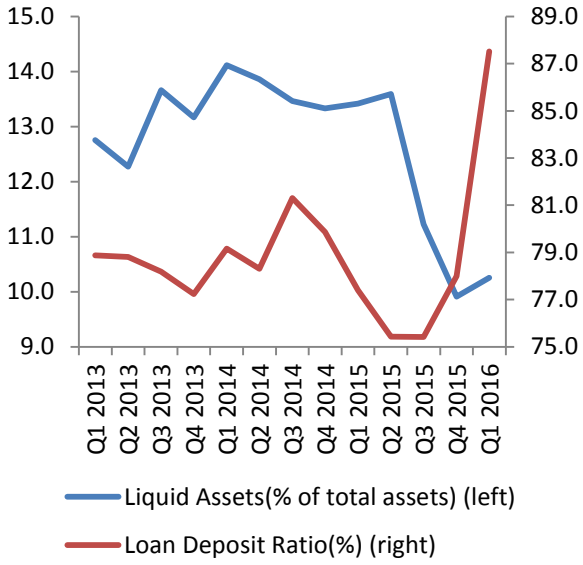
Source: Central Bank of Bahrain

Annex 2 Graph 11: Profitability



Source: Central Bank of Bahrain

Annex 2 Graph 12: Liquidity

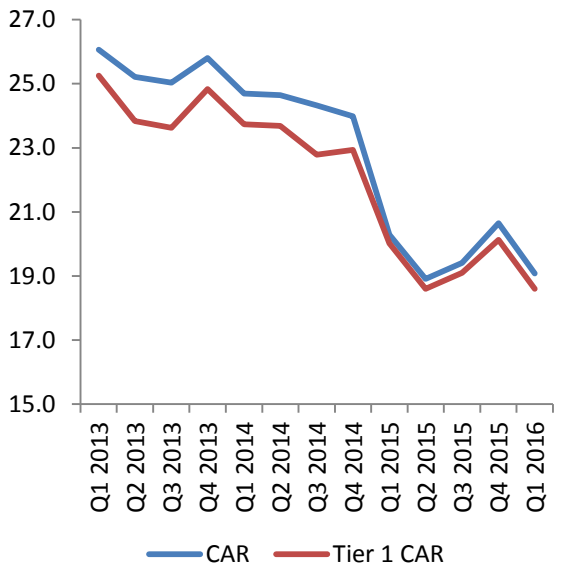


Source: Central Bank of Bahrain

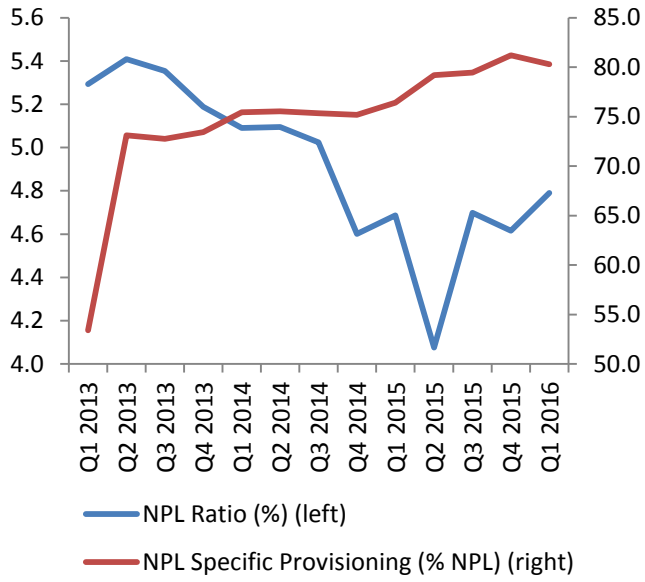
D. Islamic Wholesale

Annex 2 Graph 13: CAR

Annex 2 Graph 14: NPL and Provisioning

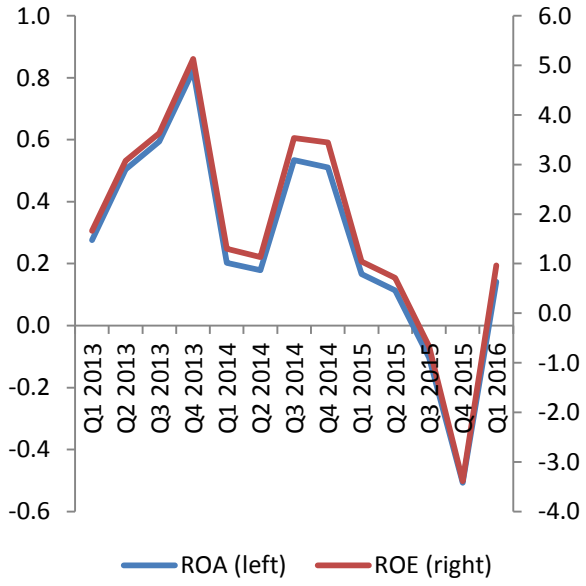


Source: Central Bank of Bahrain



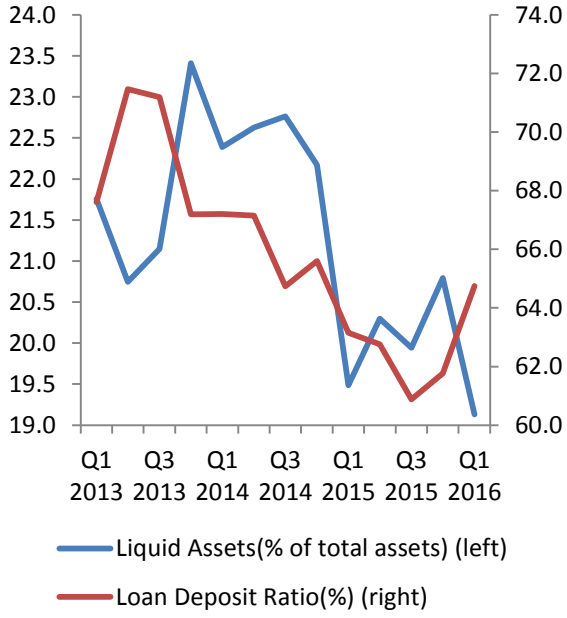
Source: Central Bank of Bahrain

Annex 2 Graph 15: Profitability



Source: Central Bank of Bahrain

Annex 2 Graph 16: Liquidity



Source: Central Bank of Bahrain