



Financial Stability Report

2016

مُؤَسَّسَةُ النَّقْدِ الْعَرَبِيِّ السُّعُودِيِّ

Saudi Arabian Monetary Agency



Financial Stability Report 2016

Saudi Arabian Monetary Agency
Monetary Policy and Financial Stability Department
King Saud Bin Abdulaziz Street
P.O. Box 2992
Riyadh 11169
Kingdom of Saudi Arabia

Telephone: 0114662218
Fax: 0114662966
Email: mpolicy@sama.gov.sa

Contents

Executive Summary.....	1
1. The Global Economy: Trends, Risks and Growth Outlook	3
1.1 Recent Trends	3
1.2 Global Financial Developments and Financial Stability Risks	5
1.3 Global Growth Outlook	6
2. The Saudi Economy: Trends, Risks and Growth Outlook	8
2.1 Growth and Inflation Trends.....	8
2.2 Monetary Developments.....	8
2.2.1 Monetary Aggregates	8
2.2.2 Reserve Assets	9
2.2.3 Fixed Exchange Rate Policy	10
2.2.4 Interest Rates.....	10
2.3 Fiscal Developments.....	10
2.4 Labor Market Performance	12
2.5 External Sector Performance	12
2.6 Saudi Economy Growth Outlook and Risks	13
3. Banking Sector: Operating Efficiency, Risks and Resilience	15
3.1 Overview	15
3.2 Balance Sheet Assessment - Banks Assets	15
3.2.1 Bank Credit	18
3.2.2 Corporate Lending	19
3.2.3 Consumer Lending.....	19
3.2.4 Real Estate Lending	20
3.2.5 Maturity Distribution of Bank Credit.....	21
3.3 Balance sheet assessment – Banks Liabilities.....	21
3.3.1 Bank Deposits	22
3.3.1.1 Maturity Distribution of Banks Deposits.....	22
3.4 Off-Balance Sheet Operations	22
3.5 Foreign Currency Exposure	23
3.6 Banking Sector Resilience	24
3.6.1 Profitability	24
3.6.2 Regulatory Capital and Asset Quality	24
3.6.3 Liquidity	25
3.6.4 Leverage	25
3.7 Risk Outlook of Banking Sector	25
4. Non-Bank Credit: Recent Trends and Initiatives	31
4.1 Overview	31
4.2 Performance of SCIs.....	31

4.2.1 SCI Assets	31
4.2.2 Credit Extended by the SCIs	31
4.3 Non-Bank Finance Sector	33
4.3.1 Finance Company Assets	33
4.3.2 Finance Company Credit Extended	33
4.3.3 Finance companies Resilience	33
4.3.3.1 Profitability	33
4.3.3.2 Leverage	34
4.3.4 Risk Outlook of Finance Companies	34
4.3.5 Overview of Policy Measures	34
5. Insurance Sector: Performance, Coverage and Resilience	37
5.1 Overview	37
5.2 Performance	39
5.3 Resilience	40
6. Capital Market Stability	46
6.1 Overview	46
6.2 Capital Market Activities	46
6.3 Market Legislation	47
6.4 Government Energy Policy Reform	47
6.5 Market Volatility and Risk	47
6.6 Market Liquidity	48
6.7 Shadow Banking	48
6.8 Market Resilience	48
6.8.1 Corporate Profitability	48
6.8.2 Corporate Leverage	49
6.9 Authorized Persons	50
6.9.1 Capital Adequacy	50
6.9.2 Profitability	50
6.9.3 Liquidity	51
6.10 Operational Risks of the Saudi Capital Market	51
7. Payment System: Recent Initiatives	52
7.1 SARIE	52
7.2 MADA	52
7.3 SADAD Payment System:	53
7.4 Mobile Banking	54

Executive Summary

A slower global economic growth continues to pose risks to most countries including the kingdom of Saudi Arabia. According to the IMF, global economic growth slowed in 2015, with real GDP up by 3.1 percent, versus a 3.4 percent growth in the previous year. The slowdown was due almost exclusively to slower growth in the world's developing and emerging nations. This pattern is not unprecedented; ever since the global economy started to recover post 2008 financial crisis, real growth in the developing/emerging world has been in a declining trajectory, from 7.4 percent in 2010 down to an estimated 4.0 percent in 2015. Growth in the world's advanced economies remained relatively steady, at a slow but sustainable pace, expanding by 1.9 percent.

Global financial markets are reflecting a higher degree of uncertainty. Doubts regarding the durability of the economic expansion are beginning to emerge in developed markets as well as regional markets. Certain economies, particularly in South America, are showing increased stress. The sharp price decline in commodity markets as well as the expectation of a slowdown in China and divergent monetary policies (between the US and other major developed nations) have contributed to global financial markets instability. Moreover, deflation risks in major developed and increased liquidity risks in some developing countries may also pose some financial stability challenges.

The outlook for global economic growth is subdued, at best. While European growth is expected to continue to pick up, the US expansion has stalled early in 2016, and growth for the year is now projected at only 1.8 percent, the lowest since 2009. In the developing world, recessions in Latin America, Russia, and Ukraine are offsetting the relatively good economic performance in Southeast Asia, keeping the outlook for growth in the developing world somewhat subdued.

In Saudi Arabia, macroeconomic indicators reflected a slowdown in 2015 as the oil prices continued its decline. This is an expected consequence in oil dependent economies where government spending is the main impetus of the economic activities. As oil revenues deteriorated, government relied on its reserve buffer to overcome the challenges and maintain growth and the stability of the financial system.

Despite the global and local economic and financial challenges, the Saudi banking system continued to grow moderately and remained resilient. Banks asset base expanded by 3.6 percent while credit

growth during 2015 was 8.9 percent. As for resilience, the sector continued to be highly capitalized with total regulatory and Tier 1 regulatory capital adequacy ratios recording 18.1 percent and 16.2 percent, respectively. Return on Assets (ROA) and Return on Equity (ROE) stood at 14.5 percent and 2.0 percent, respectively. The quality of assets remained high as banks continued to maintain very low levels of non-performing loan ratios. Stress test results show that banks are able to withstand severe macroeconomic shocks including oil shocks. Moreover, profitability continued to grow despite the low level of interest rates while the sector's leverage ratio is way above the 3 percent Basel requirement.

Both external exposure risks and liquidity risks continued to be limited. While the share of foreign assets increased in 2015 to reach 14.3 percent, this percentage is still relatively small as Saudi banks continued to rely on domestic market. Liquidity risks are also limited. All banks liquidity ratios including both the ratio of liquid assets to total assets and to short-term liabilities and Basel III liquidity ratios show ample liquidity.

The non-banking finance sector continues to support economic growth by providing another channel of credit to the private sector. Both Specialized Credit Institutions (SCIs) and finance companies have enjoyed higher level of credit extended to the public. This have helped reduce risks on the economy by diversifying channels of credit and supplementing banks' lending. The Saudi Arabian Monetary Agency (SAMA) has introduced policy adjustments on finance companies rules and regulations that would ease their operations and help increase their market share while making sure that financial institutions follow prudent practices.

The resilience of the insurance sector has improved but structural differences within the sector persists. Overall, the profitability, solvency, and efficiency increased as reflected by the various profitability indicators, solvency margins, and loss ratios. However, performance has widely diverged between insurance companies where the performance of the top three companies has outweighed the rest of companies in the sector. Furthermore, the sector remains concentrated on the two business lines; health and motor insurance. In addition, monetary, macroeconomic, and financial developments have clearly had an impact on the investment portfolios of insurance companies as the sector recorded a first-time loss in the investment book of the

insurance industry. Those losses however are insignificant and pose no material systemic risk.

In 2015, Saudi capital market was influenced by pronounced embedded correlation with oil prices fluctuations. Consequently, the Saudi stock exchange decreased 17.1 percent amid falling y-on-y turnover by 22.6 percent. Stock market capitalization decreased slightly to SAR 1.6 trillion. At the Authorized Persons (APs) industry level, the majority of the assets are classified as liquid. Liquid assets to total assets ratio remains above 60 percent for the last three years. Although APs' net income declined from last year, they continued to perform well and liquidity remains at a comfortable level. Capital Market Authority (CMA) has started implementing its Strategic Plan (2015-2019) which would further improve the stability of the capital market, develop debt and derivative markets, improve internal efficiency and effectiveness, strengthen internal governance, promote disclosure and transparency, and enhance internal as well as external risk management.

SAMA continued to secure the economy against cyber threats. Through a well-administered strategies and cutting-edge technologies, SAMA with the contribution of domestic commercial banks have successfully minimized the risks arising from electronic channels. SARIE, MADA, and SADAD are examples of SAMA developed mechanisms by which payments are being settled in Saudi Arabia. SAMA has also set certain criteria for commercial banks introducing mobile banking applications, which boosted the public's confidence in payment settlements. Notwithstanding all risks involved, the market is showing great endorsement of SAMA payment system.

Despite the existence of correlation channels among the different financial sectors, contagion risk is limited. For instance, the impact of underperforming listed insurance companies on the stock market is limited given their size in the market. Similarly, the soundness of the listed banking sector provides robustness to the market as it constitutes one of the major sectors listed in the stock exchange index. On the other hand, the linkages between the fiscal stance and the financial system in general remains strong, yet, does not pose material systemic or contagion risk given the fiscal buffer that is still available to policy makers.

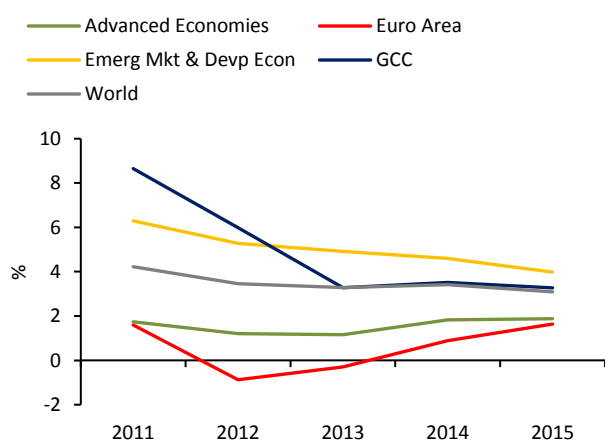
1. The Global Economy: Trends, Risks and Growth Outlook

1.1 Recent Trends

The global economic expansion continued in 2015, albeit at a slower pace, with real world GDP growing by 3.1 percent, down from 3.4 percent in 2014. The main reason for this slower growth was a decline in the growth of emerging markets and developing economies. This slowdown is not a recent phenomenon – in each of the years since the world-wide “Great Recession” of 2008-2009 ended, the growth of the emerging/developing world has slowed. Their growth was 7.4 percent in the first year of recovery (2010), but has slowed to an estimated 4.0 percent in 2015.¹

Elsewhere, growth in the world’s advanced economies accelerated slightly in 2015, expanding by 1.9 percent. The increase was due primarily to a pickup in growth in the euro area countries, from 0.9 percent in 2014 up to 1.6 percent in 2015. Japan also contributed to the faster growth, with its GDP increasing by 0.5 percent in 2015, versus no growth the year before. However, the US had the fastest growth in the G-7, growing by 2.4 percent in 2015, the same rate as the year before. The UK, Canada, and most of the other countries in the developed world showed slower growth than in 2014. As a result of these divergent growth patterns, the growth rates of the various world groupings have converged in the 2 to 4 percent range, as can be seen in **Chart 1.1**.

Chart 1.1: World and Regional Real GDP Growth Trends

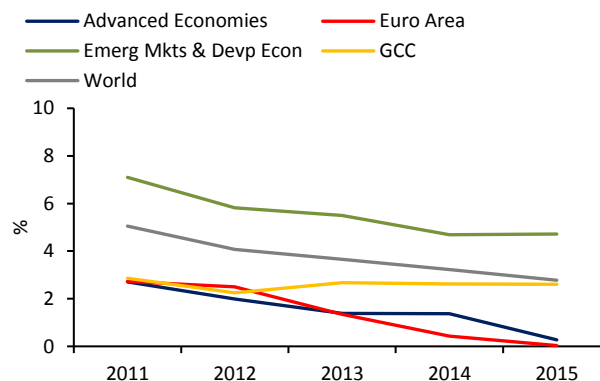


Source: IMF World Economic Outlook – April 2016

Worldwide trade and investment volume also saw a significant slowdown in 2015. The IMF estimates that worldwide trade volume growth declined from 3.5 percent in 2014 down to 2.8 percent in 2015. Again, the slowdown was concentrated in the emerging markets and developing economies. The import growth of this group of countries was only 0.5 percent in 2015, versus a 3.7 percent growth the year before, while 2015 export growth for the group was 1.7 percent, versus 3.1 percent the year before. In sharp contrast, imports of advanced economies grew by 4.3 percent, versus 3.5 percent the year before, while their export growth was almost unchanged, at 3.4 percent, versus 3.5 percent in 2014. The slowdown and rebalancing in China contributed significantly to these trends, but declining investment and imports in major oil exporters also played a role. The IMF, in its April 2016 *World Economic Outlook*, noted that “the declines in trade and investment growth is more muted” for other emerging market and developing economies.

Inflation remains very low by historical standards in the developed nations, particularly in Japan and the euro area. The central banks of both of these areas have resorted to placing negative interest rates on certain categories of commercial bank excess reserves in an attempt to keep real interest rates low in order to stimulate investment. **Chart 1.2** shows the inflation trends for the various world groupings.

Chart 1.2: World and Regional CPI Inflation Trends



Source: IMF World Economic Outlook – April 2016

¹ These growth rates are from the IMF April 2016 *World Economic Outlook*, which uses Purchasing Power Parity exchange rates to weigh individual countries’ real GDP. This measure tends to give more weight to the less developed countries.

Real GDP growth in the US slowed to a 1.4 percent annual rate in the fourth quarter of 2015. Expressed as a quarterly rate, the real GDP figure only rose by 0.34 percent. Weak business investment and a worsening of the trade deficit were the major contributors to the slow growth. However, consumer spending, buoyed by lower energy prices, rose at a 2.5 percent annual rate and was up 3.1 percent for the year as a whole. The job market remained strong with year-end employment in 2015 up by 2.49 million workers and the unemployment rate at 5.0 percent. Inflation remained well in check, with overall prices in December 2015 up only 0.7 percent versus year-ago levels. Core inflation (excluding food and energy) rose by 2.1 percent.

Euro area growth picked up in 2015 to a 1.6 percent growth. This is not particularly fast by historical standards, but the growth was steady throughout the year, and both consumer and business sentiment at year-end were at multi-year highs. Lower oil prices are being passed through to consumers, and real household disposable income grew by over two percent in 2015. The quantitative easing (QE) program has been helpful and is expected to be unchanged in 2016. Thus, euro interest rates are expected to remain below US rates for the next year.

Just as it did in 2014, the Japanese economy started out 2015 with a solid growth of 4.6 percent (quarter-to-quarter at an annual rate) followed by a mild contraction in the second quarter. The pattern was repeated again in the third quarter, with slow but positive growth in the third quarter, followed by another contraction. As a result, growth for the entire year was only 0.5 percent. Business investment remained relatively strong, but consumer spending was very weak and actually contracted in the last quarter of the year. The level of real personal consumption expenditures has shown little improvement since it fell after the April 2014 consumption tax increase. Real expenditures in the last quarter of 2015 were the lowest since the third quarter of 2011, representing over four years of stagnant consumer spending.

Growth in emerging market and developing economies (EMEs) dropped again for the fifth year in a row.² A stronger US dollar, higher US interest rates, and weaker global financial markets have all combined to slow EME growth, and this condition is expected to continue into 2016. Brazil and Russia are both experiencing recessions that began in the first quarter of 2015 and are expected to continue through 2016. Chinese growth continues to slow, a result of the gradual rebalancing toward consumption and away from investment and exports. The economy grew by 6.9 percent in 2015, the slowest pace since 1990. Growth in India in 2015 has apparently exceeded China's, recording a 7.3 percent rate of expansion for the year.

Based on preliminary data, Gulf Cooperation Council (GCC) growth slowed slightly in 2015 but remained at a moderate 3.2 percent rate. Growth was buoyed in the major oil exporters by increases in crude oil, natural gas liquids, and natural gas production. GCC petrochemical industry export prices were negatively impacted by the decline in chemical prices (reflecting the lower energy costs in US, European and Asian producers). This also impacted GCC industry profitability, since many of their subsidized feedstock prices did not reflect the same price decline. Government spending declined, but oil revenues dropped even further, resulting in large budget deficits. Inflation remained moderate, as food commodity prices and housing costs stabilized. Import price inflation remained moderate, thanks to stable (and even declining) non-oil commodity prices. Although most GCC government reserve accounts remained ample, the consensus forecast of depressed oil prices continuing for several more years has prompted the GCC governments to rationalize their spending and cut many government subsidies, particularly for domestic energy consumption. This is in sharp contrast to the 2009 period of depressed prices, which was seen as a temporary phenomenon due to the world-wide recession.

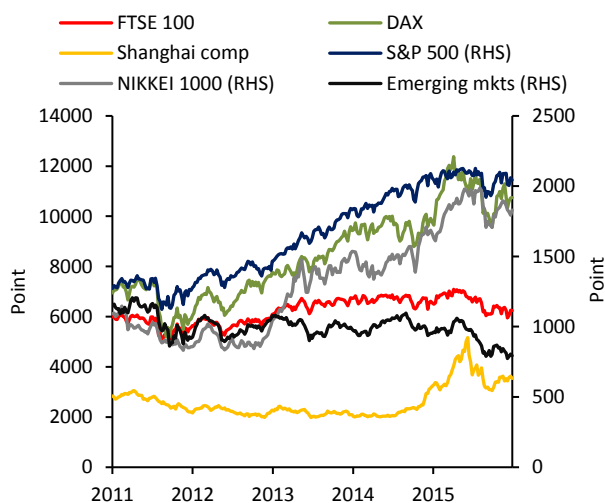
² Based on the IMF country classification scheme. 2015 GDP data for many EMEs has been estimated using IMF WEO projections. Revised historical real GDP data for Saudi Arabia are from the General Authority for Statistics website.

1.2 Global Financial Developments and Financial Stability Risks

Risks to financial stability have increased slightly in 2015. In advanced economies, there is a lower level of confidence on the durability of the expansion. For the emerging markets and developing economies, declining commodity prices have weighted heavily on exports, and export market growth is seen as being questionable. Although widely anticipated, the Chinese growth slowdown has still had a noticeable effect on global confidence. These combined factors have contributed to an elevated level of financial instability. Moreover, deflation risks in major developed countries (particularly Japan and the euro area), increased liquidity risks in developing countries (especially China), and potential divergence in monetary policies (between the US and other major developed nations) may pose some financial stability challenges.

Equity markets in 2015 have been quite volatile. As can be seen in **Chart 1.3**, the S&P 500 index ended the year with a slight drop compared to January 2015, although there was considerable volatility throughout the year. The FTSE 100 and some major emerging market indices lost ground during 2015 and also exhibited a high degree of volatility, mainly due to concerns about China's economy and its recovery and political uncertainty in continental Europe. The NIKKEI 1000 and DAX have realized some appreciation, supported by low oil and energy prices.

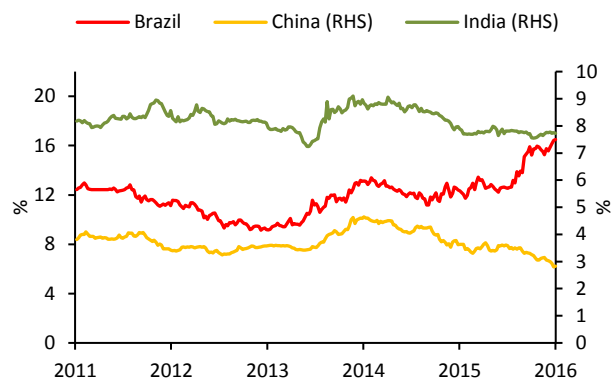
Chart 1.3: Global Equity Markets



Source: Bloomberg

With the exception of Brazil, government bond yields in emerging markets have been in a downward trend in 2015 (Chart 1.4). This decline in yields is the result of the various governments' attempt to inject liquidity into their economies, but it also reflects a decline in inflation expectations. However, the lower rates have resulted in investors searching for better yields, which may result in riskier investments.

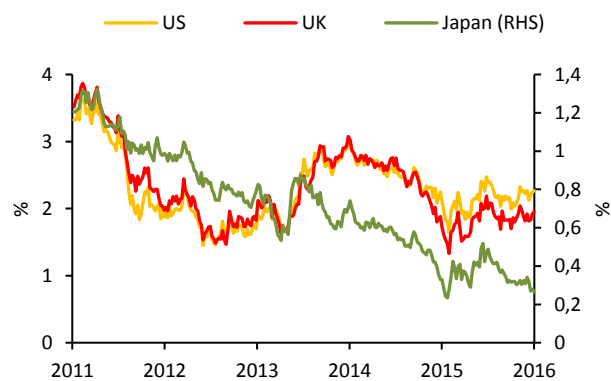
Chart 1.4: Bond Yields in Emerging Markets



Source: Bloomberg & Reuters

Bond yields in advanced economies moved up in the first half of 2015 but have mostly flattened in the last half. The exception was in Japan, where already-low yields declined slightly further (Chart 1.5).

Chart 1.5: Bond Yields in Advanced Economies



Source: Bloomberg & Reuters

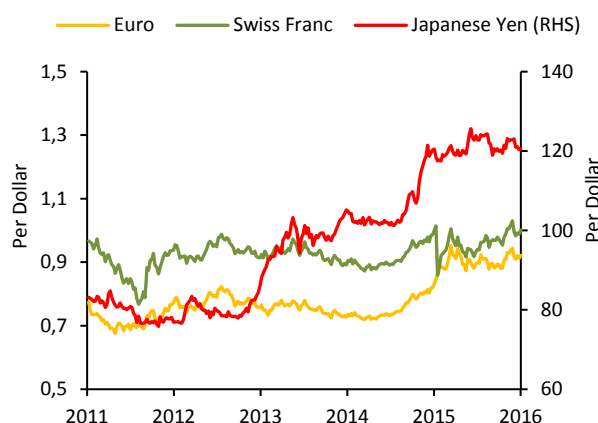
Volatility in foreign exchange markets has been lower than in 2014, and the USD continued to appreciate against the euro, Chinese yuan and Canadian dollar (Chart 1.6). However, its appreciation seems to have slowed against the Swiss franc and Japanese yen (Chart 1.7).

Chart 1.6: US Dollar Exchange Rate Against the Chinese Yuan (per \$)



Source: Bloomberg

Chart 1.7: US Dollar Exchange Rate Against Major Currencies

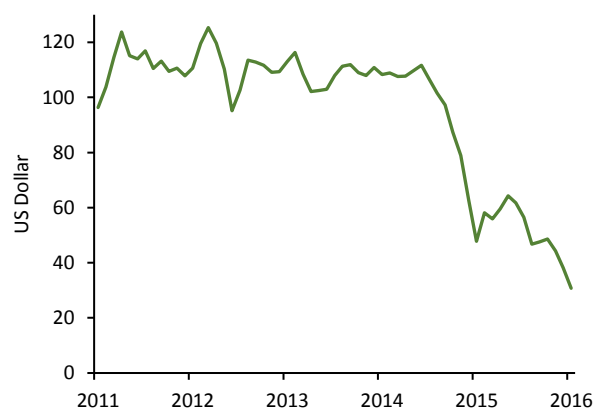


Source: Bloomberg

Commodity markets continued their downturn in 2015, with prices declining across the board. During 2015, oil prices dropped by 47.2 percent (according to IMF WEO data). The decline in the non-fuel sectors have not been as severe, with a decline of 17.5 percent. The decrease in oil prices has not yielded the expected growth in real world GDP, due to several reasons. These include 1) a propensity in the developed world to save (rather than spend) the increase in disposable income, 2) a slowdown in Chinese growth, for reasons unrelated to oil prices, 3) the decline in non-oil commodity prices, which has hurt export revenues of the non-oil developing nations, 4) declines in oil-related investments in the US and other non-OPEC producers, and 5) a decline in the import propensity of OPEC nations, due to lower incomes and reduced government spending.

Global oil market activity over the past two years has been dominated by a severe imbalance between supply and demand. The problem is not on the demand side -- the International Energy Agency (IEA), in its March 2016 *Oil Market Report*, reported that global oil demand in 2015 grew by 1.8 million barrels/day (mb/d), or 1.9 percent. This is well in line with 2015 world real GDP growth of 3.1 percent. Rather, the problem lies with oil supply, a conclusion borne out by an analysis of IEA supply data. For the last two years (2014 and 2015), oil supply has exceeded demand. In 2014, the oversupply averaged 0.9 mb/d, which implied an inventory build up of 328 million barrels during the year. In 2015, the oversupply averaged 1.9 mb/d, a new record level (going back to 1984). This rate of accumulation implies a further accumulation of 694 million barrels of oil. In other words, over the past two years, over one billion barrels of oil have been added to the world's oil stocks. The impact of this overhang on world oil prices is apparent in **Chart 1.8**.

Chart 1.8: Crude Oil Price (Brent)



Source: IMF World Economic Outlook – April 2016

However, the current lower oil prices are also acting to curtail non-OPEC oil production and exploration and development activities. Actual production has been very slow to respond to the lower prices; in fact, according to the IEA, non-OPEC production set a new record level in November 2015, before dropping by over one million barrels/day in the next three months.

1.3 Global Growth Outlook

The continuation of a high degree of monetary accommodation, combined with some moderation in fiscal consolidation by developed economies helped boost their growth slightly in 2015. However, commodity prices remain generally weak, and growth in the emerging and developing country economies

continues to decline. The much-awaited tightening of US monetary policy occurred in the last quarter of 2015, with a 25 basis point increase in the fed funds rate. The Federal Reserve Board has indicated that it will gradually boost of this benchmark policy rate through 2016, with the rate of tightening dependent on US economic performance. So far, this relatively modest tightening has had little impact on world financial markets.

The major risks to the world economic outlook include:

- the impact of the economic transition in China from an export-oriented economy to one that is more consumer-driven,
- a growing risk of financial instability in emerging market economies, particularly those that are currently in recession,
- cutbacks in the imports of oil exporting countries, particularly in capital goods,
- geopolitical risks, particularly in the Caucasus region, the Middle East, and the South China Sea, and
- instability in the European Union brought on by the potential exit of the United Kingdom.

With regard to the possibility of a UK exit from the EU, the baseline IMF forecast used in this *Report* assumes that the UK will vote to remain in the European Union in a June 23rd referendum. A vote to secede “would precipitate a protracted period of heightened uncertainty, leading to financial market volatility and a hit to output,” according to the IMF.³ Given London’s prominence as a major world financial hub, the risk of contagion to the global financial markets, added to the potential disruption in world trade, is a possibility. However, this negative outcome would require a combination of financial policy mismanagement and gridlock in the post-secession trade negotiations.

All of these risks referred to above are relatively short-term in nature. In the long-term, negative factors include the prospect of secular stagnation and deflation in the advanced economies, exacerbated by further declines in oil and other commodity prices, and a decline in the productivity of both labor and capital, which would result in slower world-wide growth.

³ “United Kingdom – 2016 Article IV Consultation: Concluding Statement of the Mission”, International Monetary Fund, May 13, 2016, <http://www.imf.org/external/np/ms/2016/051316.htm>

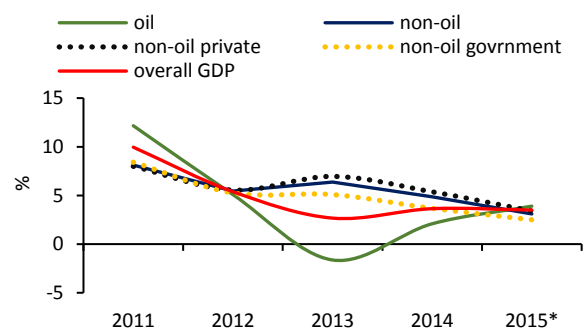
2. The Saudi Economy: Trends, Risks and Growth Outlook

2.1 Growth and Inflation Trends

Dependency on oil is still the main challenge facing the Saudi economy, which remains characterized by the dominance of fiscal policy. The main engine for the economy continues to be government expenditures, which tends to move in parallel with oil revenues. Oil revenues represented more than 70 percent of the total government revenues in 2015, despite a 25 percent increase in non-oil revenues from year-earlier levels. Thus, the performance of the Saudi economy is influenced by the volatility of oil prices. The year of 2015 was an example of the challenges caused by this dependency. Weak oil prices (down 48 percent from 2014) resulted in a decline of 42 percent in government revenues which in turn led to a deterioration of some macroeconomic indicators.

The Saudi economy continued to grow but at a notably slower pace in 2015. Overall, real GDP grew by 3.5 percent in 2015 compared to 3.6 percent in the previous year. Non-oil economic activities registered a slowdown in growth compared to 2014. Real government sector growth slowed from 3.4 percent down to 3.3 percent, while real non-oil private sector activity growth slowed from 5.4 percent down to 3.4 percent. In the case of the private sector, this was the slowest rate of growth since the turn of the century. However, these figures show a better growth than expected, given the sizeable decline in the main source of income, thus giving a sign of resilience for the economy. The only producing sector showing faster growth than the year before was the oil sector, due primarily to an increase in crude oil production and refining activity. **Chart 2.1** shows the growth rates of GDP by major sector over the past five years.

Chart 2.1: GDP Growth by Producing Sector

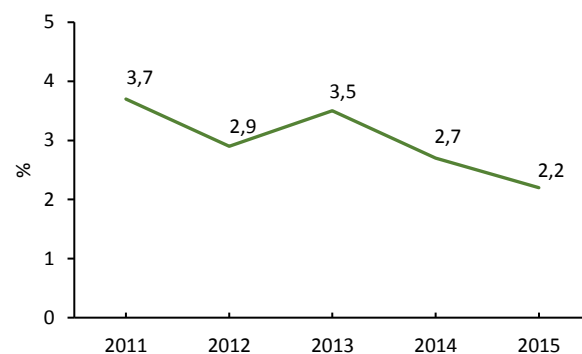


SOURCE: GENERAL AUTHORITY FOR STATISTICS

* Provisional

Inflation remained moderate and stable during the year, in line with its pattern in the last few years. Several factors kept inflationary pressure subdued, including low imported food prices and the strength of the riyal due to the dollar peg. As measured by the Overall Cost of Living Index, inflation fell to 2.2 percent in 2015 from 2.7 percent the year before (**Chart 2.2**).

Chart 2.2: Inflation Trend



SOURCE: GENERAL AUTHORITY FOR STATISTICS

2.2 Monetary Developments

2.2.1 Monetary Aggregates

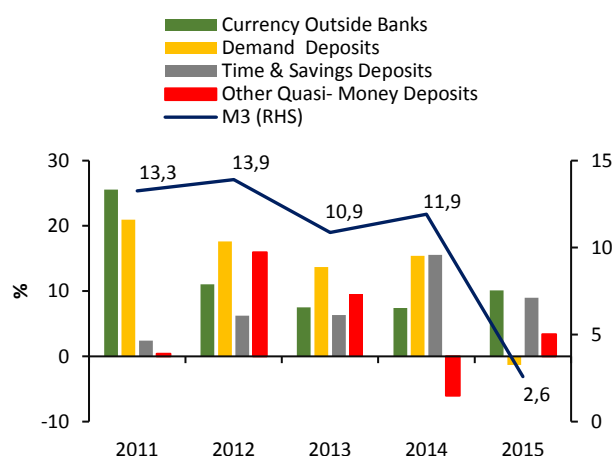
Monetary aggregates showed a slower growth pace in 2015, a sign of lower demand for money and/or tighter monetary conditions. The monetary base grew by 6.6 percent in 2015; however, the growth of all of the higher-level aggregates of money supply slowed considerably and, in some cases, the aggregates showed a decline. This resulted primarily from the decline in government spending due to lower oil prices. However, most measures of liquidity (commercial bank excess deposits with SAMA, their holdings of SAMA bills, and their foreign investments, as well as autonomous financial institution foreign investments) remained comfortably high.

These monetary developments, however, have not come at a surprise, as they remain consistent with historical trends. Monetary aggregates have normally been positively correlated with government spending as is evident from historical data. Thus, the impact of fiscal developments on these aggregates has been broadly anticipated by policymakers and market participants who have long understood the macroeconomic characteristics

and macro-financial linkages in the Saudi financial system. This has allowed them to be prepared and increased their ability to absorb any potential shocks resulting from such developments.

M3 growth slowed considerably in 2015, from 11.9 percent in 2014 down to 2.6 percent. Looking at the components of M3, demand deposits, which represented 61 percent of total deposits, contracted by 1.3 percent by the end of 2015, while time and saving deposits recorded a slow growth of 9 percent. The two components that recorded increasing growth rates were currency outside banks and other quasi-monetary deposits holdings, which grew by 10 percent and 3.4 percent respectively. **Chart 2.3** shows the growth rates of M3 and its components.

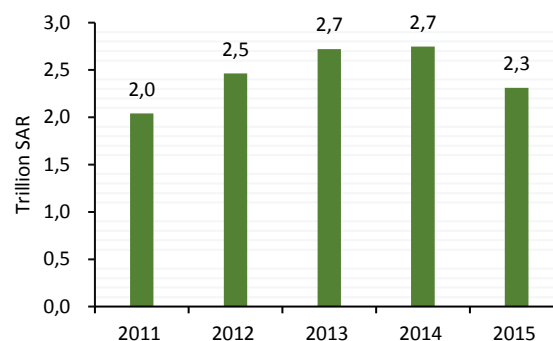
Chart 2.3: Growth Rates of M3 and its Components



2.2.2 Reserve Assets

In spite of their decline, SAMA's reserve assets remain high and available to play an important role in supporting the fixed exchange rate policy. SAMA's total reserve assets registered a decline of 16 percent in 2015, dropping in value from around SAR 2.75 trillion to SAR 2.3 trillion. The decline was due mainly to government withdrawals to finance budget deficits throughout the year. However, it remains at a high level and will continue to support the stable exchange rate, which has been maintained at its current rate of 3.75 SAR per US dollar for almost 30 years. **Chart 2.4** shows SAMA's reserves assets during the last five years.

Chart 2.4: Total Reserve Assets



So far, the decline in SAMA's reserve assets does not pose a major concern, as it remains at relatively high levels. SAMA has built large reserves of assets over the past decade, which were intended to be used as a buffer against any potential shocks to the government revenues or the fixed exchange rate arrangement. When this shock materialized in the form of a significant drop in government revenues in 2015, reserves at SAMA were put to their intended use. Consequently, the activation of such a measure in late 2014 and throughout 2015 has helped smooth out government spending and acted as a preventive measure against the transmission of fiscal risk to the financial system.

Although the withdrawal from reserves may result in some short-lived negative consequences, several factors and policy measures have outweighed these implications and sustained stability in the system. On the downside, the sudden decline of the reserves may have induced a decline in investor confidence regarding fiscal policy and the government/central bank's ability to achieve macroeconomic, monetary, and financial stability objectives. On the upside, however, the facts that the decline started from record high levels of FX reserves and that reserves remain to be relatively high have helped maintain confidence. For example, the observation of a brief bout of speculative behavior in the FX market was quickly self-corrected by the market as investors realized the strong commitment and ability of SAMA to stick to its fixed exchange rate policy. This was also backed up by the government's ability to diversify its financing sources through two other major channels; debt issuance and fiscal consolidation.

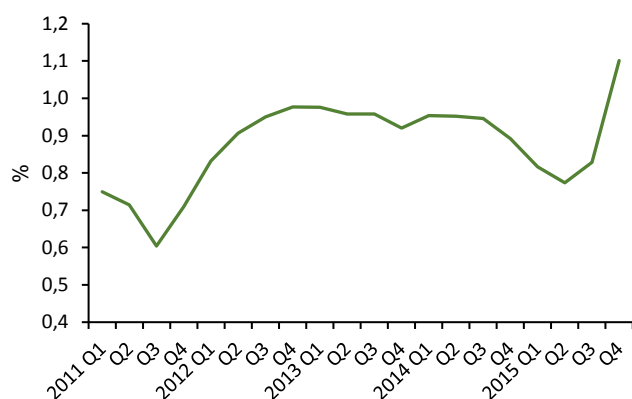
2.2.3 Fixed Exchange Rate Policy

SAMA is committed to its fixed exchange policy and will continue to support it. In 2015, the Saudi riyal remained fixed at SAR 3.75 per US dollar in the spot market as a result of SAMA's policy aimed at maintaining the stability of the Saudi riyal to serve the interests of the Saudi economy. Minor fluctuations in the riyal against the dollar exchange rate were noted in small transactions due to the expectation of some speculators that the Saudi economy could potentially be affected by the low oil prices. However, the large foreign exchange reserves which stood well above SAR 2 trillion in 2015, the resilience of the Saudi economy, the strength of economic indicators, and the commitment by SAMA to maintain the exchange rate eliminated these fluctuations and restored the riyal exchange stability in the forward market (**Box 2.1**).

2.2.4 Interest Rates

The 3-month Saudi Inter-Bank Offer Rate (SIBOR) rose steadily during 2015, and the trend continued in early 2016. This rise reflects government's deficit financing by borrowing from the domestic market, combined with usual leads/lags in government disbursement. In early 2016, SAMA relaxed its Loan-to-Deposit (LTD) ratio from 85% to 90% in a bid to smoothing the trend in money market rates.

Chart 2.5: Saudi Interbank Offer Rate (SIBOR)



2.3 Fiscal Developments

The plunge in oil prices has had a strong impact on the government's fiscal balance. The average export

price of the Kingdom's crude oil and refined petroleum products dropped by more than 48 percent in 2015, and government oil revenues were down by more than 51 percent. Consequently, the government's budget showed a deficit for the second consecutive year, but it was also accompanied by a current account deficit this time.

The response was quick and several policy measures were employed to minimize the impact of low oil prices on the fiscal position. The government instituted fiscal consolidation measures in the second half of 2015, which resulted in a reduction in overall spending of almost 12 percent. Government capital expenditures were cut by 28.8 percent, while current expenditures were reduced by around 3.4 percent from 2014's level. These spending cuts were effective in keeping the deficit at a considerably lower level than anticipated by many economic agencies and international organizations. The deficit amounted for about 15 percent of GDP. Furthermore, serious fiscal reforms were implemented during 2015 including, among others, the restructuring of budget classifications and components and the gradual removal of subsidies. Finally, additional significant reforms are expected to be implemented throughout the course of 2016.

In addition, accumulated budget surpluses have enabled the government to build large fiscal buffers which have been used to overcome the impact of lower oil prices in the short run. High reserves and record low debt levels have helped avoid the system-disruptive impact of government spending cuts. They have also secured the time needed for gradual structural reforms, which is critical to avoid shocking the system while transitioning to a more diversified economy.

Despite an increase in public debt, sovereign risk remains minimal as the debt level is still comfortably low. The public debt, all of which is domestic, was only at 5.9 percent of GDP at the end of 2015. Therefore, sufficient room remains for the government to issue both domestic and international bonds to help finance the anticipated budget deficits. **Chart 2.6** shows the fiscal stance of the Saudi economy.

Box 2.1

Speculation in the Forward US/SAR Exchange Rate in 2015

SAMA has maintained a fixed exchange rate, pegging the riyal to the U.S. dollar at a parity of 3.75 since 1986. This arrangement served the economy well in terms of trade as most of Saudi exports are denominated in dollars and most of the imports are invoiced in dollar too.

The Saudi riyal exchange rate against the US dollar remained relatively stable in the spot market. However, the forward market witnessed some volatility in 2015 with the forward US/SAR exchange rate reaching its highest level (988.75 bps) since the historical movements in 1993 and 1998 (**Chart 1**). This volatility is driven mostly by the plunge in oil prices since mid-2014, devaluation currencies by other central banks, and speculations at offshore side (i.e., foreign banks). Although the volatility in the forward Market has reached high levels, current pressures have been softer than the historical incidents back in 1993 and 1998 due to large buffers of high foreign reserves, sound financial indicators including record low NPLs, high capital, and comfortable levels of liquidity.

Recently, the forward market returned to lower levels standing around 300 bps as of April 2016. The market has calmed down in the back of oil prices rebounding and recent measures taken by SAMA. In addition, SAMA's public statement by the governor assured that fixed exchange rate of Saudi riyal will be maintained as stated below:

“Of late we have observed volatility in the USD/SAR forward market due to the mispricing linked to market operators' misperception about Saudi Arabia's overall economic backdrop. Factors affecting the forward market are largely speculative in nature.

Saudi Arabia's key economic and financial indicators are stable, as reflected by its net creditor position with a sound and resilient banking system.

I would like to reiterate our official position that Saudi Arabian Monetary Agency (SAMA) will uphold its mandate of maintaining the peg at SAR 3.7500 per USD, backed up by the full range of monetary policy instruments including its foreign exchange reserves.”

Chart 1: Forward US/SAR Exchange Rate

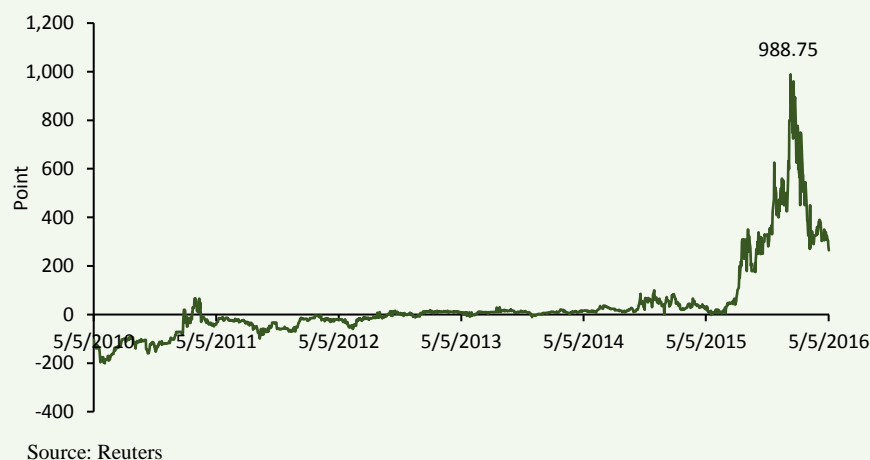
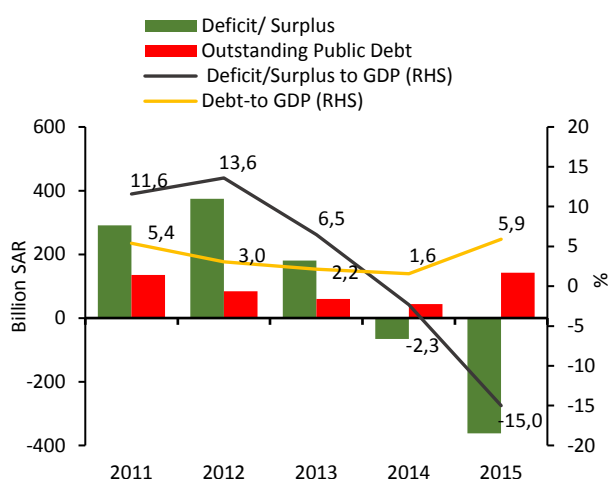


Chart 2.6: Fiscal Developments



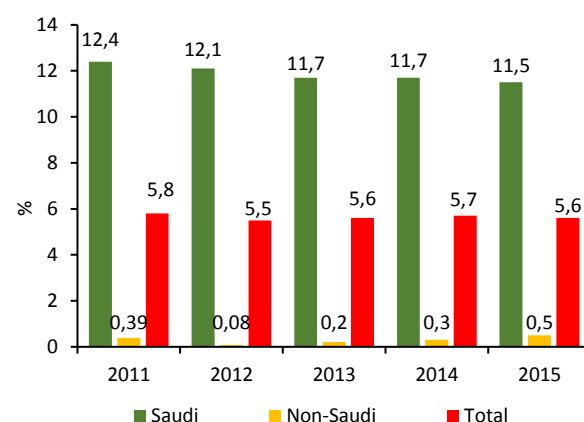
Prudent debt management is critical in avoiding any unintended impact on the stability of the financial system. The reliance on domestic borrowing is an additional factor that would promote stability. However, over-reliance on the local market may result in a crowding-out effect, where public borrowing comes at the expense of private sector credit. Therefore, striking the right balance between domestic and international borrowing is crucial.

2.4 Labor Market Performance

The overall unemployment rate dropped to 5.6 percent in 2015, a slight reduction from the previous year's 5.7 percent rate. This was mainly due to increased Saudi female participation in the work force. This decline was due to a drop in the unemployment rate for Saudi nationals, which decreased to 11.5 percent, versus 11.7 percent in 2014. The Saudi authorities continued their efforts to reduce the unemployment rate. During the last few years, several labor market reforms have been adapted to attract more Saudis to the private sector, as well as to improve the work environment in the private sector for Saudi workers, both male and female. The goal is to create more jobs and increase the number of Saudis in the private sector in the medium-to-long term. However, it seems that major efforts will be needed to achieve this goal with the acknowledgment that some progress has been made, especially in increasing the female participation rate. In this regards, the number of Saudi females that were employed increased by 20 percent in 2015 compared to 2014. This was the main factor behind the decline in

unemployment rate among Saudis. **Chart 2.7** shows the overall unemployment rate broken down by nationality.

Chart 2.7: Unemployment Rate

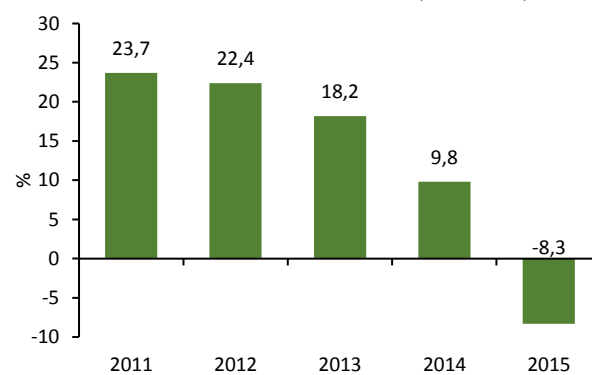


SOURCE: GENERAL AUTHORITY FOR STATISTICS

2.5 External Sector Performance

The current account balance in the Saudi economy is mainly driven by oil sector conditions that makes it vulnerable to oil market volatility. During the years of high oil prices, the current account was in a comfortable surplus. This surplus helped in financing the major current account outflows such as imports and workers remittances. However, as a result of the decline in oil prices, the current account in 2015 recorded a deficit for the first time since 1998. This deficit is attributed to a decline in oil exports revenue of 46 percent and an increase in workers' remittances of 4.5 percent. **Chart 2.8** shows the current account balance as a percent of nominal GDP. As the chart indicates, the current account deficit amounted to 8.3 percent of GDP in 2015 compared to a surplus of 9.8 percent in 2014.

Chart 2.8: Current Account Balance (% of GDP)



2.6 Saudi Economy Growth Outlook and Risks

Despite the reductions in spending that are necessary in order to control the government deficits, we expect the economy to continue growing, but at a slower pace. Both major non-oil sectors of the economy are projected to record slower growth rates – government headcount growth (the major determinant of real government sector GDP) is expected to slow markedly, while the non-oil private sector will feel the pinch of slower growth in spending on goods and services.

In the short to medium term, the ability to handle low oil prices is still high. Despite the deterioration in foreign reserves during 2015, the absolute amount remains high and the rate of decline has significantly diminished. In addition, public debt remains low, as reflected by the debt-to-GDP ratio, which provides another channel to secure budget financing. This will enable the government to maintain the appropriate spending level required to ensure positive growth rates and a stable financial system, while continuing its fiscal consolidation efforts. We expect that the government will stick to its commitment for spending as it is announced in the current and future budgets.

The economic situation resulting from the depressed oil price should be seen from different angles. Each economic cycle carries its own challenges and opportunities. Needless to say, the Saudi economy has room for improvement and increased efficiencies. Serious steps should be, and have been, taken toward this goal this time around. The decline in oil prices is a good opportunity to implement growth-enhancing structural reforms. In this regard, the Saudi vision 2030 seems to provide a road map to tackle fundamental issues in the Saudi economy. The National Transformation Plan (NTP), expected to be announced during the first half of 2016, would be a step forward toward a more knowledge-based and efficient economy. A full and timely implementation of the NTP's agenda would result in a significant redirection of the Saudi economy toward a better and more productive era.

In the long run, the risks facing the economic outlook may stem from a persistent and prolonged low levels of oil prices that do not coincide with successful fiscal consolidation measures. If oil prices drop further, harsher austerity plans would have to be implemented. If that happens before successful restructuring takes place, an economy that depends mainly on government spending

would face significant challenges. Without structural reforms, a prolonged period of depressed oil prices would put a real strain on the fiscal stance and would require even more cutbacks in government spending.

To avoid those scenarios, measures that promote further fiscal consolidation and structural reforms could be activated. This includes further government spending cuts and further gradual subsidy removal. Furthermore, the private sector would need to play a larger role in terms of job creation and contribution to output. This will help ease the burden on the government budget by lowering its wage bills and replacing government capital spending with private capital expenditures. It is also important not to rely only on domestic sources to finance the government deficit in order to avoid crowding out private sector borrowers.

Geopolitical risk continues to pose a challenge to economic and financial stability in the region. The financial system could become more vulnerable to volatility in capital flows and reduced investor sentiments. Such risk is, in fact, a regional concern that requires the collaboration of the regional and international community.

The Saudi economy has shown considerable resilience against several economic turbulences in 2015, but continues to face significant challenges ahead. Policymakers have so far succeeded in safeguarding the economy from significant oil market and geopolitical shocks through a set of tools and economic buffers that were built during the last decade. The challenge, however, remains acute amid the drop in oil prices since mid-2014. To stay resilient, fiscal consolidation, economic reforms, and diversification efforts need to continue the path they were set to follow. The low oil price environment should be considered as an opportunity in itself to introduce the needed reforms and explore potential improvements in the structure of the economy (e.g., promoting the Small and Medium Enterprise (SME) and applying appropriate privatization plans). Meanwhile, the government can still secure budget financing through public borrowing to cushion against the unintended consequences resulting from structural reforms. Public debt issuance, however, should be prudently managed and diversified. If successfully implemented, these policies could mark the start of a new era for economic prosperity.

In conclusion, the Saudi economy has a large capacity, a multitude of opportunities to be exploited, and there is the need, desire, and ability to overcome challenges. There will, of course, be a negative impact from the lower oil prices, but at the same time the adjustment to such a situation is achievable. During the

last year, several steps have been taken and more will be taken this year. Therefore, just as the Kingdom has demonstrated its ability to control its own destiny in the past during the 1980s and 1990s oil decline episodes, it will be able to do so again in the current one.

3. Banking Sector: Operating Efficiency, Risks and Resilience

3.1 Overview

The Saudi banking sector continues to be well-capitalized, profitable and liquid showing strong resilience to the sharp decline in oil prices. The year 2015 was a real test for the Saudi banks' resilience to external shocks. The success of banks in comfortably absorbing the oil shock can be attributed to the two layers of protection that they enjoy. The first is the abundant financial reserves that the government enjoys which helps in smoothing out the transition from less dependence on government spending to more dependence on the private sector. The second protective layer is the abundant capital buffers, high profitability, and ample liquidity that banks enjoy. In addition, SAMA's successful monetary, macro-prudential and supervisory policies have greatly contributed to the financial system's robustness and stability.

A long period of low oil prices coupled with no or slow actions by policy makers can cause a build-up of systemic risks and pose serious challenges to the financial system. If global economic and financial conditions remain weak for a prolonged period of time, this may potentially lead to liquidity and credit risk for banks. A combination of these risks could not only cause failure of a bank but could also have a contagious effect on the entire financial system. Given that Saudi banks enjoy accommodative monetary policies, ample liquidity, and strong balance sheets, they should be able to smoothly ride out the current economic conditions, and should not face a systemic risk in the short and medium term.

Significant progress has been made in many key areas that has enhanced the depth, robustness and the stability of the financial system. In recent years, SAMA has been working on several initiatives, many of which have already been implemented, that have positively contributed to economic and financial stability (Figure 1). These initiatives include implementation of Basel III requirements, development of a formal Macroprudential Policy Framework, establishment of a Deposit Protection Fund, regulation of Finance Companies, and adoption of International Financial Reporting Standards. Significant progress has also been made in areas such as Anti-Money Laundering and Combatting the Financing of Terrorism

while new initiatives are underway to deal with developing a Resolution framework and enhancing Financial Technology (Box 3.1).

Figure 1: SAMA's Initiatives for Robust Financial System



Saudi Arabia has been subject to a number of reviews of its financial system in recent years. These include the Financial Sector Assessment Program conducted by a joint IMF-World Bank Team (2011), a Regulatory Consistency Assessment Program on Capital Adequacy and Liquidity Coverage Ratio, conducted by a Team of the Basel Committee on Banking Supervision (2015), and a Peer Review conducted by the Financial Stability Board (FSB) (2015). The latter review covered Deposit Protection Fund, Resolution Framework and Macroprudential Policy Framework. These reviews have indicated that Saudi Arabia had fully or largely implemented the international requirements (Box 3.2)

3.2 Balance Sheet Assessment - Banks Assets

Despite the global and local economic and financial conditions, Saudi banking sector has continued to grow, albeit moderately. In 2015, their asset base expanded by 3.6 percent to SAR 2.2 trillion, which is lower than the average growth of 9.3 percent during the past five years. (Chart 3.1).

Box 3.1

SAMA's Achievements in Different Areas of Financial Stability

Basel III:

SAMA has fully implemented the BASEL III rules dealing with Capital, Liquidity and Leverage Ratios. Saudi banks have already met the Basel III requirements in these areas, which are to be fully met by 2019. SAMA has also implemented the Going Concern, and the Gone Concern Capital requirements.

OTC Reforms:

SAMA has already standardized the OTC derivatives contracts and established a Trade Repository within the mandated timelines.

SAMA is currently implementing the Basel margining requirements for the OTC Derivatives, the new Counterparty Credit Risk rules and the rules for Central Counterparties.

Resolution:

SAMA is leading the process of issuing a new Resolution Law, which is undergoing the formal legislative approval process. The draft resolution law in Saudi Arabia will apply to all financial institutions under the supervision of SAMA (banks, finance companies and insurance companies). For all these institutions, the Key Attributes will be implemented, so that Saudi Arabia's resolution regime is not only applicable to SIFIs, but also to smaller financial institutions, thus providing SAMA the tools to deal with any stress situation as it arises.

Shadow Banking:

In the Shadow Banking area, a new law was passed in 2012 to license and regulate Finance, Leasing and mortgage Finance Companies. With these reforms, a part of shadow banking sector is being regulated by SAMA, which already regulates Money Exchange companies and Insurance companies.

Governance:

- Banks operating in Saudi Arabia have been practicing a proactive governance framework including the requirements of various standards issued by standard setting bodies such as the FSB, BCBS, IAIS etc. In 2010, SAMA has fully implemented the FSB Compensation Principles and Standards. In addition, SAMA has issued a number of regulations and guidelines to establish an effective governance structure for banks operating in Saudi Arabia including:
 - Principles of Corporate Governance
 - Board Member Qualifications
 - Duties and Responsibilities of Directors
 - Board Committee requirements including (Audit, Nomination & Compensation and Executive Committees)
 - Requirements for appointment to senior positions in the Financial Sector
 - Rules on Compensation Practices
 - Guidelines on Internal Controls
- SAMA has initiated a project to review and assess the governance framework of SIBOR to bring it in line with international best practices, which is currently underway. Once completed, the project is expected to implement best in class governance framework for SIBOR.

Box 3.2

International recognition in the area of financial resilience and adoption of best international supervisory practices in the banking and financial sector

During the year 2015, three different international organizations visited the Kingdom of Saudi Arabia to conduct assessments on the compliance of the Saudi Arabia to international standards and methodologies including the Financial Stability Board (FSB), Basel Committee on Banking Supervision (BCBS) and Financial Action Task Force (FATF). The FSB conducted a country peer review to examine three topics (macroprudential policy framework, resolution, and deposit insurance scheme) that are of significant importance to the Kingdom of Saudi Arabia and to the stability of its financial system. The BCBS conducted an assessment of the implementation of the Basel Capital Adequacy standards and the recently introduced Liquidity Coverage Ratio (LCR). In addition, the high-level mission from the FATF visited the Kingdom to assess the country's efforts to implement the legal, regulatory, and operational measures for combatting money laundering, terrorist financing and other related threats to the integrity of the international financial system.

From the recommendations arising from the assessments relating to The Macroprudential Framework, Deposit Protection Fund and Resolution Framework, significant progress has been made. This has been recognized by the assessors as below:

On Macroprudential Framework:

"SAMA has taken significant steps to address the FSAP recommendations and developed a more formal macroprudential policy framework." - Financial Stability Board- Country Peer Review – November 2015

On Resolution:

"On the bank resolution side, the authorities should proceed with the prompt adoption of the draft law and make it operational." - Financial Stability Board- Country Peer Review – November 2015

On Deposit Insurance Scheme:

"The introduction of an explicit deposit insurance scheme (DIS) on 1 January 2016 as a "pay box" within SAMA indicates the authorities' commitment to implement the internationally agreed standards." - Financial Stability Board- Country Peer Review – November 2015

For the assessment of the implementation of the Basel capital adequacy standards, SAMA had attained an overall Compliant rating, which is the highest rating to be attained under the assessment program.

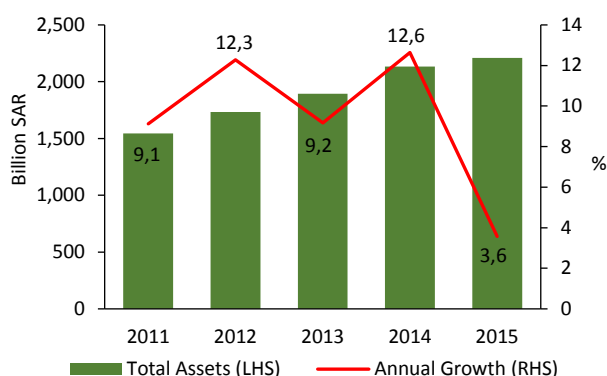
"Overall, the Assessment Team finds SAMA's prudential regulations to be compliant with the standards prescribed under the Basel framework. All 14 components of this review are assessed as compliant with the Basel standards." - Basel Committee on Banking Supervision(BCBS)-RCAP- September 2015

For the assessment of the implementation of Basel III liquidity coverage ratio regulations, SAMA was deemed "largely compliant" and "Compliant" within the Basel standard for the two graded components of LCR framework, the LCR standard and the LCR disclosure requirements, respectively.

"Overall, for the reasons set out below, as on the cut-off date for the RCAP assessment, the final LCR requirements in the KSA are assessed as largely compliant with the minimum Basel liquidity standards. The two graded components of the LCR framework, the LCR standard and the LCR disclosure requirements, are assessed as largely compliant and compliant with the Basel standard, respectively." - Basel Committee on Banking Supervision(BCBS)-RCAP- September 2015

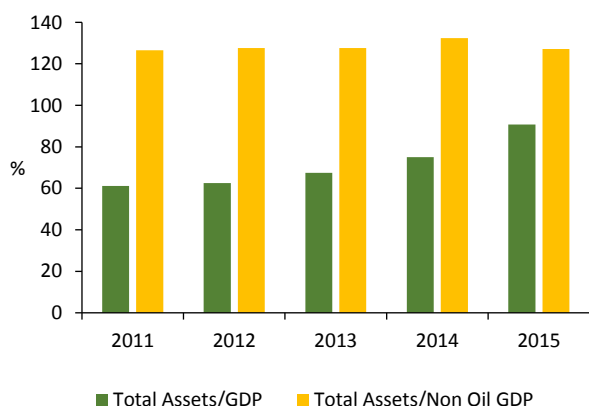
For the assessment on combating money laundering, terrorist financing and other threats to the integrity of the international financial system, all FATF member countries unanimously supported the Kingdom's promotion and voted it to be an observer member in the international FATF organization during the Plenary Meeting in Brisbane, Australia in June 2015.

Chart 3.1: Growth Pattern of Bank Assets



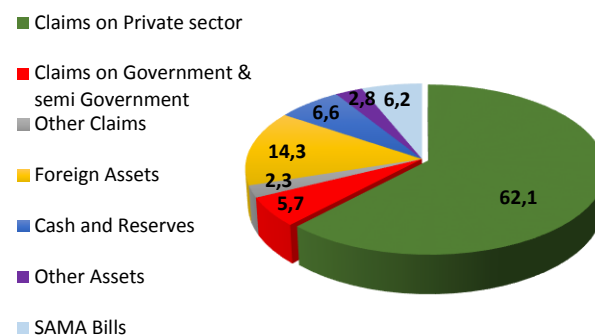
The ratio of banks' assets to GDP in 2015 increased, reaching 91.2 percent, while the share of banks' assets to non-oil GDP decreased to 127.6 percent (Chart 3.2). As in the past four years, the annual growth of banks' assets in 2015 exceeded the growth in total GDP, yet fell short compared with non-oil GDP. On one hand, if used efficiently, these assets can well support the economic activity in the private sector and thus make a larger contribution to the country's economic growth, which could counter the downward pressure on GDP from the decline in oil prices. On the other hand, if there are resource misallocations, then high growth of banking assets combined with poor productivity could increase the risk of a bubble in the assets market.

Chart 3.2: Bank Assets Relative to GDP and Non-Oil GDP



Saudi banks continue to rely on domestic market. Claims on domestic private sector continue to constitute the bulk of banks' assets. However, the share of foreign assets increased in 2015 to represent 14.3 percent of total assets up from 11.8 percent in the previous year (Chart 3.3). The rise was mainly due to an increase in Saudi banks' dues from banks abroad. However, SAMA closely monitors such changes and measures and assesses the related risks on a continuous basis.

Chart 3.3: Distribution of Bank Assets (Percentage)

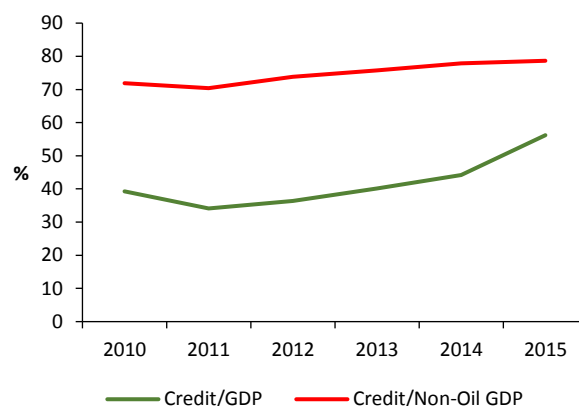


3.2.1 Bank Credit

Bank credit continues to grow, albeit at a slower pace. Credit growth during 2015 was 8.9 percent, which was much slower than the previous four years. Although this growth was the lowest since 2011, it still exceeded expectations given the sharp decline in the country's revenues.

SAMA's early warning indicators show no sign of asset bubbles or excessive leveraging. The share of banks' credit to both GDP and to non-oil GDP increased to reach 56.2 percent and 78.6 percent respectively. The fact that credit to non-oil GDP is almost flat suggests that credit growth is consistent with economic growth delivered by the private sector (Chart 3.4). The increase in the credit to GDP trend in 2015 can be explained by a slower GDP growth due to decrease in oil revenues.

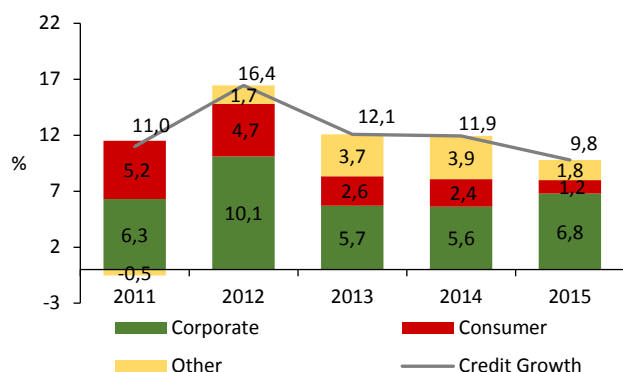
Chart 3.4: Bank Credit Relative to GDP and Non-Oil GDP



Given the slowdown in credit growth and the downwards pressure on GDP growth, SAMA continues to evaluate the use of its macroprudential tools to support the country's economy. The use of such tools in a countercyclical manner should allow banks to continue extending credit to the private sector to counter the economic slowdown.

Banks' credit to Corporate Sector continued to significantly contribute to the total credit growth. The share of credit to Corporate Sector to total bank credit increased during 2015 reaching 57.7 percent compared to 56.3 percent in the preceding year. The share of credit to the Consumer Sector declined to 24.8 percent from 25.5 percent last year. As a result, 6.8 percent of total credit growth came from credit to Corporate Sector; while only 1.2 percent came from credit to Consumer sector (**Chart 3.5**).

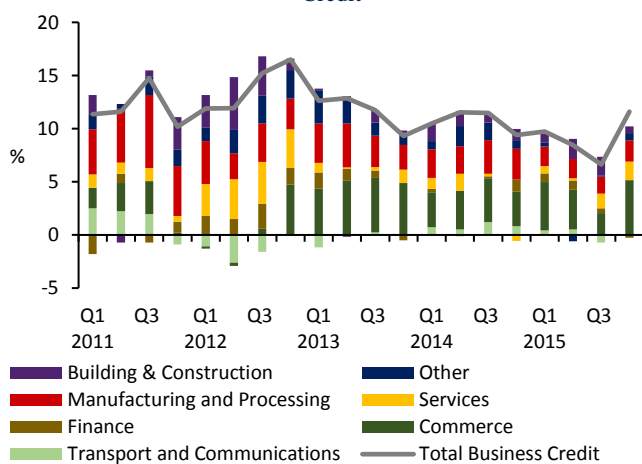
Chart 3.5: Sectoral Contribution to Growth of Bank Credit to Private Sector



3.2.2 Corporate Lending

Banks' credit to the Corporate Sector showed a strong growth in 2015. Total banks' credit to Corporate Sector recorded a growth of 11.6 percent in 2015 compared to 9.4 percent in 2014. This strong growth was mainly attributed to the strong credit demand from business in the Commerce Sector, while credit demand by business in services, and building and construction sectors was also higher in 2015 (**Chart 3.6**).

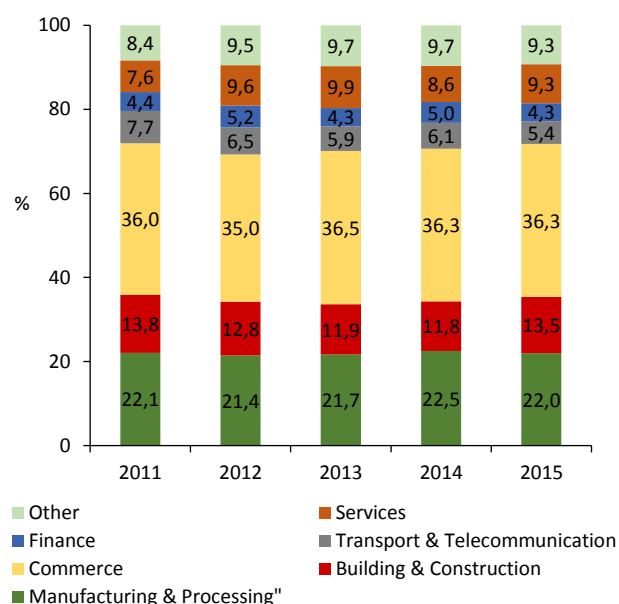
Chart 3.6: Sector-Wise Contribution to Growth of Business Credit



Distribution of credit to Corporate Sector between the sub-sectors generally remained consistent.

Due to higher credit demand by Corporates in commerce, building and construction, and manufacturing and processing sectors, credit concentration has slightly increased to 71.8 percent in 2015 from 70.6 percent in the preceding year; although still remain in line with historical trends (**Chart 3.7**). In order to achieve further sectoral development, higher contribution to GDP growth, and lower credit risk, corporates credit portfolios need to be further diversified.

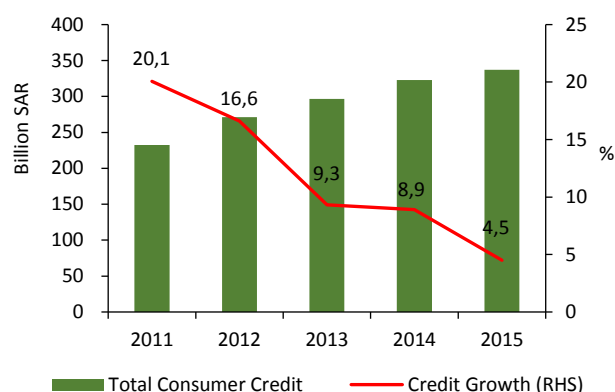
Chart 3.7: Sector-Wise Distribution of Corporate Loans



3.2.3 Consumer Lending

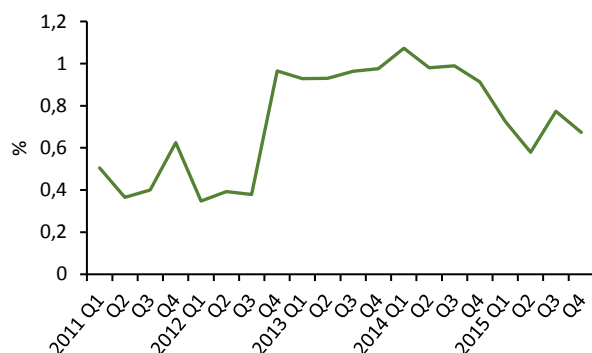
Banks continued to expand credit to Consumer Sector, albeit at a slower pace. In 2015, growth in consumer loans recorded 4.5 percent to stand at SAR 337.3 billion (**Chart 3.8**), which constituted 24.8 percent of total bank credit. While the expansion in consumer credit can be explained by the growth in labour force, low interest rate environment, better risk assessment of individual borrowers and technological advancements, the slowdown in its growth relative to past years can be attributed to the overall slowdown in the economic activity.

Chart 3.8: Growth Pattern of Consumer Loans



Credit quality of consumer loans continued to remain high. Nonperforming loan ratio (NPL) for consumer and credit card loans was 0.7 percent in the fourth quarter of 2015. **Chart 3.9** shows that the quality of consumer and credit card loans further increased during 2015. The high quality of these loans can be attributed to banks' sound credit risk management and SAMA's conservative prudential measures.

Chart 3.9: NPL Ratio for Consumer and Credit Card Loans



Slower consumer credit growth indicates changes in consumer spending behaviour. In the past four years, consumers used to spend more on cars and equipment than on home renovations. This year, however, 9.4 percent of consumer loans were spent on home renovation, while 8.5 percent of loans were used for purchasing cars and equipment (**Chart 3.10**). In addition, except for home renovations, consumer appetite to spend on consumption-oriented activities was lower in 2015 (**Chart 3.11**).

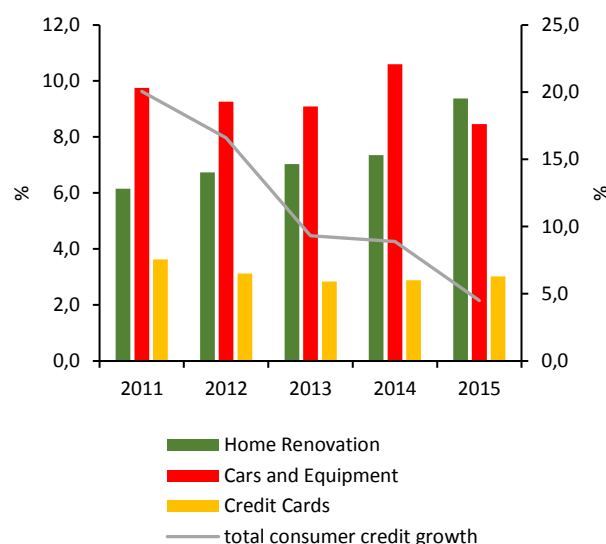
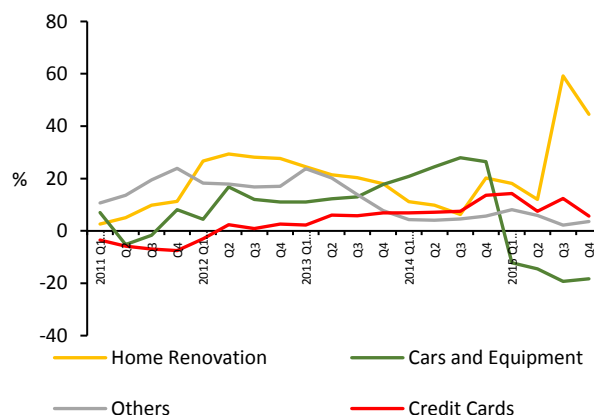
Chart 3.10: Usage and Growth Pattern of Consumer Loans⁴

Chart 3.11: Growth Patterns of Classified Consumer Loans

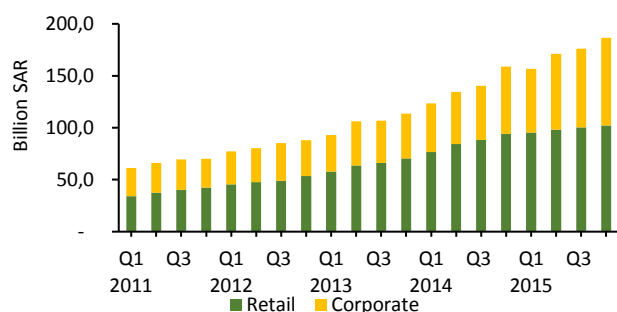


3.2.4 Real Estate Lending

Real estate lending slowed down in 2015. Relative to 2014, growth has dropped from over 30 percent to 17.2. The composition of real estate lending was 45 percent for Corporate Lending and 55 percent for retail. (**Charts 3.12**). Although real estate lending growth slowed down in 2015, its share of total bank lending has increased by one percent, reaching 13.7 percent. When measuring real estate lending as part of GDP and non-oil GDP, its share is 7.7 percent and 10.8 percent, respectively.

⁴ Loans classified as "Others" were excluded from the chart because of their large size and to highlight the changes in 2015. The size of "Others" continue to be large representing 77.3 percent of total consumer spending. SAMA is currently working on a new data system, which would improve the granularity of the data.

Chart 3.12: Distribution of Bank Loans to Real Estate

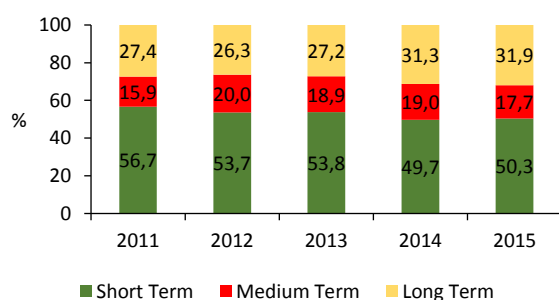


The decline in the growth of the real estate lending can be tracked back to several factors. The 70 percent Loan To Value (LTV) requirement has lowered the demand for mortgage loans. Also, the rapidly growing finance companies sector has taken part in extending credit which has reduced real estate lending by banks. Finally, the "wait and see" attitude by individuals influenced by the proposed land tax (tariff) and its expect impact on prices may have reduced demand for real estate.

3.2.5 Maturity Distribution of Bank Credit

The maturity distribution of the overall banking credit is mainly skewed toward short-term lending⁵. Short-term loans accounted for half of the total bank loans in 2015, a slightly higher proportion than in 2014 (Chart 3.13). The share of medium-term loans decreased by about 7 percent relative to preceding year (17.7 percent), while the share of long-term bank loans generally stayed at the same level (31.9 percent).

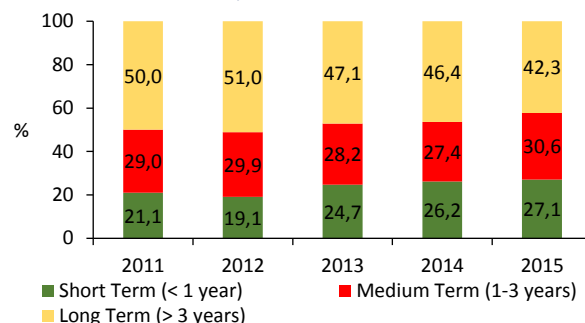
Chart 3.13: Maturity Distribution of Total Bank Credit



Despite the continued reduction, long-term loans still dominate consumer loans. Long-term loans represented about 42 percent by end of 2015, a 9 percent fall relative to preceding year (Chart 3.14). The share of medium-term consumer loans rose significantly by 12

percent to reach over 30 percent. The short-term loans also rose but at a slower rate of 4 percent, and reaching about 27 percent of total consumer loans. This trend shows banks' preference towards lowering the maturity horizon.

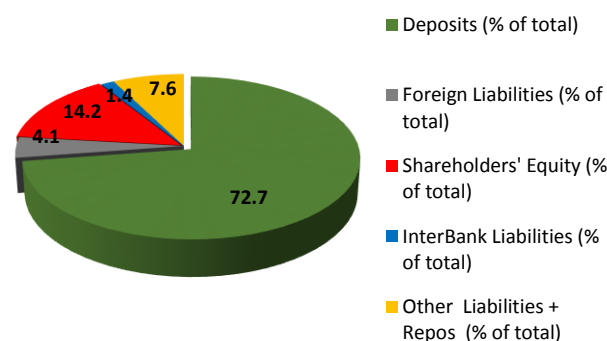
Chart 3.14: Maturity Distribution of Consumer Loans



3.3 Balance sheet assessment – Banks Liabilities

Non-interest bearing bank deposits continued to serve as the primary source of funding. During 2015, banks deposits represented 72.7 percent of banks' total liabilities, slightly decreasing from the previous year (Chart 3.15). On the other hand, the share of shareholders' equity, interbank liabilities, and other liabilities as a percentage of total liabilities increased from previous year while foreign currency liabilities decreased. The reduction in foreign liabilities further reduces foreign exchange risk. The growth in interbank liabilities, although still very limited, increases the cost of funding and the interconnectedness risk between the banks. However, the current levels indicate that the system is still well protected against these risks which are far from posing any systemic risk.

Chart 3.15: Distribution of Bank Liabilities

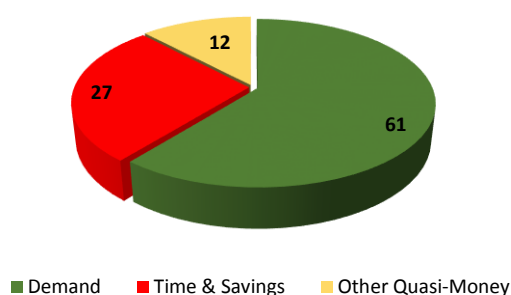


⁵ Short term is less than 1 year maturity, Medium term is from 1 – 3 years and Long term is more than 3 years.

3.3.1 Bank Deposits

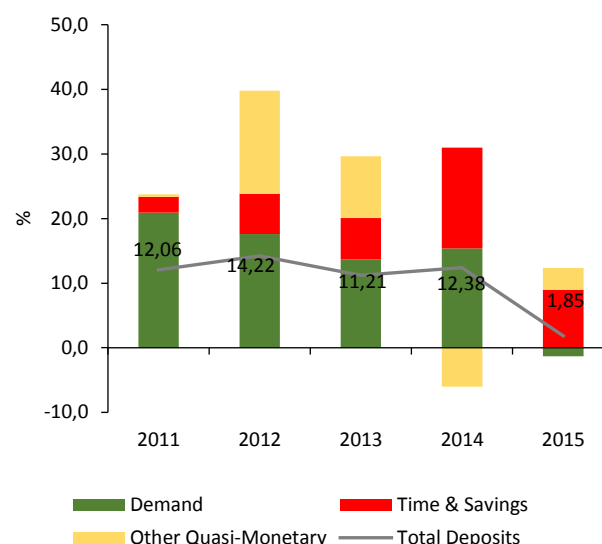
Bank deposits in Saudi banks are mostly demand deposits. At 31 December 2015, demand deposits represented 60.8 percent of total deposits, which is 1.3 percent lower than the preceding year. However, the percentage share of time and saving deposits and other quasi-money deposits⁶ increased to 27.0 percent and 12.0 percent, respectively (**Chart 3.16**). Although the large percentage of demand deposits raises the risk of asset-liability mismatch, demand deposits have been associated with high level of stability even during period of stress.

Chart 3.16: Distribution of Bank Deposits (%)



Total deposits continue to grow despite the negative growth in demand deposit. In 2015, total deposits grew by 1.58 percent, which represents the weakest annual growth since 2009. Demand deposits were the main contributor to this considerable slowdown. Although demand deposits have recorded a robust growth in the past few years, 2015 witnessed a negative growth of 1.3 percent (**Chart 3.17**). The decrease in demand deposits is attributed to the 11.9 percent reduction in government entities' demand deposits. However, this is justifiable as these entities have been withdrawing their demand deposits to buy the newly issued government bonds. Since Saudi banks continued to enjoy a large deposits base of SAR 1.6 trillion, a continuation of deposits withdrawal by government entities to buy government bonds may not have a significant impact on liquidity in the short to medium term. However, it has indeed increased the cost of funding between banks. In 2015, deposits in foreign currency amounted to SAR 160.9 billion which is equivalent to 10 percent of the total banks' deposits. This suggests that the risk from foreign exchange market on banks' balance sheet is limited.

Chart 3.17: Deposit Growth Classified by Type



3.3.1.1 Maturity Distribution of Banks Deposits

Maturity-mismatch risk is moderate. The domination of short-term deposits is matched with the relative preference towards short term lending. Short-term deposits with a maturity of less than 12 months represent the bulk of total deposits base. There is, however, still some room to mitigate this risk further by encouraging longer-term deposits such as time and saving deposits.

3.4 Off-Balance Sheet Operations

The growth of off-balance sheet items has been modest in 2015. Banks' off-balance sheet operations grew by 4.1 percent in 2015 compared with a growth of more than 22 percent in the preceding year. This was mainly driven by the slow growth of derivatives. The value of the off-balance sheet items reached SAR 2.2 trillion, a size equivalent to total asset value. The bulk of the off-balance sheet assets, 67.5 percent, is composed of derivatives (SAR 1.50 trillion). Guarantees, Revocable Overdrafts and Letters of Credit accounted for 16 percent, 10 percent, and 3 percent of off-balance sheet operations respectively (**Charts 3.18**). It should be noted, however, that the comparative value of the off-balance sheet items in terms of the Basel risk-weighted assets is equivalent to only about 15 percent of total off-balance sheet operations. Derivatives post credit conversion value, is only equivalent to 1.4 percent.

⁶ Other quasi-money deposits comprise of residents' foreign currency deposits, marginal deposits for LCs, outstanding remittances, and banks' repo transactions with private parties.

Chart 3.18: Components of Off-Balance Sheet in 2015

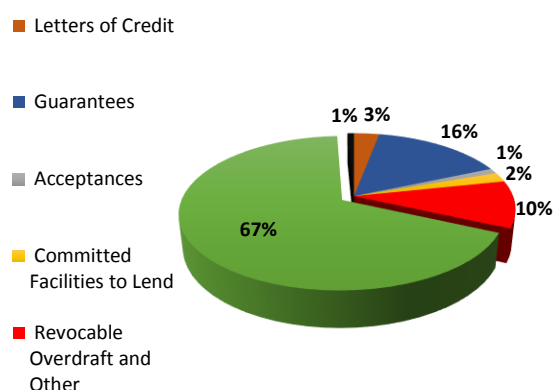
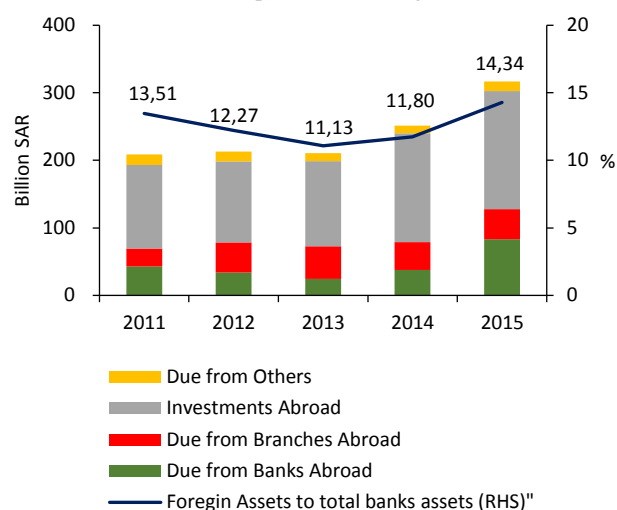


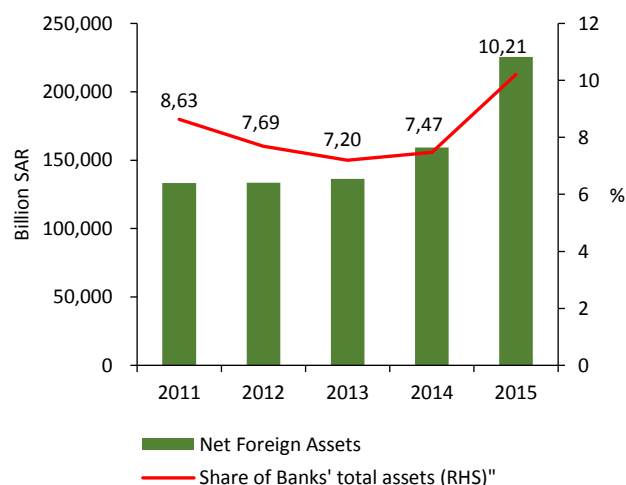
Chart 3.20: Components of Foreign Assets



3.5 Foreign Currency Exposure

Saudi banks increased their exposure to foreign financial markets, but remained limited. In 2015, net foreign assets increased by over 41 percent, reaching SAR 225.5 billion. However, it remained slightly over 10 percent of banks' total assets. This conservative approach has helped the banking sector remain resilient against volatility in the global financial system. (Chart 3.19).

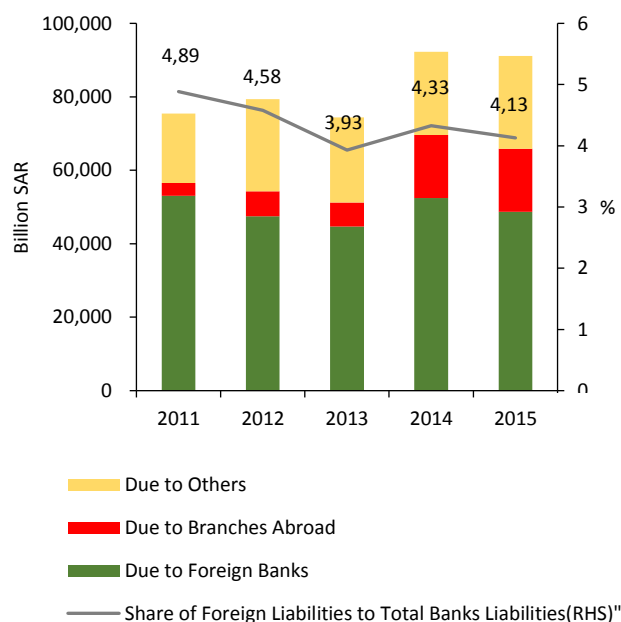
Chart 3.19: Growth Pattern of Banks Net Foreign Assets



The growth was mainly driven by an increase in Saudi banks' dues from banks abroad, which rose by about 121 percent and currently account for about 26 percent of foreign assets. Banks' foreign asset portfolios are still largely represented by their investments abroad and represented 55 percent at end of 2015 (Chart 3.20)⁷.

On the other hand, Banks' foreign liabilities remained small relative to total liabilities. In 2015, banks' foreign liabilities fell slightly to SAR 91.2 billion, about 1 percent drop relative to preceding year and equivalent to less than 4.1 percent of total liabilities (Chart 3.21). Balances due to foreign banks were the major component of foreign liabilities, which fell by about 7 percent relative to 2014.

Chart 3.21: Components of Foreign Liabilities



⁷ Banks' investment abroad is subject to SAMA's approval, and banks' proposals are evaluated on a case-by-case basis.

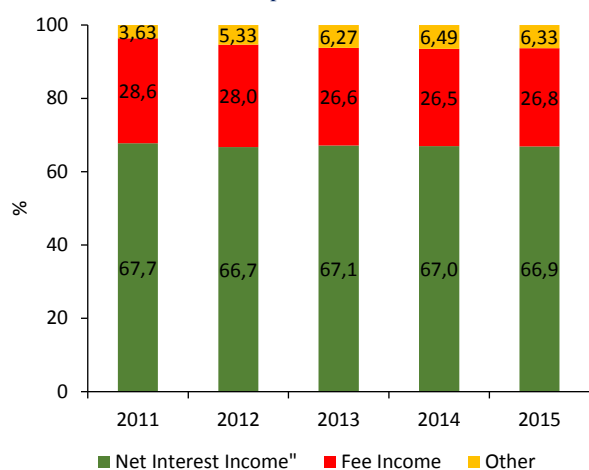
3.6 Banking Sector Resilience

Saudi banks have continued to rely on a business model that is largely oriented towards domestic savers and investors. For instance, the overriding source of their assets has been domestic deposits from households, businesses and government entities. Similarly, most of their lending has been directed to domestic households, corporates and semi-government entities. In other words, Saudi banks' exposure to foreign banks and other entities in terms of lending or borrowing is fairly limited. Moreover, the fixed exchange rate system that has been in place for decades has contributed to the stability of Saudi riyal and hence largely reducing banks' foreign exchange transaction risk. It is because of these historical realities that the Saudi banking sector has a built-in protection against adverse domestic and external developments.

3.6.1 Profitability

The banking sector profitability continued to grow despite low interest rate. Cumulative profit by end of 2015 reached SAR 42.7 billion, a 6.3 percent growth relative to the preceding year. The growth of profit was almost half of that in 2014, but in line with similar trends in 2013 and 2012. Net interest income continued to be the major driver of profit, contributing for about 67 percent of gross income (Chart 3.22).

Chart 3.22: Components of Gross Income



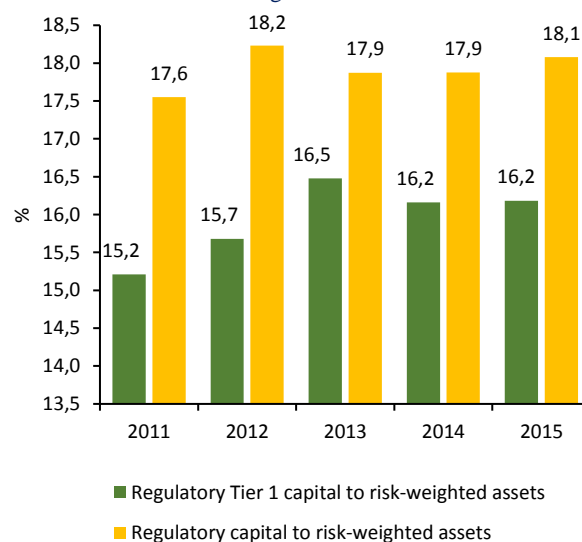
Interest on loans to the private sector are the major driver of income, accounting for over 76 percent of total interest income in 2015. Other key sources of income mainly included the net special commission and fee-based income from capital market products, i.e. brokerage and asset management services.

3.6.2 Regulatory Capital and Asset Quality

SAMA's prudent regulatory framework requires banks to maintain capital level (the Regulatory Capital to Risk Weighted Assets) well in excess of the Basel Committee's minimum requirements. Furthermore, SAMA has been at the forefront of adopting and implementing the rollout of Basel III Capital Adequacy Regulations incorporating enhanced and expanded risk metrics in 2008. The Saudi banks are not facing challenges in adopting the Basel III standards. They were among the first in the region to fully implement the enhanced Capital Adequacy Ratio (CAR) under Basel III (standardized approach) effective in 2013, with all banks reporting their Basel III CAR in their March 2013 financial statements.

The Saudi banking sector continued to be highly capitalized. In 2015, banks' CAR further increased to reach 18.1 percent. These strong capitalization levels continue to demonstrate the resilience of the Saudi banks even during times of economic challenges (Chart 3.23). In addition, banks maintain high quality capital in the form of Tier 1 capital, which primarily consists of common equity and freely available disclosed reserves, representing 89.5 percent of total regulatory capital. Moreover, common equity remained the dominant component of the Tier 1 capital. Regulatory tier 1 capital to risk-weighted assets maintained the same level from last year of 16.2 percent.

Chart 3.23: Regulatory Capital and Tier 1 Capital to Risk-Weighted Assets



3.6.3 Liquidity

Liquidity in the banking system remained at comfortable levels due to adequate liquidity buffers. The ratio of liquid assets to total assets stood at around 17.5 percent and 27.3 percent relative to short-term liabilities in 2015 (**Chart 3.24**). Saudi Banks continued to exceed the minimum liquidity requirements proposed by Basel III for both the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). Saudi Banks held an average LCR and NSFR at 193 percent and 123 percent by end of 2015 respectively⁸ (**Chart 3.25**).

Chart 3.24: Liquid Assets to Total Assets

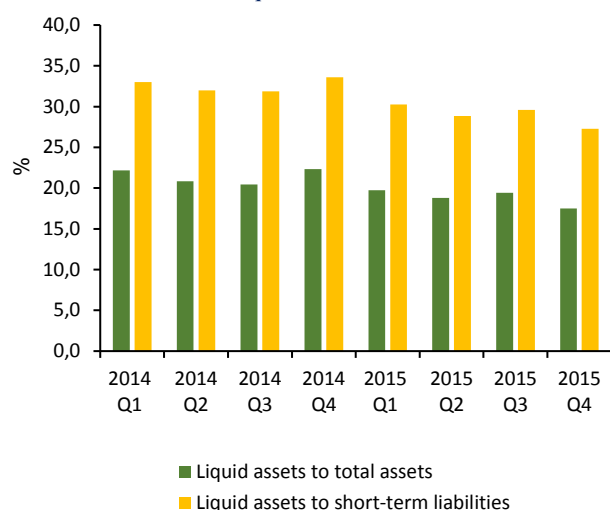
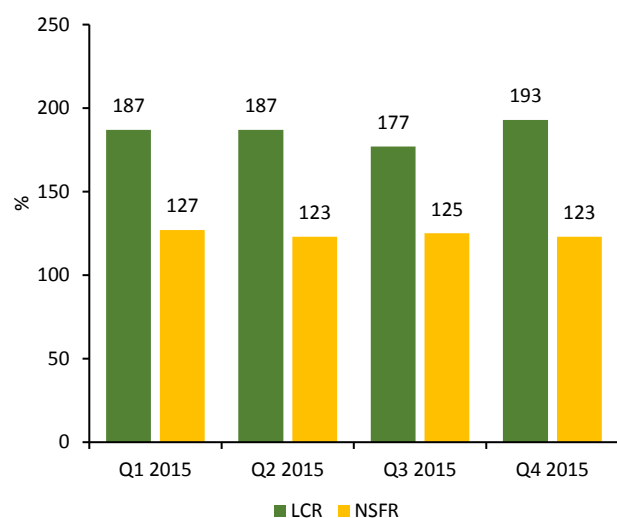


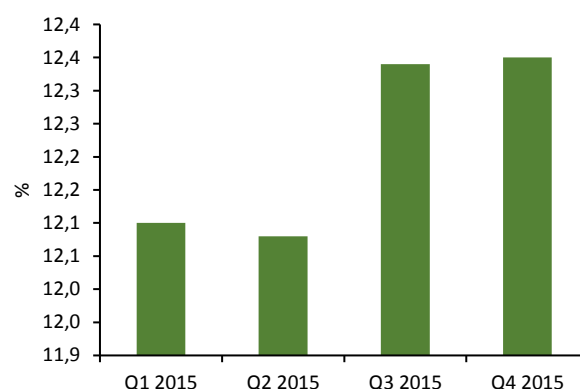
Chart 3.25: Liquidity Coverage Ratio & Net Stable Funding Ratio



3.6.4 Leverage

Leverage in the Saudi banking sector is maintained at comfortable levels. As of 2015, Saudi banks started reporting the Basel Committee on Banking Supervision (BCBS) leverage ratio. The average leverage ratio was above 12 percent which is well above the floor of 3 percent set by the BCBS. Maintaining banks' leverage at prudent levels is an important measure to ensure stability within the financial sector (**Chart 3.26**).

Chart 3.26: Leverage Ratio



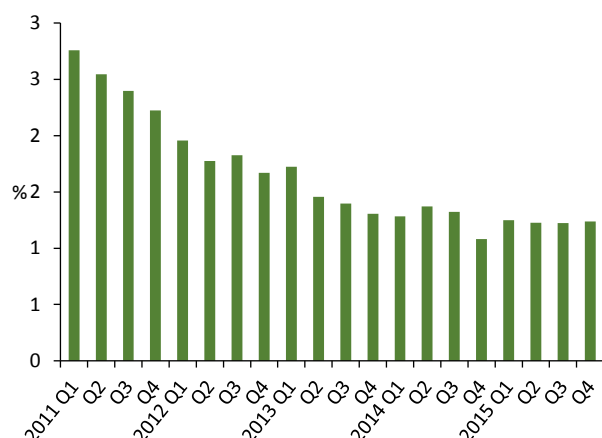
3.7 Risk Outlook of Banking Sector

The Saudi Banking Sector has shown high resilience over the past decades and it is expected to continue performing well in the future. The banking sector performance is highly correlated with macroeconomic changes, particularly the oil prices and government spending. However, the banks' business models are expected to remain focused on current, non-interest bearing deposits as the primary source for funding and on a mix of floating interest rate lending and on hedged fixed interest rate investments. Meanwhile, exposure to international markets is likely to remain low.

Credit quality continues to perform well. This is indicated by the record low NPL ratios even in the current low oil price environment. The recent episode of oil price drop is expected to have a milder impact on the underlying credit quality given the prudent and close monitoring by SAMA and the high creditworthiness of borrowers. Total bank credit grew by about 9 percent in 2015, while the stock of non-performing loans rose by about 6 percent in the same period. Nevertheless, the NPL ratio rose slightly to 1.2 percent in 2015 relative to 1.1 percent in the preceding year (**Chart 3.27**).

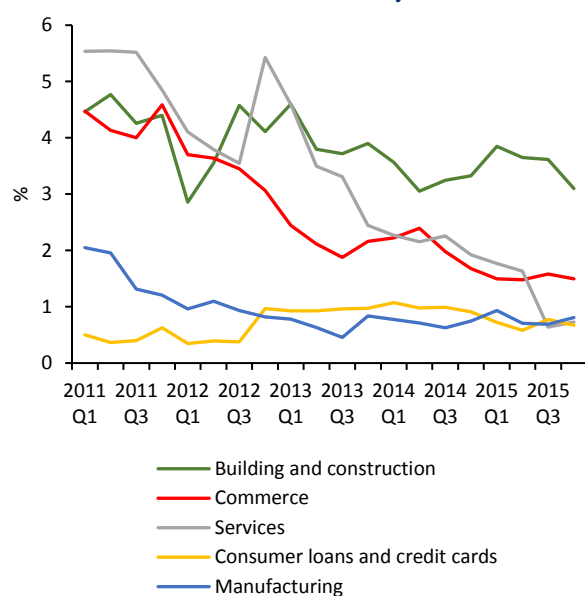
⁸ Saudi banks have started in 2015 disclosing their LCR and NSFR on a quarterly basis as required by the BCBS

Chart 3.27: Quarterly Non-Performing Loan Ratios (NPL)



Although, the overall NPL ratio in the banking sector is close to historical low levels, it varies from one economic sector to another. Increasing NPLs have been recorded in early 2015 in Building and Construction sectors, which accounts for about 21 percent of total credit, but then reversed and started to decrease in the second half of 2015. While NPLs in the Commerce and Services sectors continued to decrease, which account for about 8 percent and 5 percent of total credit respectively. As for consumer loans, credit cards and manufacturing, their NPLs trend continued to be stable during the last couple of years (Chart 3.28). Overall, SAMA continues to monitor the changes in NPLs in all economic sectors to ensure prudent and safe lending practices.

Chart 3.28: NPLs in Key Sectors



SAMA continued to rely on a counter-cyclical provisioning policy to ensure higher resilience of the banking sector to absorb shocks during stress times. In view of this, SAMA requires banks to increase their capital reserves during up-turns (good times) so that they could use them during down-turns (stress times) to minimize the impact of adverse occurrences. Consequently, in 2015, the coverage ratio for total NPLs was about 170 percent. In 2016, SAMA formalized and published its methodology for calculating its countercyclical capital buffer. Based on this methodology, SAMA has implemented a zero percent buffer rate for 2016 (Box 3.3).

The strong capitalization of Saudi banks has been an important contributor to the resilience of the entire Saudi Banking Sector. Saudi banks' asset quality also continued to show sustained improvement as a result of a combination of supportive factors and regulatory initiatives. This includes a favourable economic and business environment, SAMA's hands-on regulatory oversight coupled with risk-based supervision, and the obligation for banks to adopt improved risk management practices following the implementation of Basel III Capital Adequacy requirements (such as the pillar 2 regulatory requirements). Banks are also subject to all other relevant standards and principles issued by the Basel Committee and the Financial Stability Board.

Interest rate risk is well managed and banks are well positioned for a potential hike in interest rate. The decision of SAMA to raise the reverse repo rate from 25 basis points to 50 basis points on 16 December 2015 had minimal impact on the financial system, as the banking sector has positioned itself to absorb any impact of the higher interest rates. This is mainly due to the banks' business model of relying primarily on non-interest bearing deposits for their funding, while focusing more on floating rate investments that will adjust to changes in interest rates. A major portion of banks' assets are floating rate assets which include majority of loans and investment portfolios. Furthermore, the fixed rates assets are hedged through entering into interest rate Swaps deals whereby banks pay fixed and receive floating rates. Any significant interest rate rise that is higher than 1 percent could bring challenges for certain industries, for example, for contracting industry where the contracts are executed and pricing is locked. Similarly, the electronic industry would face the same situation since margins are very slim.

Moreover, SAMA periodically performs top-down stress testing for the banking sector to evaluate its resilience against hypothetical macroeconomic shocks. The current stress test is based on three different scenarios that range from mild to severe macroeconomic shocks. The 2015 stress test results show that Saudi banks are resilient to adverse macroeconomic shocks (including oil price drop) regardless of the shock severity level (**Box 3.4**). In addition, SAMA requires individual banks to semi-annually perform and report the outcomes of their own stress tests. These outcomes are reviewed regularly and is used in SAMA's top-down stress tests to ensure consistency and resilience on both macro and micro-prudential levels.

The Saudi Arabian Deposit Protection Fund (DPF) is further promoting financial stability. The fund that is introduced by SAMA will reinforce confidence and minimize contagion and liquidity risk in the banking sector. Under the DPF rules, which is effective from January 1st 2016, all eligible deposits will be covered up to SAR 200,000 of the deposited amount. The scheme will be funded by a special fund built particularly for this purpose by banks, which will pay quarterly premiums on eligible deposits.

SAMA continues to adopt a wide range of Macro-prudential measures to ensure financial stability and minimize systemic risk within the banking sector. Over the years, SAMA's macroprudential policy ensured that the banking sector is able to withstand financial and economic shocks and vulnerabilities. SAMA gives high priority to ensuring that banks are fully capable of managing their liquidity mismatch of assets and liabilities, and that they are well positioned to meet cash flow obligations in a timely manner to promote the stability of the banking sector. Consequently, banking sector's asset portfolios largely contain high-quality liquid assets such as Saudi government bonds, SAMA bills, and reserves with SAMA. The leverage is an additional stability factor as it acts as a credible supplementary measure to the risk-based capital requirements. It restricts the build-up of leverage in the banking sector to enable authorities to avoid destabilizing deleveraging processes that can damage the broader financial system and the economy. In addition, SAMA has adopted a framework for dealing with domestic systemically important banks in the Kingdom.

Box 3.3

Applicability of Countercyclical Capital Buffer (CCyB) in Saudi Arabia

History and background

In 2010, the BCBS released the Basel III capital standards, which contained detailed information about CCyB. This was followed by an additional information for operating this buffer. The CCyB aims to ensure that banking sector's capital requirements take account of the macro-financial environment in which the banks operate. Its primary objective is to achieve a broader macro prudential goal of protecting the banking sector from periods of excessive aggregate credit growth that have often been associated with the build-up of system-wide risk. In downturn environment, the release of this buffer should help to reduce the risk of undermining the performance of the real economy and additional credit losses in the banking system.

Calculation

The Countercyclical Capital Buffer varies between 0 percent and 2.5 percent to total risk weighted assets and is calculated as the weighted average of the buffers in effect in the jurisdictions in which the banks have a credit exposure.

Timeline

All banks in Saudi Arabia should use the buffer rate for each country (including Saudi Arabia) for the calculation of CCyB from 1 January 2016.

Periodic announcement

Countercyclical buffer rate for Saudi Arabia will be pre-announced by SAMA at least one year in advance. While increases in buffer rate becomes effective one year after the date of announcement of the increase, decreases will take effect immediately as of the date of announcement. However, in case of any immediate changes foreseen, SAMA will make the changes in the buffer rate more frequently.

Methodology

Credit-to-GDP gap (point in time and longer-term trend) as proposed by the Basel Committee has been taken by SAMA as the main indicator for the calculation of countercyclical buffer rate. However, in future, SAMA could also include additional indicators relating to the financial system and may revise the current methodology, if needed.

Calculation of bank-specific countercyclical capital buffer

- 1) Reciprocity is an important basis for the calculation of bank-specific countercyclical capital buffer based on location of exposures in different countries. However, this arrangement is valid mainly for Basel Committee member countries and countercyclical capital buffer rates implemented in those countries. These rates (along with countercyclical capital buffer for Saudi Arabia) will be available on the Basel Committee website (<http://www.bis.org/bcbs/ccyb/index.htm>) and should be taken by the banks for the calculations. However, SAMA could determine a more prudent rate for certain countries, if needed.
- 2) In case, if there is no rate published by the Basel Committee for the country in which the banks have a presence or a position, a maximum buffer rate of 2.5 percent should be used for that country.
- 3) Banks should take into account exposures to private sector counterparties, which attract a credit risk capital charge in the banking book, and the risk-weighted equivalent trading book capital charges for specific risk, the incremental risk charge, and securitization. Interbank exposures and exposures to the public sector are excluded while non-bank financial sector exposures should be included in the calculation.
- 4) Banks should make classification of geographic location according to the criteria of "ultimate risk" i.e. where the final risk lies.
- 5) Banks should take into account the geographic location of their private sector credit exposures (as explained in 4 above) and calculate their countercyclical capital buffer requirement as a weighted average of the buffers that are being applied in various jurisdictions where they have an exposure. The weighting applied to the buffer in place in each jurisdiction will be the bank's total credit risk charge (as explained in 3 above) that relates to private sector credit exposures in that jurisdiction, divided by the bank's total credit risk charge that relates to private sector credit exposures across all jurisdictions.

Buffer rate for Saudi Arabia

For the year 2016, SAMA has computed 0 percent buffer rate for Saudi Arabia based on the methodology as already explained, which has also been published on the dedicated Basel webpage. Banks will be notified a year in advance if there were any changes in the future.

Box 3.4

Stress Testing of the Banking Sector in Saudi Arabia

As part of its risk assessment toolkit, SAMA conducts macro stress testing of the Saudi banking sector on an annual basis. This Box provides an overview of SAMA's credit risk stress testing model, its assumptions, and its main results.

1. Objectives of the Exercise:

The main objective of the stress testing exercise is to assess the resilience of Saudi Banking Sector to absorb macroeconomic shocks. It also aims to identify weaknesses in the banking system or in the individual banks to enable SAMA to design appropriate supervisory responses to proactively address such weaknesses.

2. Scope and Coverage:

The focus of the stress testing exercise is to stress test the banking sector against the credit risk. The exercise has been carried out using bank level data of NPLs, provisions, income components and Risk-Weighted Assets (RWA) covering periods from 2000 to 2015. Total credit and NPLs are used at various subsector levels. There are 11 subsectors used in this exercise i.e. Banks and Other Financial Institutions, Agriculture and Fishing, Manufacturing, Mining and Quarrying, Electricity, Water and Gas, Health Services, Building and Construction, Commerce, Transportation and Communication, Services, Consumer loans and Credit Cards, and Other Loans.

3. Stress Testing Methodology:

The following methodology has been used to conduct the stress testing exercise:

- i. **Step 1** - three stress-testing scenarios are defined which are based on SAMA's macro-economic forecasting model and expert judgments. The scenarios assume shocks in several macroeconomic variables including 1) oil prices; 2) government spending growth; 3) implicit lending rates; 4) SIBOR; and 5) Tadawal All Share Index (TASI) growth rate.
- ii. **Step 2** - various "satellite" models are constructed to investigate the underlying relationship between macroeconomic and banking sector variables.
- iii. **Step 3** - based on the underlying scenario, projections of changes in major banking variables (such as NPLs, provisions, and profitability) are obtained.
- iv. **Step 4** - based on projections in step 3, the new levels or regulatory capitals are projected.

4. Data Collection:

In order to complete the stress testing exercise for 2015, the following data have been collected:

- i. **Bank level data:** time series of a quarterly data from January 2000 to December 2015 on *Non-Performing loans, Total Credit, Provisions, Net Interest Income, Net Other Income, Net interest Expense, Dividend payments, Total Regulatory Capital and Tier 1 Capital and Risk Weighted Assets*;
- ii. **Macroeconomic data:** time series of a quarterly data from January 2000 to December 2015 on *Oil Prices, Government Spending, SIBOR, TASI, and Total Credit*.

5. Stress Testing Scenarios:

As already mentioned, the scenarios for conducting stress tests are based on (i) SAMA's macroeconomic model outcomes and (ii) Expert judgment. The stress test then utilizes three different scenarios: Baseline Scenario, Moderate Shock Scenario, and Severe Shock Scenario. The three scenarios used in 2015 are summarized as below:

- Baseline scenario - assumes that oil prices would grow gradually from \$35 in 2016 to \$47 per barrel. Government spending growth rate drops gradually to almost nil by 2018. Furthermore, commission rates (both lending interbank rates) remains stable around their average level in 2015. Finally, The TASI is assumed to remain at its 2015 with a zero growth rates up to 2018.
- Moderate shock scenario assumes a drop in oil prices to \$25 per barrel in 2016 which gradually bounces back up to \$40 per barrel by the end of 2018. Simultaneously, Government spending contracts sharply by around 10% in 2016, 5% in 2017, 3% in 2018. Interbank and lending commission rates also increase constantly to exceeds 2015 level by more than %100 by then end of 2018. Finally, a stock market is shocked through a 10% drop in the TASI end of 2015 level.
- Severe shock scenario assumes a drop in oil prices to \$25 per barrel in 2016 that remains at the same level up to 2018. Simultaneously, Government spending contracts sharply by around 20% in 2016, 10% in 2017, 5% in 2018. Interbank and lending commission rates also increase constantly to exceeds 2015 level by more than %100 by then end of 2018. Finally, a stock market is shocked through a 20% drop in the TASI end of 2015 level.

6. Stress test Results:

The stress testing results show that Saudi banks can easily withstand various economic shock scenarios. In the baseline scenario, the projected non-performing loan ratio slightly increases during the first quarter then stabilizes around 2 percent. The projected coverage ratio on the other hand decreases sharply in the first quarter, but then increases gradually to end up at around 124 percent by the end of 2018. The projected Capital Adequacy Ratio (CAR) decreases but remains high ending at around 16 percent by the end of 2018.

Under the moderate shock scenario, the results show that the projected non-performing loan ratio would increase to its maximum level at the second quarter of 2017 and then stabilizes at around 2.3 percent by the end of 2018. The projected coverage ratio on the other hand, decreases to reach 114 percent by the end of 2018. The projected CAR decreases but remains high ending at around 16 percent by the end of 2018.

Under the severe shock scenario, the results show that the projected non-performing loan ratio would persistently increase to end up slightly below 3 percent by the end of 2018. The projected coverage ratio on the other hand, decreases to reach 100 percent by the end of 2018 while the projected CAR remains stable (in fact slightly improves) reaching levels close to 19 percent by the end of 2018.

4. Non-Bank Credit: Recent Trends and Initiatives

4.1 Overview

In the same fashion as commercial banks, non-bank credit institutions (NBCI) provide loans to stimulate the growth of the Saudi economy. The non-bank credit sector includes SCIs and finance companies. The main difference from commercial banks is that NBCI do not accept deposits from private customers and businesses. Rather, they are financed by funds from the government in the case of SCIs and private investors in the case of finance companies.

SCIs have been supporting the economy for decades; in recent years, their role has been further emphasized by the government.⁹ SCIs provide credit to various sectors, individuals, and institutions such as small and medium enterprises, real estate, industry, and agriculture. Hence, they are important providers of capital to different economic sectors.

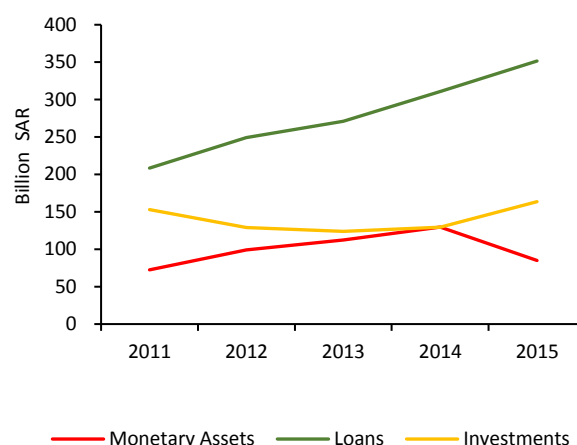
Finance companies also play a crucial role in supporting capital-intensive activities such as real estate and leasing. Under SAMA's supervision in 2015, the number of finance companies has expanded greatly. These companies make loans to both individuals and corporates engaged in real estate and leasing operations.

4.2 Performance of SCIs

4.2.1 SCI Assets

Specialized Credit Institution assets have been on an upward trajectory for years, supporting the growth of the non-oil private sector, in line with the government's diversification objective. In 2015, assets recorded a 3.2 percent growth, reaching SAR 635 billion. Assets classifications include loans, monetary assets, and investments. These classes constituted 94.4 percent of total assets, which amounted to SAR 600 billion at the end of 2015 (Chart 4.1).

Chart 4.1: SCIs Assets by Type



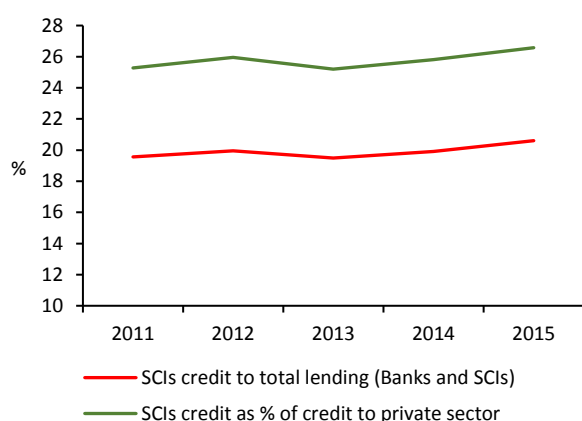
As expected, assets classification was dominated by loans. Total loans extended by SCIs were equivalent to 55.3 percent of total assets in 2015. The other asset categories (investments and monetary assets) are the other uses of the total available SCIs capital. The percentage share of both segments to total assets reached 39 percent by the end of 2015, an indication of sufficient liquidity in the SCIs books, particularly in the case of the monetary assets, which can be made available for loans if necessary.

4.2.2 Credit Extended by the SCIs

SCIs credit growth in 2015 was higher than its compounded average growth rate (CAGR) over the previous five years. The 2015 growth was 13.1 percent, versus a compounded average of 10.1 percent. SCIs outstanding loans reached a total of SAR 351.5 billion, a percentage share equivalent to 20.2 percent of the total credit (bank plus non-bank), when comparing outstanding loans to bank credit extended to the private sector, a 26.6 percent was recorded (Chart 4.2).

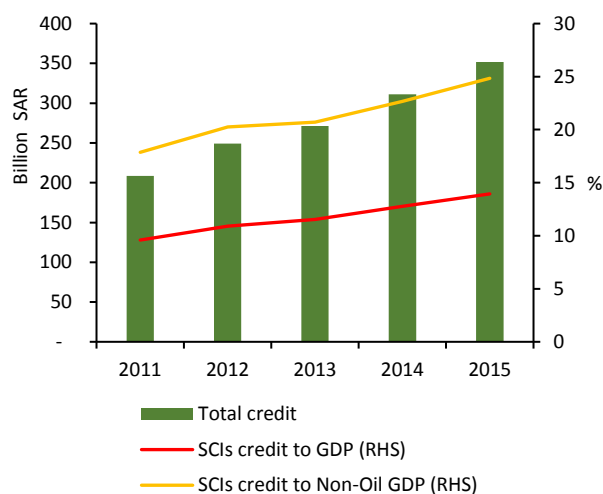
⁹ SCIs are state-owned institutions that were formally established few decades ago with the aim to facilitate the development of some domestic sectors by extending interest-free credit to projects falling within these sectors. Please see 2015 FSR for more details on SCIs.

Chart 4.2: Pattern of SCIs Credit



The magnitude of total SCIs credit can be better interpreted when compared with total GDP and non-oil GDP. Total SCIs credit extended in 2015 was equivalent to 13.9 percent of total GDP and 24.8 percent of non-oil GDP. These ratios are above the average of the previous five years which is 10.9 percent of total GDP and 19 percent of non-oil GDP (**Chart 4.3**).

Chart 4.3: SCIs Outstanding Credit Relative to GDP and non-oil GDP

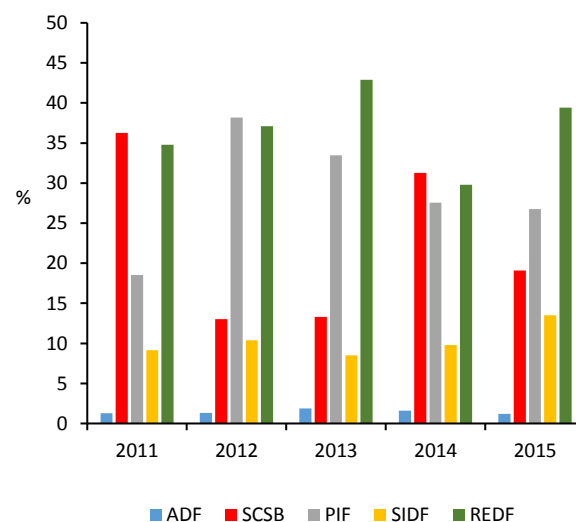


The risks inherent in the SCI sector are limited due to the following reasons. First, SCIs are government institutions and do not accept deposits that can be withdrawn with little or no notice. Second, the SCIs do not amplify the contagion risks to the financial system, due to the fact that they are fully financed by the government. Third, the liability & equity side of the SCIs' balance sheet consists entirely of government equity, with absolutely no leverage implications on the banking sector.

This limits the impact of any deterioration in the SCIs' credit quality. Finally, the SCI's lending activities are perceived by Saudi citizens and private sector businesses as being bulwarks of certain sectors of the economy such as industrial, agriculture, and real estate. They also provide loans to small and medium enterprises. On the other hand, the default rates of SCIs on loans are quite low. Most of the SCIs have been self-funded traditionally, and the vast majority of borrowers are aware of the necessity of "passing it forward" by repaying their loans.

When analyzing the percentage share of disbursed loans, it is important to realize that most of the loans are focused on real estate and large scale projects. The total loans disbursed by the Real Estate Development Fund amounted to SAR 27.5 billion in 2015, equivalent to 39.4 percent of the total loans. The total loans disbursed by the Saudi Credit and Savings Bank amounted to SAR 13.3 billion in 2015, equivalent to 19.1 percent of the total. The total loans disbursed by the Public Investment Fund amounted to SAR 18.6 billion in 2015, equivalent to 26.8 percent of the total. The total loans disbursed by the Saudi Industrial Development Fund amounted to SAR 9.4 billion in 2015, equivalent to 13.5 percent of the disbursed loans. Finally, the total loans disbursed by the Agricultural Development Fund amounted to 842 million in 2015, equivalent to 1.2 percent of the disbursed loans (**Chart 4.4**).

Chart 4.4: Percentage share of disbursed loan by SCI types



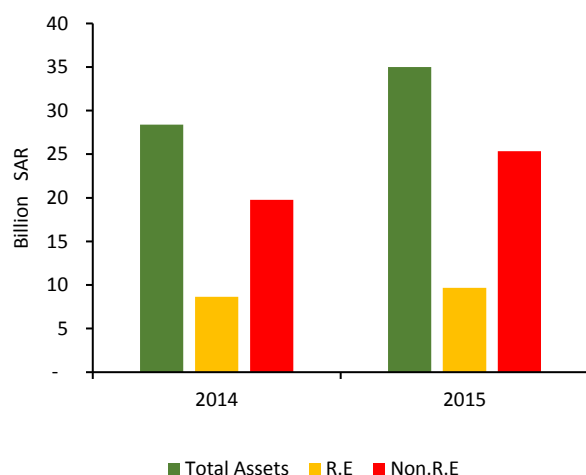
4.3 Non-Bank Finance Sector

4.3.1 Finance Company Assets

The finance companies segment can be characterized as being small yet rapidly growing. By the end of 2015, this sector's total assets were equivalent to 1.2 percent of the Saudi financial system's overall assets. There were 12 new finance companies licensed in 2015, increasing the number of operating companies to 30 companies¹⁰.

During 2015, total assets of this sector rose by 25 percent (SAR 37.5 billion) (Chart 4.5). Real estate and non-real estate assets accounted for 26 percent and 74 percent of total finance companies' assets, respectively. These assets were equivalent to 1.4 percent of GDP, and 2.5 percent of the non-oil GDP in 2015. Moreover, the finance companies' assets accounted for 1.6 percent of the total bank assets in 2015.

Chart 4.5: Total Assets

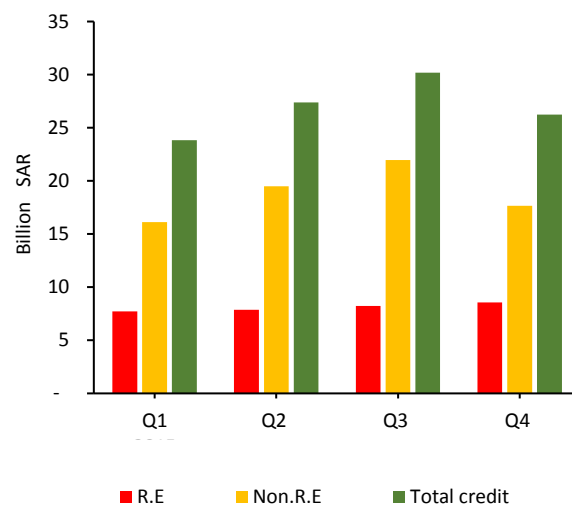


4.3.2 Finance Company Credit Extended

The total credit extended by finance companies compared to the credit extended by the banking sector was minor in 2015. The total credit accounted for about 1.9 percent of the total banking sector credit. However, the growth rate was substantial, with an increase of 25 percent, reaching SAR 28 billion in 2015 (Chart 4.6). The real estate and non-real estate components grew by 10 and 32 percent respectively. Real estate and non-real estate

accounted for 32.7 percent, and 67.3 percent of total finance companies credit, respectively. It was equivalent to 1 percent of GDP, and 1.9 percent of the non-oil GDP in 2015. The finance companies' credit classification consists of real estate and non-real estate credit, with an average loan maturity of 15 years for real estate and 3-4 years for non-real estate. The amount of credit dedicated to real estate was one third of the total credit extended.

Chart 4.6: Credit by Business Line in 2015



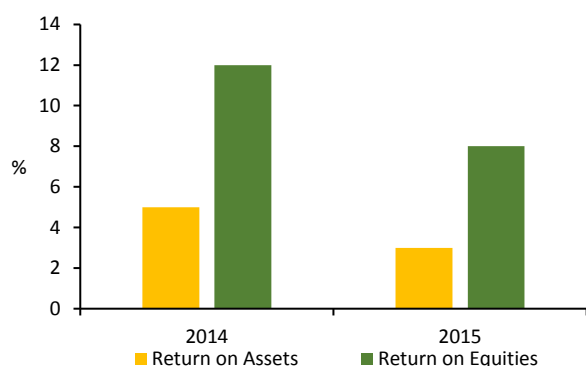
4.3.3 Finance companies Resilience

4.3.3.1 Profitability

In the face of an increase in total assets and credit, declining profits might be unexpected. However, an examination of the causes reveals that such a decline is justified. The finance companies have realized a decline in profits in 2015. Profits have fallen down by 22 percent to SAR 1.2 billion. Moreover, both ROE and ROA have been negatively affected which represented 8 percent and 3 percent, respectively (Chart 4.7). The downturn in profits was primarily due to the higher administrative expenses anchored as a consequence to the transformation in the companies' structure to be in compliance with the licensing requirements.

¹⁰ The finance company sector is divided into two segments based on the line of business, namely, real estate and non-real estate. There are six real estate and 24 non-real estate companies.

Chart 4.7: Profitability



4.3.3.2 Leverage

The finance companies' leverage position was quite favorable in 2015. SAMA's regulations in regard to leverage state that the amount of real estate credit extended by companies shall not exceed five times the company's capital and reserves. This policy can be raised to a maximum of seven times, given SAMA's approval. As far as non-real estate companies are concerned, leverage shall not surpass three times the amount of capital and reserves, with an upper limit of five times, after obtaining a no-objection letter from SAMA.

Leverage ratios have not realized any major change during the past two years. Real estate companies' leverage has reached a level of 2.35, a minor increase from 2014's level of 2.2. On the other hand, the non-real estate companies' leverage level has been stable at 1.7. These ratios are far below the maximum limits allowed by SAMA in their policy framework. This puts the finance companies in a comfortable position in terms of being able to cope with high levels of nonperforming loans, in case they occur.

4.3.4 Risk Outlook of Finance Companies

Credit extended to borrowers has grown by 21.5 percent, which exposes finance companies to a broader risk level. NPL have increased from 3.53 percent at the end of 2014 to 3.79 percent at the end of 2015. Although the NPL ratio seems to be increasing, it is still considered to be relatively low compared to other countries. The high level of credit extended to the real estate sector may constitute another venue of risk, as the credit to real-estate

projects share to total in 2015 was 32.5 percent. The high concentration could amplify financing companies' risk exposure.

4.3.5 Overview of Policy Measures

SAMA has set forth a comprehensive policy framework by which the finance companies should operate. Some of the most important points are the following:

- The finance company should set a clear written business strategy and a written risk management policy approved and updated annually by the board of directors. The policy shall address all types of relevant risks¹¹, taking into account all business activities, including outsourced operations and tasks.
- The finance company shall not hold securities such as stocks, bonds, sukuk and derivatives except in the following cases:
 - 1) For the purpose of a finance transaction to extend financing to the borrower
 - 2) For hedging purposes.

As an ongoing policy adjustment, SAMA has revised the Loan-to-Value (LTV) ratio for real estate finance companies. The down payment provided by the borrower was lowered to 15 percent from 30 percent. Raising the LTV will induce growth in the real estate finance sector and increase competition among companies to provide more services at competitive prices, with higher quality, while meeting market needs better.

Moreover, it seems evident that real estate finance companies are better positioned to bear the risks of real estate finance and adapting to the challenges associated with the nature of the sector. However, the risk associated with credit growth will probably increase. This risk could later carry over to the financial system, but the finance company sector does not presently play a major role in the overall financial system. Furthermore, the elevated risk will not cause systemic risks, as finance companies are not allowed to accept deposits.

¹¹ Credit risks; Market risks; Term cost risks; Asset-liability mismatch risks; Exchange rate risks; Liquidity risks; Operational risks; Country risks; Legal risks; Reputation risks; and Technology risks.

Table 4.1: SAMA's Macprudential Measures and Policies Toolkit – Non-Bank Credit

Instrument	Regulatory Requirement
Leverage ratio	<p>Real estate companies' leverage shall not exceed five times the company's capital and reserves (Could be exceeded upon-approval).</p> <p>Non-real estate companies' leverage shall not surpass three times capital and reserves (Could be exceeded upon-approval).</p>
Factorization ¹²	<p>The company is allowed to factorize a loan provided it complies with the following conditions:</p> <p><u>Real Estate Companies:</u> Passing one year from credit initiation or six months from the first installment, whichever comes later.</p> <p><u>Non-Real Estate Companies:</u> Passing three months from credit initiation or three months from the first installment whichever comes later.</p>
Legal Reserves	10 percent of profit until a reserve of 50 percent of the paid up capital is reached.
Loan-To-Value (LTV)	Mortgage loans \leq 85 percent of residential real estate value.
Single exposure limit	Single exposure \leq 10 percent of capital + reserves (Could be exceeded upon-approval)

¹² Transfer of ownership of finance assets or their contractual rights to the second party as a collateral.

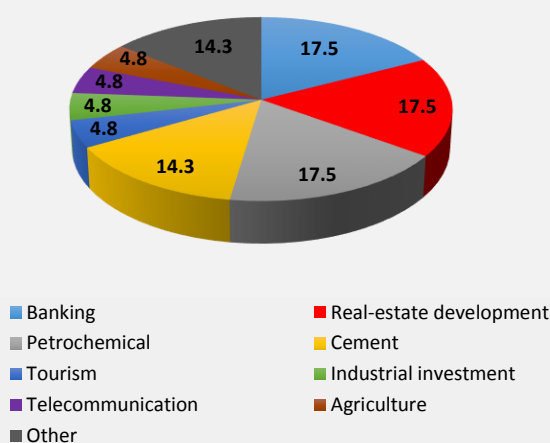
Box 4.1

The Public Pension Agency and General Organization for Social Insurance: a Financial Stability Perspective

The Public Pension Agency (PPA) was founded in 1958; its primary objective is to manage the public sector employees' retirement fund. The PPA aims to secure an income source for public sector and military retirees who have left public service, through safe and sound investment strategies that shall yield the highest return possible, associated with a risk level agreed upon by the investment affairs department. Likewise, the General Organization for Social Insurance (GOSI) provides the same service to private sector employees. GOSI was established in 1969 and currently has 21 field offices throughout the Kingdom.

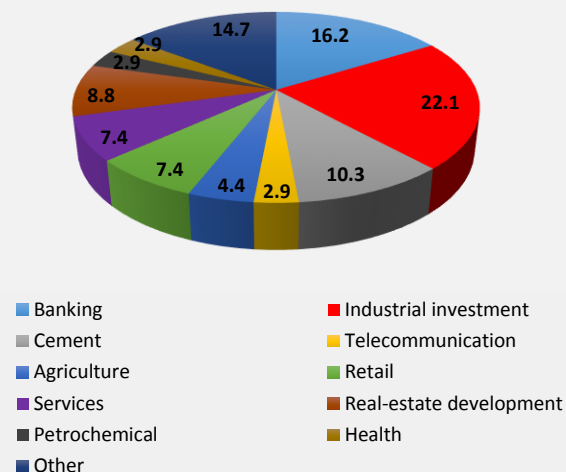
The PPA currently invests in 63 domestic companies, 45 of which are listed in the Saudi Arabian stock market. According to the PPA's Annual Statistical Report published in 2014, their main investments are in the financial, petrochemical and real-estate development sectors (**Chart 1**). Ownership level changes have been minor compared to 2013. The ownership level has increased in the financial sector, which has reached 6.10 percent of the sector's aggregate paid up capital. Investment continues to grow in the financial, petrochemical, and cement sectors, whereas it has dropped by one percentage point in real-estate development. Real-estate investments have reached SAR 26.8 billion by the end of 2014. GOSI invests in five main categories, namely, financial investments, securities, credit, stocks, and real-estate projects. Moreover, its investments are primarily domestic and concentrated in the financial and industrial sectors, with about 70 percent of its portfolio in those two sectors. The overall number of domestic companies GOSI invests in are 68 with a SAR 54 billion portfolio (**Chart 2**). GOSI also invests in a number of real-estate projects across the country with over four billion riyals dedicated to such projects.

Chart 1: Public Pension Agency Sectoral Investments by Number of Companies



Source: PPA

Chart 2: GOSI Sectoral Investments By Number of Companies



Source: GOSI

Based on the aforementioned facts concerning the PPA and GOSI strategies and functions, it is undoubtedly apparent that they are an indispensable part of the Saudi Arabian financial system. Domestic companies could face liquidity shortages if investment strategies were changed due to precautionary measures. The high level of capital already injected in the economy indicates the role of PPA and GOSI in enforcing financial stability in the market. Due to the current economic downturn, investment decisions in 2015 is expected to have taken a more conservative approach by scaling back the level of investment in the private sector and expanding government bond purchases. This approach is rather favorable from a financial stability perspective, as government bonds bear minimal risk. However, although increasing the securities level in a portfolio would reduce risk, in a near zero short-term interest environment, returns are expected to encounter a sharp decline which inflicts another risk on the financial system. As returns decrease, it will be more challenging for PPA and GOSI to meet their financial obligations. Furthermore, adopting a precautionary investment approach may be a counterproductive strategy to SAMA's overall objective of revitalizing the economic cycle and uplifting the market to get over the economic slump.

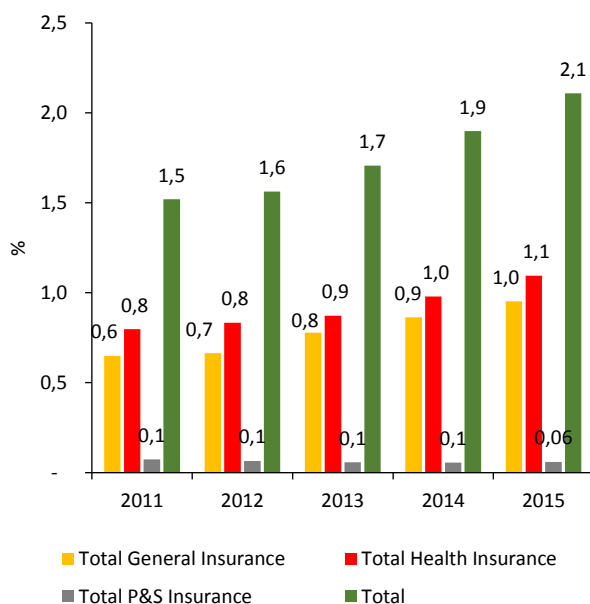
5. Insurance Sector: Performance, Coverage and Resilience

5.1 Overview

The structure of the insurance sector and its regulatory framework have developed further. In 2015, the sector remained comprised of 35 companies, 2 actuaries, 15 loss assessors and loss adjusters, and 8 insurance advisors. However, the number of insurance brokers increased from 80 to 88, insurance agents increased from 82 to 91, and insurance claims settlement specialists (third-party administration) increased from 10 to 13. SAMA remains the regulator for the sector, except for health insurance, which is shared between SAMA and the Council of Cooperative Health Insurance. Furthermore, since all insurance companies are publicly listed, the CMA is mandated to ensure that all insurance companies are compliant with the *Saudi Capital Market Law*.

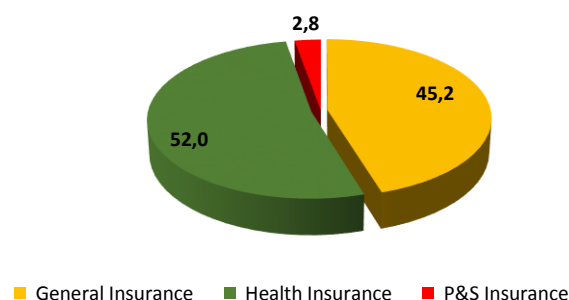
The Sector remains small measured by its contribution to non-oil GDP and compared to the banking sector. The insurance penetration ratio as measured by the ratio of Gross Written Premium (GWP) to non-oil GDP, which indicates the contribution of the insurance market to non-oil output, averaged at 1.8 percent during 2011-15 and slightly increased from 1.9 percent in 2014 to 2.1 percent in 2015 (Chart 5.1). It also remained a small component of the financial sector. While banks' total assets in terms of non-oil GDP reached more than 127 percent in 2015, insurance sector's total assets relative to non-oil GDP stood at around 3 percent in the same period.

Chart 5.1: Insurance Penetration (GWP as % of non-oil GDP)



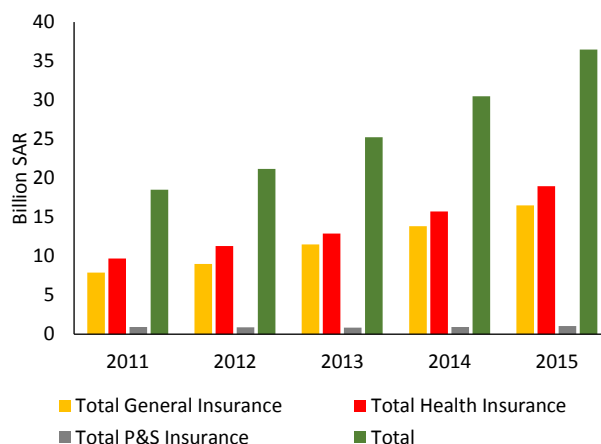
Insurance products and services are provided through three main insurance classes with each class containing several business lines. The first class is categorized as *General Insurance*, which includes business lines such as *Accidents and Liability*, *Motor*, *Property/Fire Insurance*, *Marine*, *Aviation*, *Energy*, and *Engineering*. The second class is *Health Insurance*, and the third class is *Protection and Saving Insurance*. Their respective shares of total insurance activities based on GWP stood at 45.2 percent, 52.0 percent and 2.8 percent in 2015 (Chart 5.2).

Chart 5.2: Market Shares by Business Line in 2015 (% of Total GWP)



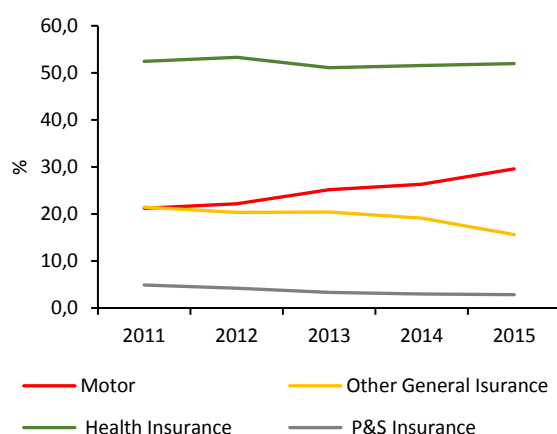
The Saudi insurance market continued to grow in 2015. The share capital of the entire insurance industry significantly increased by around 25 percent in 2015, compared to 5.6 percent increase in 2014, exceeding SAR 12.6 billion. The large increase in capital was mainly due to further stock issuance as a way of raising additional needed capital by insurance companies. The overall GWP increased by around 19.7 percent to SAR 36.5 billion in 2015 (Chart 5.3).

Chart 5.3: Gross Written Premiums



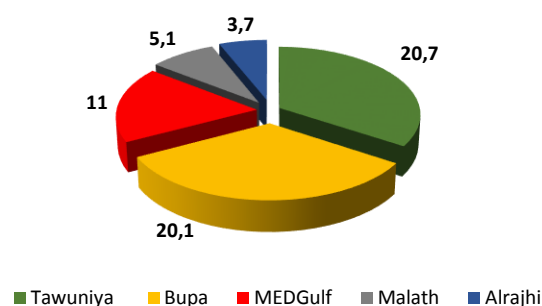
Health and motor insurance continued to dominate insurance activities as they accounted for **81.6 percent of total GWP**. The two lines grew rapidly by 20.3 percent and 28 percent respectively in 2015 (**Chart 5.4**). This concentration of insurance activities resulted from the provision of health insurance by many businesses to their employees, and the requirement of at least a third-party insurance for all motorists. Other insurance business lines, however, did not show similar growth pattern in their respective GWPs in 2015. This indicates a need for further developments in these business lines (especially in the Protection and Savings line) to help reduce the concentration risk and allow for business diversification within the industry.

Chart 5.4: Market Share Growth Pattern of Different Insurance Lines



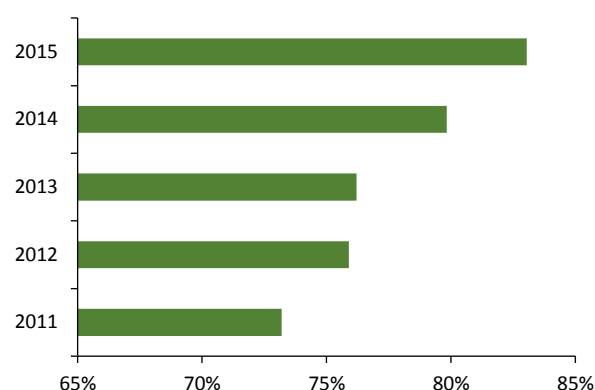
Despite the domination of the top three players, several companies have started to gain additional market share. The share of the top three companies' GWP market share dropped from 54 per cent in 2014 to 51.8 percent (**Chart 5.5**). In addition, many companies have started to gain further market shares in some business lines.

Chart 5.5 : Market Share of Top Insurance Companies as a Percentage of Total GWP in 2015



The current retention ratio of the Saudi insurance industry reflects less reliance on the reinsurance market. The retention ratio which indicates the percentage of GWP retained by the insurance companies increased to 83 percent in 2015 from 79.8 percent in 2014 (**Chart 5.6**). This was indicative of less integration between the domestic and global insurance markets owing to low percentage of reinsurance contracts signed with international reinsurers. The low reliance on the reinsurance market indicates that most of the market risk is being assumed by the insurance companies.

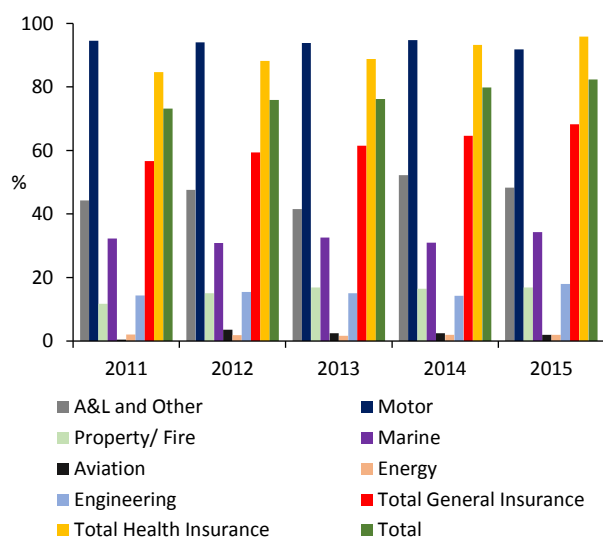
Chart 5. 6 : Retention Ratio of Total Insurance Activities



Retention ratios of different insurance lines showed a wide divergence. While the health and motor insurance businesses that accounted for 81.6 percent of the overall GWP ended up with high retention ratios of 96 percent and 91.8 percent, respectively, in 2015, the retention ratios were significantly lower for the rest of insurance lines reaching a level as low as 2.0 percent for Energy insurance and Aviation (**Chart 5.7**). The retention ratios of health and motor insurances are expected to be higher given the demand for these business lines.

The Saudi insurance industry as a whole comfortably met the requirement of a minimum of 30.0 percent retention ratio laid down for the entire insurance sector by Article 40 of the Insurance Implementing Regulations. However, these Regulations do not specify such a limit for each business line within the insurance sector. As a result, a high level of risk may be concentrated in certain business lines.

Chart 5.7 : Retention Ratios by Business Line



5.2 Performance

Overall, the insurance market showed stable profitability growth pattern in 2015. Net results have increased from SAR 735 million in 2014 to SAR 810 million in 2015 recording a growth rate of around 10 percent. This increase in profitability was solely led by the insurance activities as insurance underwriting results grew rapidly by 48 percent reaching SAR 963 million in 2015 compared to SAR 651 million in 2014 (**Chart 5.8**). Similarly, both ROE and ROA remained within the historical average, except for the bumpy year of 2013, recording around 6.5 percent and 1.5 percent respectively during 2015 (**Chart 5.9**).

Chart 5.8 : Insurance Underwriting, Investment and Net results

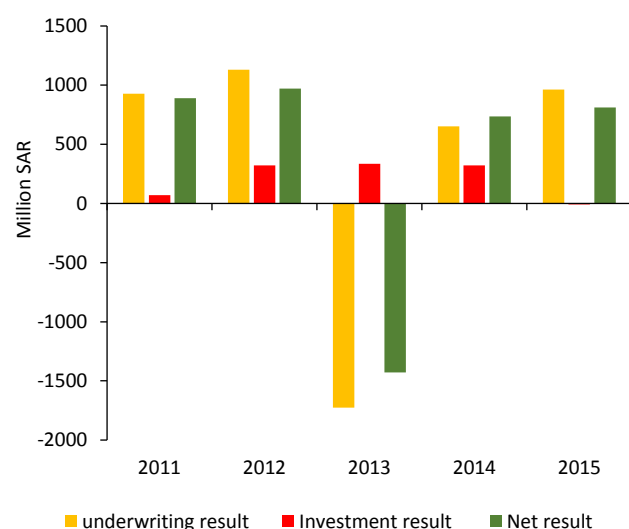
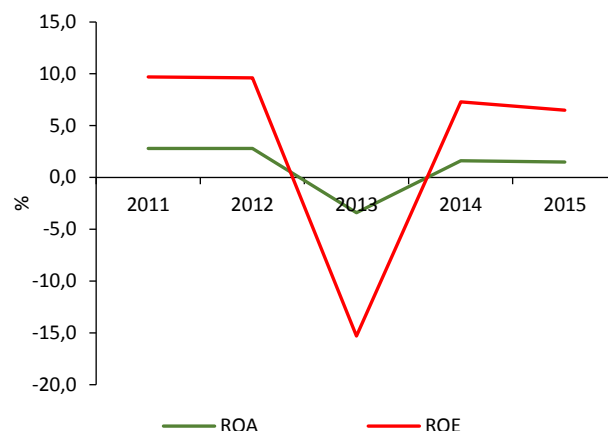


Chart 5.9 : Returns on Assets and Equity



However, there remains a wide divergence in the performance of individual insurance companies. The industry-wide profitability is mainly impacted by the performance of the top two companies whose net results constitute around 70 percent of the sector's profitability. If excluded, the results would show a net loss across the remaining companies of around SAR 271.2 millions. Moreover, a large segment of insurance companies reported losses in 2015. Out of the 35 insurance companies, 16 companies reported net losses.

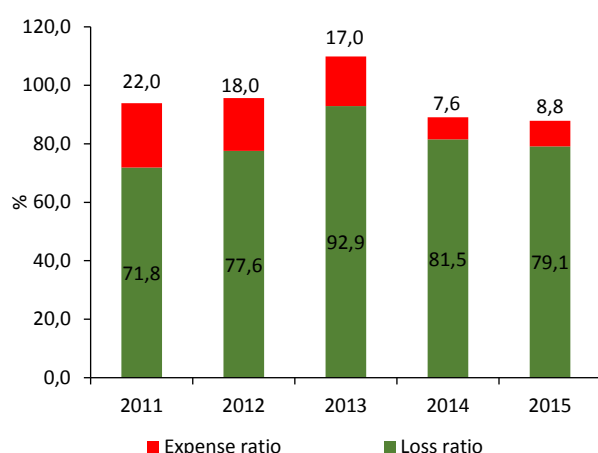
Sector-wide accumulated losses may pose some systemic risk to the financial system. By the end of 2015, 26 publicly listed insurance companies still have not fully recovered their total accumulated losses on their balance sheets. Out of which, 5 have been yellow-flagged in the Saudi stock exchange indicating accumulated losses of higher than 50 percent of their respective capital and one company is red-flagged indicating suspension from trading due to accumulated losses that exceeded 75 percent of its capital. Moreover, although haven't reached 50 percent, around 5 additional companies registered accumulated losses that exceeded 40 percent of their respective capital and are close to the flagging limit. This impact of high accumulated losses may spill-over to the capital market increasing its volatility.

Investment activities registered losses in 2015, the first since 2010, indicating the impact of low interest rate environment and high volatility in the equity market. Investment results registered a loss of around SAR 9 million after a history of positive returns that ended in 2014 with around SAR 323 million (**Chart 5.8**). This clearly indicates a challenge facing insurance companies which will have to readjust their investment portfolios given the current financial conditions in a way that achieves positive returns while still adhere to regulatory limits on the investment portfolio that are

designed to sustain financial stability and minimize systemic risk (**Table 5.1**).

A downward trending loss ratio indicates an improvement in the efficiency of the insurance companies' underwriting activities. The average loss ratio, which is defined as the ratio of total net claims incurred to net earned premium, moderately improved from 80 percent in 2014 to 79 percent in 2015. However, the improvement is moderate and the ratio remains relatively high indicating a room for further improvements in the underwriting standards in order to control for market risk and lower the net claims incurred (NCI) levels. On the other hand, the expense ratio, defined as the ratio of total operating expenses to net earned premiums, has increased moderately but remained below 10 percent, which indicates operational efficiency on the industry level (**Chart 5.10**).

Chart 5.10: Patterns of Loss and Expense Ratios



Given the domination of few large companies, there is a need for small companies to undergo restructuring. It is clear that most insurers are unable to compete against the top three market players due to their small size. Therefore, it seems highly desirable for these underperforming companies to get larger either through merger and acquisitions (M&A) or through recapitalization. However, no insurance company to date has formally approached SAMA to seek approval for any form of M&A. This was largely due to their preference in taking the route of recapitalization, opting for additional stock issuances largely facilitated by supportive liquidity conditions in the capital market. However, owing to the drop in oil prices and economic slowdown, liquidity is

expected to tighten in the capital market making it more difficult for companies to secure any potential financing needs through additional stock issuance.

5.3 Resilience

SAMA has put in place a number of measures to reinforce the resilience of the Saudi insurance sector to a high level to make it withstand potential market turbulences. For instance, SAMA requires each insurance company to deposit in SAMA an amount equivalent to 10.0 percent of its paid-up capital as a statutory deposit to meet any unexpected obligations towards policyholders. In addition, as per the Saudi corporate law, insurance companies are required to build a statutory reserve equivalent to 10 percent of their annual profit during each financial year. The total statutory reserves for the insurance sector amounted to around 62 percent of total shareholders' liability and more than 11 percent of share capital in 2015. This indicates a good level of prudence from a shareholder perspective as sufficient provisioning against losses is ensured. Additionally, SAMA prohibits Saudi insurance firms from extending reinsurance to non-Saudi companies that have received a rating below BBB from S&P, or its equivalent from another internationally recognized credit rating agency. This tends to add to the resilience of the market and enhance its ability to withstand shocks resulting from interconnectedness with global markets. **Box 5.1** provides an overview of SAMA's policies regarding the investment portfolios of insurance companies which are designed to ensure resilience and mitigation of several types of risks in the insurance industry.

Solvency margins have returned to levels above the regulatory requirements reflecting the recovery of insurance companies from the losses incurred back in 2013. In 2014, insurance companies have been able to raise capital through the capital market, which helped rebuild the stock of capital needed to bring their solvency ratios back to regulatory requirements. This was backed by a number of measures put by SAMA to help improve the performance of the sector which resulted in improved earnings during 2014. As a result, the industry's solvency margins began to gradually improve throughout the years 2014 and 2015 ending up exceeding the 100 percent requirement and reaching 121.4 percent by the end of 2015 (**Chart 5.11**).

Box 5.1**Prudential measures for Insurance investment activities**

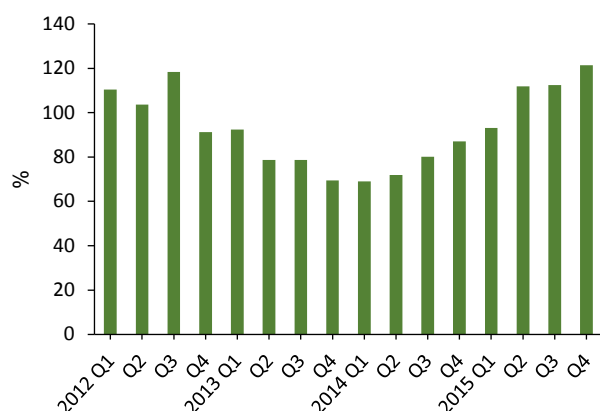
Recognizing the potential impact of the investment portfolios of insurance companies on the stability of the financial system, SAMA has enforced a set of regulatory and prudential measures to help control excessive risk taking and minimize concentration risk. As per the “Insurance Implementing regulations”, insurance companies are required to adhere to certain regulatory requirements when formulating their investment strategies. Among these measures are the following:

- All companies are required to have a written investment diversification policy that takes into consideration all risks including, market, credit, interest rate, currency exchange, liquidity, operations, country, regulatory and legal, re-insurance, and technology risks.
- To mitigate maturity risk, companies should take into consideration that the maturity of their invested assets is in concurrence with their liabilities according to the issued policies.
- Unless otherwise is approved by SAMA, investments in certain sectors or assets should adhere to limits pre-specified by SAMA, as per **Table 5.1** below.
- To mitigate foreign exposure risk, investments outside Saudi Arabia are capped at 20 percent of total investments.
- To mitigate concentration risk, concentration in an investment instrument shall not exceed 50 percent in one investment instrument mentioned in **Table 5.1**.
- Insurance companies shall not use financial instruments such as derivatives and off-balance-sheet items, other than for efficient portfolio management under certain conditions and with the written approval of SAMA.

Table 5.1: Investment Standards for Insurance Companies

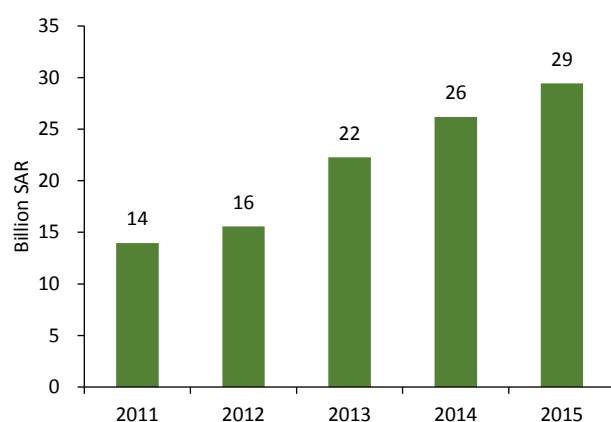
Investment Type	Percentage for General Insurance	Percentage for Protection and Savings Insurance
Saudi Authorized Banks	20% minimum	10% minimum
Saudi Government Bonds	20% minimum	10% minimum
Saudi Riyals Denominated Investment Funds	10% maximum	15% maximum
Foreign Currency Denominated Investment Funds	10% maximum	10% maximum
Foreign Government's Bonds (Zone A)	5% maximum	5% maximum
Bonds issued by Domestic Companies	5% maximum	5% maximum
Bonds issued by Foreign Companies	5% maximum	5% maximum
Equities	15% maximum	15% maximum
Real Estate in Saudi Arabia	0%	5% maximum
Loans Secured by Real Estate Mortgages	0%	5% maximum
Other Investments	15% maximum	15% maximum

Chart 5.11 : Trend of Solvency Margins



SAMA's provisioning policies have ensured adequate provisioning and further improved resilience of the insurance sector. In 2015, *Technical* reserves (funds set aside from profits to cover claims) increased by 12.5 percent to SAR 29.4 billion from around SAR 26.2 billion in 2013 (**Chart 5.12**). This amount accounts for more than 75 percent of the sector's liabilities and covers more than 136 percent of total net claims incurred during the same year.

Chart 5.12 : Technical Reserves



Overall, market risk have increased in 2015 but with a slower growth rate. The industry's total Net Claims Incurred (NCI) increased by around 24 percent in comparison to its 2014 level reaching SAR 21.5 billion from SAR 17.6 billion in 2014. Nevertheless, it remained below the 2011-2014 average rate of around 28 percent. Additionally, Gross Claims Paid (GCP) have Increased for Motors insurance reaching SAR 7.5 billion in 2015 compared to SAR 6 billion in 2014 reflecting a growth rate of 25.0 percent compared to a 27.6 percent growth in 2014. GCP for total Protection and Savings insurance increased from SAR 329.4 million in 2014 to around SAR 338.8

million by end of 2015 reflecting a much slower growth rate of 2.9 percent compared to 10.9 percent in the preceding year. GCP for Health insurance, however, registered higher growth rates in 2015. It increased from SAR 11.56 billion in 2014 to SAR 13.1 billion in 2015 reflecting a 13.3 percent growth rate compared to 11.2 percent in 2014. **The linkages between the insurance sector and the rest of the financial system, especially banks, have increased emphasizing the importance of policy measures that reduce the probability of contagion between those sectors.** As mentioned earlier, the performance and resilience of insurance companies would have an impact on the capital market given that all insurance companies are publicly listed. Moreover, insurance companies have investments in various financial instruments such as equities, and fixed income securities. Most notably, however, the linkages between the insurance sector and the banking sector have strengthened significantly given the large increase in insurance companies' deposits in the banking sector. In 2015, the insurance sectors' deposits in financial institutions, mainly banks, represented more than 61 percent of total insurance investments (**Chart 5.13**). Furthermore, they increased from around SAR 4.2 billion to more than SAR 7.7 billion, showing a growth rate of more than 81 percent (**Chart 5.14**). In addition, ten out of the twelve local Saudi banks have significant stakes in insurance companies that range from 20 percent to 30 percent of these companies' shares.

Chart 5.13: Share of Each Insurance Investments in 2015

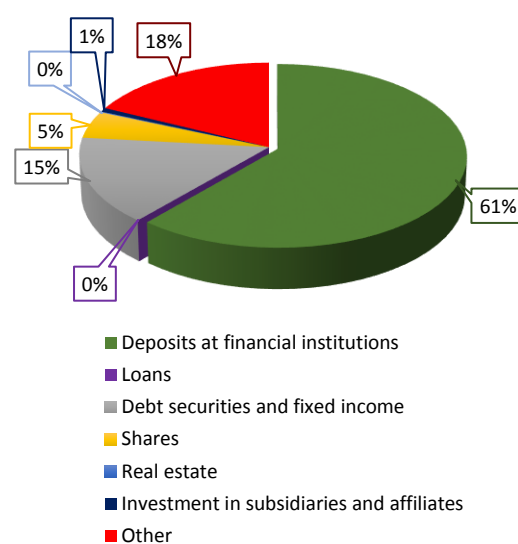
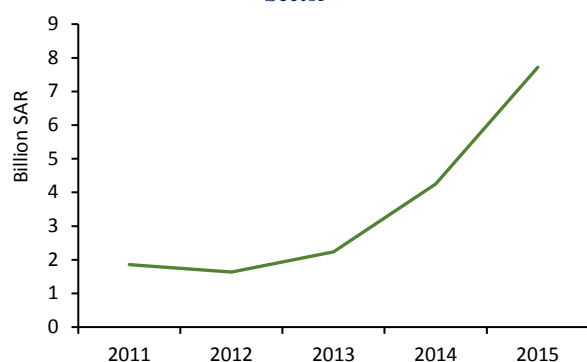


Chart 5.14: Deposits at Financial Institutions by the Insurance Sector



Several areas could be improved further to promote development and stability in the Saudi insurance industry. Two suggested areas, among others, are closing regulatory gaps and human resource development. Insurance regulators need to coordinate more strongly to ensure more synchronization between different insurance laws to enhance operational efficiency and promote insurance market stability. Particularly, further coordination between SAMA and the *Council of Cooperative Health Insurance* will reduce regulatory arbitrage and eliminate conflicts in the law implementation; Second, human capital and underwriting skills need to be built in a systematic fashion to speed up development of the Saudi insurance industry. Insurance programs are not common in Saudi universities and therefore there is a shortage of qualified and skilled Saudi professionals especially in the underwriting and pricing process. The shortage is particularly acute in the mid-level management of insurance companies. As the insurance industry is highly skills and knowledge-oriented, it is necessary to develop programs to improve insurance-related skill sets, and ensure healthy work environment to encourage Saudis to enter the insurance industry.

Macroeconomic developments may pose some challenges for the industry. The expected slowdown in economic growth, due to oil market developments, may have an impact on aggregate, and government spending. This may result in a drop in aggregate demand and reduced spending on infrastructure projects and real sector investments affecting the performance of the insurance industry. Furthermore, as health insurance is largely dependent on employment, job losses that result from slowing economic activities would have their impact on the underwriting results of health insurance, which already represents the largest segment of all insurance business lines. In addition, as oil volatility impact the local capital market, the industry may find it more difficult to raise any additional capital, which they were able to easily secure back in 2014. Also, any volatility in the capital market caused by its strong correlation with the oil market may impact the industry's returns from equity investments. This effect may be exacerbated in a low interest rate environment in which insurance companies may switch investments to riskier assets. Finally, as all insurance companies are publically listed, such volatility may result in valuation issues for the companies' shares in the market.

Table 5.2: SAMA's Macroprudential Measures and Policies Toolkit - Insurance

Instrument	Regulatory Requirement
Solvency Margin	$\frac{\text{Admissible Assets}}{\text{Min Capital/GWP/Claims}} = 100 \text{ percent}$
Provisioning (Technical Reserves)	Specific Requirements for each type of reserve (See Insurance Implementing Regulation)
Statutory Deposit (at SAMA)	10 percent of Paid Capital (Subject to additional 5 percent based on company profile)
GWP-to-Capital ratio	$\text{GWP}/(\text{Paid Capital} + \text{Reserve}) \leq 10 \text{ times}$
Reinsurance	<ul style="list-style-type: none"> At least 30 percent must be reinsured within the Kingdom Reinsurers must be rated at least BBB
Retained Insurance Premium	30 percent of total Insurance Premium (SAMA exemption may apply)
Investment Concentration Limit	single instrument investment ≤ 50 percent of total investment
Foreign Exposure	<ul style="list-style-type: none"> SAMA approval before risk sharing with foreign companies 50 percent of Investment portfolio should be in Saudi Riyal Foreign investments/Total Investments ≤ 20 percent Off-Balance sheet investments are not allowed
Other qualitative measures	SAMA approval for mergers and acquisition

Box 5.2

Regulatory developments and new insurance regulations

SAMA introduced several new insurance regulations in 2015 as part of its regulatory role to ensure closing any regulatory gaps and development of the insurance sector. Most of these regulations address governance issues within insurance and insurance related companies.

1. The Insurance Corporate Governance Regulation:

In October 2015, SAMA published the Insurance Corporate Governance Regulation which enumerates SAMA's corporate governance requirements that must be met by insurance and/or reinsurance companies. The objective of the regulation is to set high standards of corporate governance within the insurance industry in accordance with recognized best international practices. It regulates several governance aspects including accountability, disclosure and transparency, independence, conflict of interests, remuneration, board of director issues, and shareholders rights. As per the regulation, all licensed companies are required to put in place and develop a code of corporate governance in accordance with the regulation and make it available to the company's shareholders within one calendar year from the issuance date of this regulation.

2. The Audit Committee Regulation in Insurance and/or Reinsurance Companies:

In October 2015, SAMA published the regulations, and requirements for establishing audit committees for all insurance and reinsurance companies operating in Saudi Arabia. It defined the Audit Committee as an independent committee that reports directly to the company's board. The committee's mandate includes monitoring the performance and implementation of the internal control systems of the company, ensuring the effectiveness and efficiency of those systems, verifying the implementation of internal control decisions and actions, and ensuring compliance with the Supervision of Cooperative Insurance Companies Control Law and its Implementing Regulations, other applicable laws, regulations, and instructions in addition to the requirements set forth in this regulation as well. All compliance and internal audit departments will technically report to this committee which will supervise their work and administratively to the Chief Executive Officer (CEO). Among its compliance requirements, the committee is required to establish written procedures for internal control to ensure and monitor compliance with this regulation. It should consist of 3 to 5 members, most of which shall be from outside the board of directors and must appoint a committee secretary to handle administrative tasks and document and keep meeting minutes in a special register.

3. Actuarial Work Regulation for Insurance and/or Reinsurance Companies:

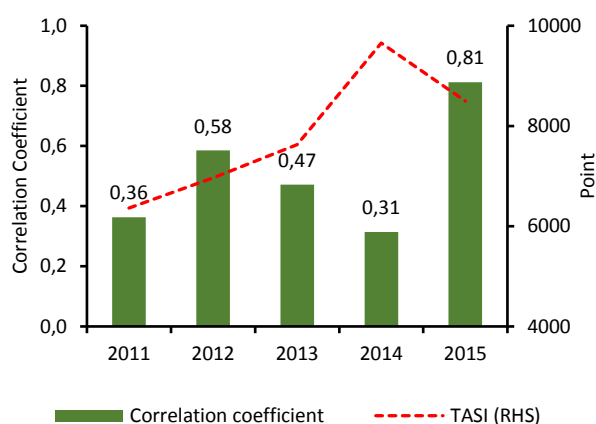
In January 2016, SAMA issued the actuarial work regulation document that aims at a) enumerating the procedures for appointing the Appointed Actuary and his/her roles and responsibilities, and b) promoting high standards of actuarial practices within the Kingdom. According to the regulation, each Appointed Actuary shall submit his or her actuarial reports about any threats against the stability or the solvency of the insurance companies regarding, for example, their solvency margins, reinsurer obligations, risk retention levels, profitability, technical reserves and any other issues. The main roles and responsibilities of the actuarial include, among many, pricing insurance products, evaluating the company's ability to meet its future obligations, determining the company's technical provisions, and performing profit tests of P&S premium rates. The document also specifies the reports required to be prepared and provided to SAMA regarding different types of risks and for the main types of insurance activities along with their time lines. Furthermore, the Appointed Actuary shall carry out mid-year review exercise that includes three-year projections for the insurance company under three different scenarios.

6. Capital Market Stability

6.1 Overview

Similar to many international stock market, the Saudi stock market faced a volatile year during 2015. Recent international economic developments including the decline of commodity prices, worldwide economic growth condition, and China's sharp decline in equity market have a considerable effect on the Saudi capital market. In 2015, Saudi capital market was influenced by pronounced embedded correlation with oil prices fluctuations (**Chart 6.1**).

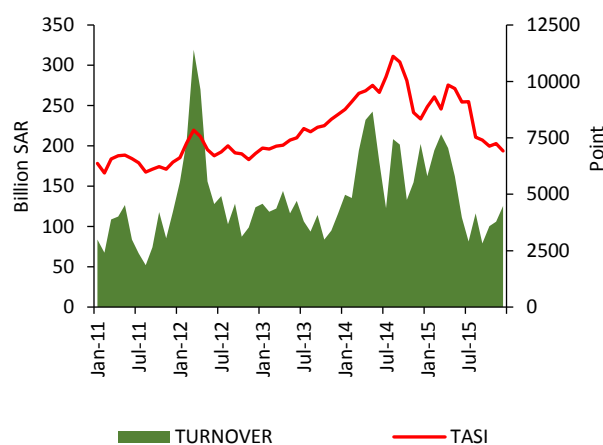
Chart 6.1: TASI & Oil Prices Correlation



Source: Bloomberg, CMA

As oil prices plunged almost 40 percent, the Saudi stock exchange decreased by 17.1 percent with year-on-year turnover falling of 22.6 percent (**Chart 6.2**).

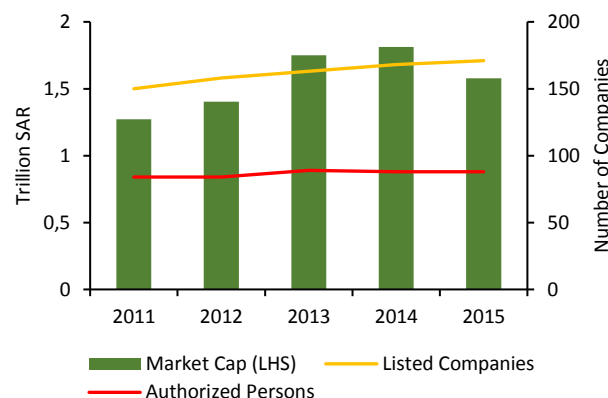
Chart 6.2: TASI & Turnover



Source: CMA

Stock market capitalization witnessed a slight decrease in 2015 to SAR 1.6 trillion, while the number of listed companies rose to 171 and the number of authorized persons (brokerage companies) remained unchanged (**Chart 6.3**). On the other hand, the ratio of stock market capitalization to GDP went up slightly in 2015 to 64.5 percent compared to 64.1 percent in 2014.

Chart 6.3: Market Size

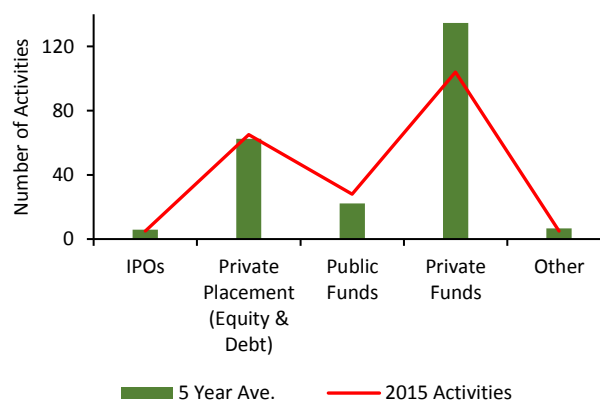


Source: CMA

6.2 Capital Market Activities

Capital market financing continues to play a limited role in funding the economy compared to loan financing. These financing activities during 2015 beat the 5-year averages despite all challenges facing the world and the Saudi economy (**Chart 6.4**). Total capital market approved financing operations rose by 56.4 percent to 208 operations. However, total value of issuances decreased by 50.5 percent to SAR 34.1 billion which is below the 5-year average by 28.8 percent.

Chart 6.4: Capital Market Activities



Source: CMA

6.3 Market Legislation

CMA has started implementing its Strategic Plan (2015-2019) which would further improve the stability of the capital market. It has many initiatives aim at improving internal efficiency and effectiveness, strengthening internal governance, promoting disclosure and transparency, and improving internal as well as external risk management. CMA also started in 2015 reviewing and updating its Implementing Regulations and rules, and preparing regulatory documents to conform to the new Companies Law, which has introduced an important new provision in relation to corporate governance and companies' insolvency.

6.4 Government Energy Policy Reform

While the impact of the recent government energy policy reform is expected to have no or insignificant impact on the companies' competitiveness in most sectors, it expected to have a noticeable impact on companies' profits in certain sectors. Estimation based on some calculations of preliminary costs and expenditures data shows that the effect will be insignificant on most listed companies. However, the impact, as the reform stay at this level, is higher on cement

and petrochemical sectors. Both sectors will encounter an expenditure cost increase. The increases in energy prices are still below international rates and the recent prices would actually incentivise companies' cost efficiency.

6.5 Market Volatility and Risk

Tadawul All-Share Index (TASI) fluctuated notably during 2015 recording in terms of 90-day volatility an average of 26.2, which is the highest volatility level since 2009. That was mainly driven by the downside pressure of oil prices that affected TASI sectors directly or indirectly. **Table 6.1** breaks down volatility on a sectorial level showing how much of the company prices' volatility is explained by the market volatility presenting the sectors' Betas " β " combined with their relative weights in TASI for 2015 and 2014. It is clear that excessive risks ($\beta > 1$) were not adjacent to relatively small market cap. Sectors that recorded more volatility and excessive risk were rather the heavy weight sectors such as the petrochemical industries sector and the real estate development sector which recorded high volatility during 2015. A possible explanation of this observation is the augmented fundamental influence of the consequences of oil prices' decline.

Table 6.1: TASI Sectors' Volatility and Weights

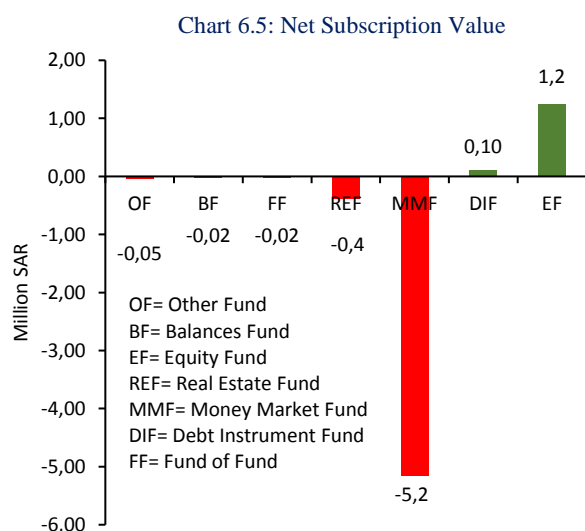
Sectors	2015		2014		90-Day Volatility for 2015
	β	Average weight	β	Average weight	
Banks & Financial Services	0.933	32.6%	0.913	28.9%	25.0
Petrochemical Industries	1.157	16.9%	1.159	20.5%	34.6
Cement	0.648	8.9%	0.784	7.8%	20.5
Retail	0.732	7.4%	0.857	7.4%	24.1
Energy & Utilities	0.695	6.9%	0.795	8.1%	31.6
Agriculture & Food Industries	0.984	5.1%	0.923	6.8%	28.4
Telecommunication & IT	0.802	5.9%	0.946	6.1%	31.5
Insurance	1.099	3.9%	1.084	3.3%	36.1
Multi-Investment	0.845	3.1%	0.890	2.3%	31.2
Industrial Investment	1.174	2.2%	1.053	2.3%	37.4
Building & Construction	1.010	1.7%	1.097	1.6%	31.1
Real Estate Development	1.055	2.1%	0.949	2.2%	35.3
Transport	0.993	1.7%	0.913	1.3%	38.7
Media and Publishing	0.595	1.1%	0.660	1.1%	33.2
Hotel & Tourism	1.026	0.5%	1.052	0.3%	37.8
TASI	1	100%	1	100%	26.2

Source: Bloomberg, CMA

6.6 Market Liquidity

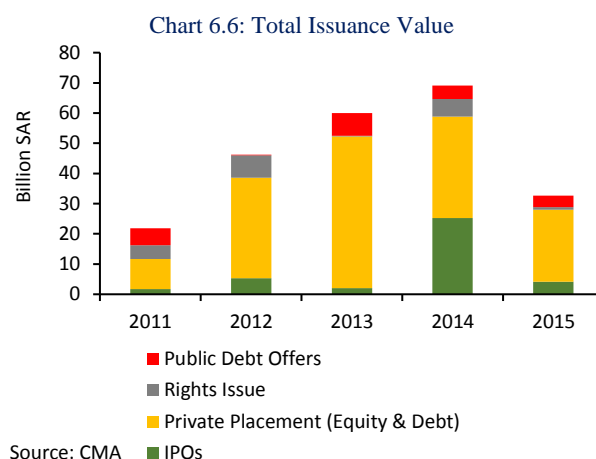
Debt market issuance activities and liquidity volume have been historically insignificant, and its issuance decreased slightly in 2015. The outstanding publicly offered debt totalled in nominal value SAR 28.5 billion in 2015. Declining commodity prices are hoped to shift some interest of companies and the government to enhance the role of the debt market development as a major source of financing. In 2015, funds raised by debt market stood at SAR 25.2 billion, dropping by 28.2 percent as compared to the previous year. The CMA, on the other hand, has placed an ambitious strategic plan to develop the debt market to play a significant role in the local capital market

No significant changes occurred in the mutual fund industry's liquidity during 2015. The number of newly approved public funds was 28, scoring the highest as compared to the last five years. Net flow posted a minor negative value of less than SAR 4.1 million driven by a decline in money market funds (**Chart 6.5**). Total Assets under management rose by 11.2 percent year-on-year to SAR 180.3 billion.



Source: CMA

Liquidity in the equity market is slightly tighter, reflecting market uncertainties driven by oil market volatility. Market sentiment followed the expected decline in market profit. Market liquidity turnover in 2015 decreased by 22.6 percent to SAR 1.7 trillion, yet it was above the 5-year average. Margin lending reached 0.9 percent of stock market capitalization, contracted 19.7 percent year-on-year to SAR 13.9 billion. (**Chart 6.6**).



Breadth and depth or bid-ask spread test for liquidity of share trading show no major concern for imbalances over most of the market sectors. Cases of imbalances are mainly recorded in some of the small cap companies in the insurance sector. A total of 7 companies in this sector showed some degree of mismatches over the year 2015.

6.7 Shadow Banking

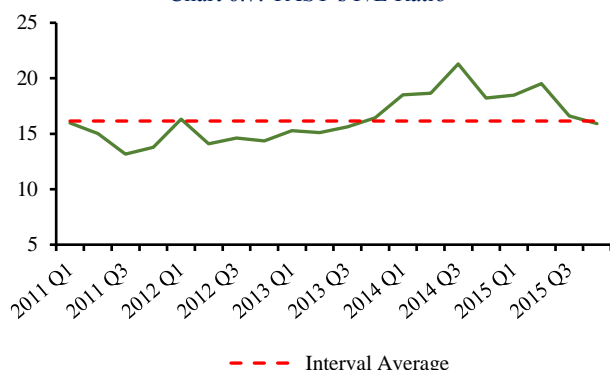
Shadow banking activities in the Saudi capital market are limited. The 2008 crisis highlighted the excessive risk taking by less regulated institutions and transactions involving liquidity transformation, maturity mismatches, and leverage, done by the shadow-banking sectors. Regarding capital market based intermediation, shadow-banking (mainly done through collective investment scheme products) is insignificant in size in Saudi Arabia. Asset values of public investment funds reached SAR 102.9 billion in 2015, representing almost 4.2 percent of the GDP. Money market funds were hovering around 60 percent of that total.

6.8 Market Resilience

6.8.1 Corporate Profitability

In line with the significant drop of oil prices, the overall profitability of the Saudi stock market decreased by only 2.5 percent to SAR 98.7 billion in 2015. The decrease was mainly driven by the Petrochemical sector which represent almost 22 percent of market total profit. Bank & Financial Services sector posted sound profit (SAR 43.7 billion) up by 1 percent, accounting for 44 percent of market profit. TASI's Price-Earnings (P/E) ratio stood at a lower P/E normal range (15-25). It was down to 15.9, a bit below the 5 year-average, indicating that stock prices decreased by a larger percentage than earnings (**Chart 6.7**).

Chart 6.7: TAST's P/E Ratio



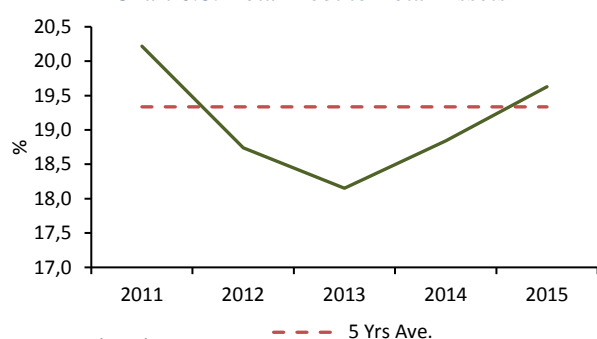
Source: Bloomberg, CMA

6.8.2 Corporate Leverage

Corporate leverage continued to be limited.

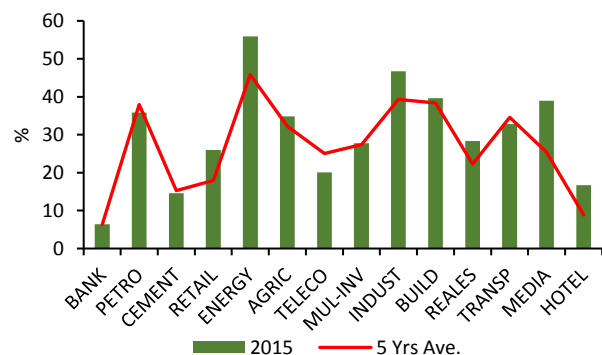
High degree of corporate financial leverage risk is leaving small amounts of capital structure for companies and cause financial resources to be depleted quickly. This may leave counterparties at large exposures that are not covered by adequate levels of collateral. In the Saudi stock market, most listed companies in various sectors remained less reliance on borrowing. Although the overall debt-to-assets ratio for listed companies increased by 4.2 percent in 2015, it is still within the range of 5-year average (Chart 6.8) and (Chart 6.9).

Chart 6.8: Total Debt to Total Assets



Source: Bloomberg, CMA

Chart 6.9: Total Debt /Total Assets

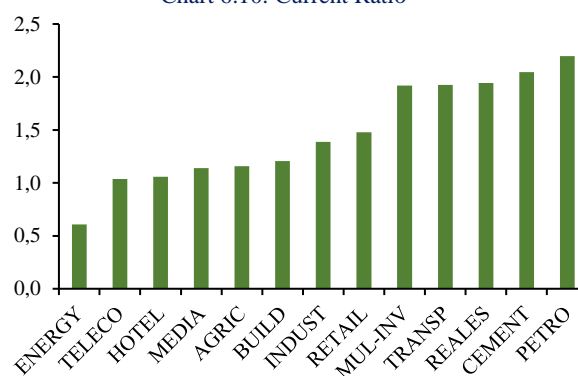


Source: Bloomberg, CMA

The last 5 years show that the Petrochemical sector has dominated 36 percent of the total debt in the stock market, followed by Energy & Utilities sector by 20 percent. On the other hand, Media & Publishing, Hotel & Tourism, and Industrial Investment sectors recorded the highest yearly increase in total debt for the last 5 years respectively. Such increase could be attributed to the low debt base for those sectors in the past.

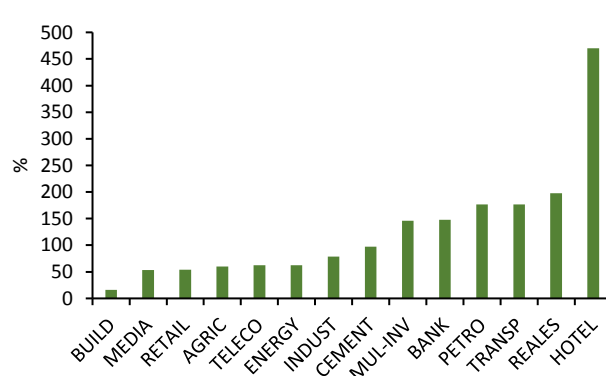
Interest expenses of the overall market debt are 9 times covered by the total market operational income. Multi-Investment, and Media & Publishing are the only sectors with interest expenses to operational income less than 1. The current ratio for the overall market decreased by 12.5 percent to 1.4 in 2015. This ratio shows the market's ability to pay off its current liability in a short term horizon. Only Energy & Utilities sector has a current ratio below 1 (Chart 6.10). Moreover, overall market cash-to-short-term debt stood at 133 percent, well above the 100 percent threshold (Chart 6.11).

Chart 6.10: Current Ratio



Source: Bloomberg, CMA

Chart 6.11: Cash/Short-Term Debt

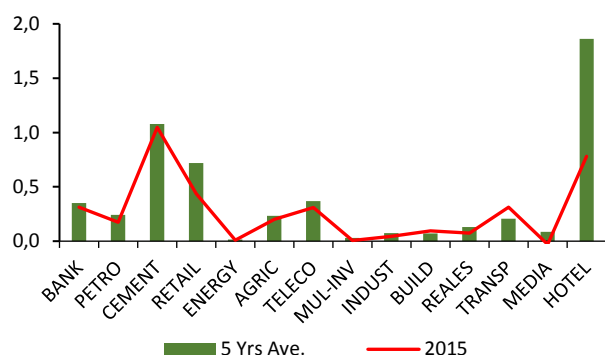


Source: Bloomberg, CMA

From efficiency perspective, total market earnings to total debt was 16percent in 2015, while the 5-year average was

21 percent. **Chart 6.12** shows the efficiency of debt usage among various sectors in the market.

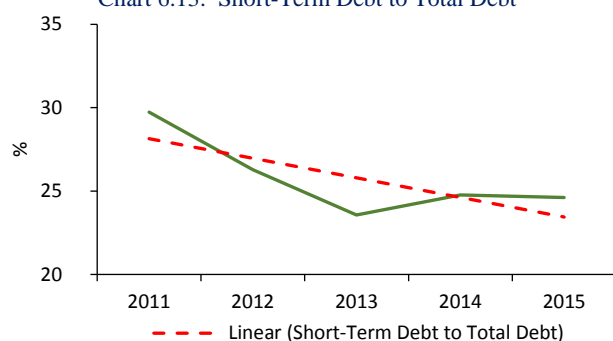
Chart 6.12: Earnings/Total Debt



Source: Bloomberg, CMA

Most listed companies continued to prefer long term over short term debt. Total market's short-term debt to total debt has a downside trend in the last 5 years. In 2015, combined short-term debt relative to total debt stood at 25 percent. Their respective short-term debt to total debt ratios remained well below the 50 percent (**Chart 6.13**).

Chart 6.13: Short-Term Debt to Total Debt



Source: Bloomberg, CMA

In general, most market sectors continued to behave in a risk aversion manner by holding a comfortable level of liquidity and a limited level of leveraging. They continued to be well-placed against recent economic developments on account of relatively small holdings of short-term debt along with liquidity holdings to be large enough to clear their short-term debt obligations. Hence, no signs of concerns on their economic fundamentals.

6.9 Authorized Persons

6.9.1 Capital Adequacy

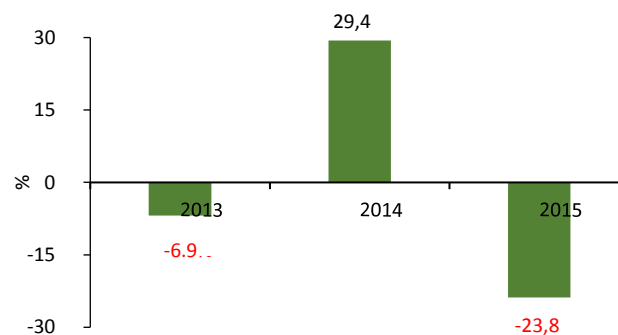
Authorized Persons' (APs) capital adequacy ratios show high resilience. The CMA supervises the

capital adequacy of the APs in accordance with the requirements of the Prudential Rules which are based on Basel framework. The capital to risk-weighted assets ratio of the APs who are licensed to conduct dealing, managing and custody activities increased at the end of 2015 to reach 28.1 percent compared to 26.0 percent at end of the preceding year.

6.9.2 Profitability

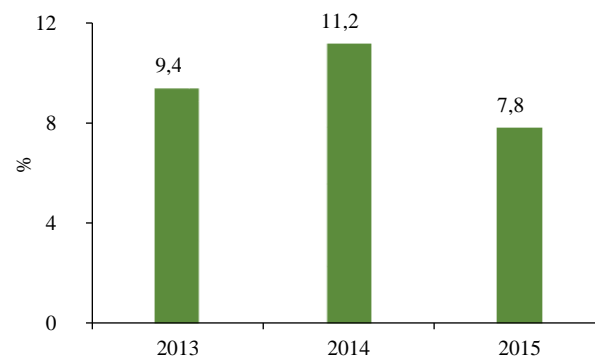
Although APs' net income declined from last year, they continued to perform well. During 2015, APs' recorded profit was SAR 2.3 billion, which is lower than last year's profit by 23.8 percent (**Chart 6.14**). The decline in profit from last year could be attributed to the low sentiment that dragged the market activities down due to the oil prices decrease in 2015 and also due to the increase of wage expenses by 6.6 percent y-o-y, reaching to 55 percent of total expense in 2015 compared to 49 percent in 2014. As for return on assets, the sector enjoyed a high return on assets during 2015, reaching 7.8 percent, yet fell short from the previous two years (**Chart 6.15**).

Chart 6.14: Net Income Growth



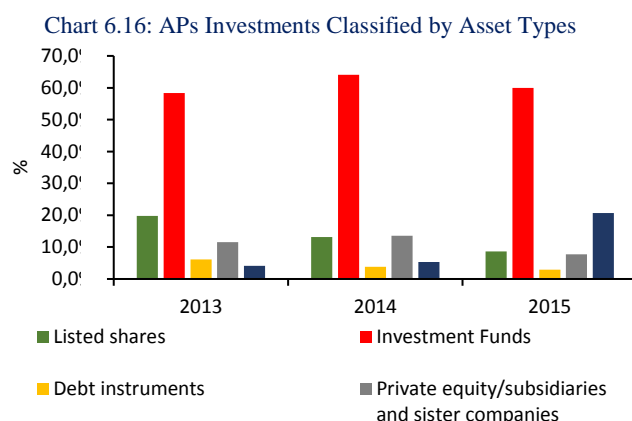
Source: CMA

Chart 6.15: Return of Assets (%)



Source: CMA

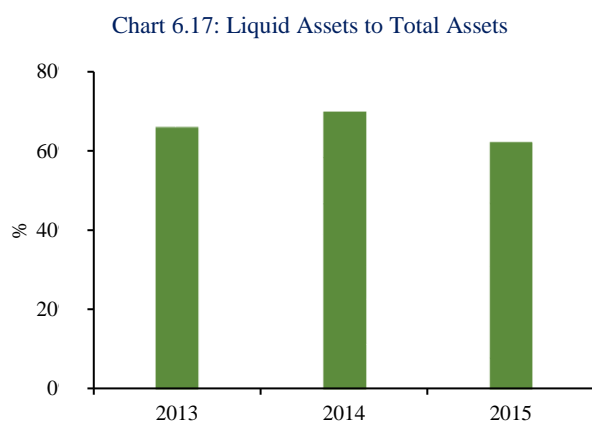
With regards to the APs lines of investments, the data show, at the aggregate level, that they are well diversified and the majority is channelling their investments through mutual funds. During 2015, APs investment has increased noticeably in real estate accounting for 20.7 percent of their total investments compared to 5.4 percent in the previous year (**Chart 6.16**).



Source: CMA

6.9.3 Liquidity

APs Liquidity remain at a comfortable level. The last financial crisis in 2008 demonstrated the risk of liquidity dry out facing the financial market during crisis. Thus, recently more attention has been paid to liquidity issues and measures are set to strengthen the liquid positions of market participants. At the APs industry level, the majority of the assets are classified as liquid. Liquid assets to total assets remains above 60percent for the last three years as shown in **Chart 6.17**.



Source: CMA

6.10 Operational Risks of the Saudi Capital Market

Tadawul continues to well manage its security system and all other operational risks that could pose risks to the stability of the market. The operational risk factors are crucial in determining the overall-risk profile of the capital market. Underweighting these factors might lead to a severe market disruption. The major parts of the capital market operational risk are presented by Tadawul's operational risk profile. We select the most interesting issues from the profile; the information security risk (including the risk of cyber-attacks) and the default risk of cash or securities settlements. Tadawul is closely monitoring and managing its aforementioned risks. As per 2015, Tadawul reported only one successful incident threatening information security (for non-critical information) during the first quarter of 2015, but no incident has been reported to threatening critical information. With respect to cash or securities default, Tadawul reported no incidents in 2015. However, Tadawul has established an escalation matrix based on its risk appetite. Within this process, thresholds have been set at three levels: Acceptance level (Actual level of risk appetite indicator ≤ 85 percent of the pre-defined threshold), near breach level (Actual level of risk appetite indicator from 86 percent to 99 percent of the pre-defined threshold) and Breached (Actual level of risk appetite indicator ≥ 100 percent of the pre-defined threshold). The key risk indicators and their thresholds are presented in **Table 6.2**.

Table 6.2: key Risk Indicators and their Thresholds

Key Risk Indicator (KRI)	Thresholds	Number of Instances
Security Breaches for Sensitive Critical Information	0	0
Security Breaches for Sensitive non-Critical Information	≤ 2	1
Default in Cash or Securities Settlement	0	0

Source: Tadawul, CMA

7. Payment System: Recent Initiatives

Cyber threats have been one of the main topics currently being discussed at the financial stability board (FSB). As all other member states, Saudi Arabia continues to improve its efforts to safeguard the economy against such threats. Various payment systems have been developed in order to achieve this goal. These include the Saudi Arabian Riyal Interbank Express (SARIE), SADAD payment system (SADAD), the Saudi payment network (MADA), and mobile banking applications. According to the International Telecommunication Union, Saudi Arabia has been ranked 19th on the Global Cybersecurity Index (GCI) in 2015. SAMA has invested heavily in safeguarding its national payment systems by adopting the latest Information security standards based on international best practices, including processes, products and people awareness and education. As owner of a major Critical National Infrastructure (CNI), SAMA is an important member of the National Cyber Security Center, which coordinates between CNIs in the Kingdom regarding cyber threats. CNIs are a continuous target for cyber threats given its impact, however none of those attacks have materialized to a threat on its payment or information systems.

As the sole owner, operator and regulator of the payment system in Saudi Arabia, SAMA has the responsibility to ensure the safety and soundness of those payment systems. A key element of this responsibility is to define those systems within the kingdom, which are considered to be systemically important to the smooth functioning of our financial infrastructure of the kingdom. A systemically important payment system (SIPS) is one whose disruption could trigger or transmit further disruption to participants or cause systemic disruption to the financial infrastructure of the kingdom. As part of their oversight function, SAMA has defined a set of criteria to categorize those systems, which are considered systemically important. SAMA has decided that a system which meets any one, or combination of, the following criteria will be classified as systemically important system:

- Any system handling interbank or customer payments, which could pose a risk to financial stability.
- The principal payment system in terms of the aggregate daily volume and value of payments.
- Any system used to effect settlement in other systemically important Financial Market Infrastructures (FMIs).

- Any system, which is central to the payments infrastructure and our customer confidence due to the number and type of participants, market penetration and the lack of available alternatives.

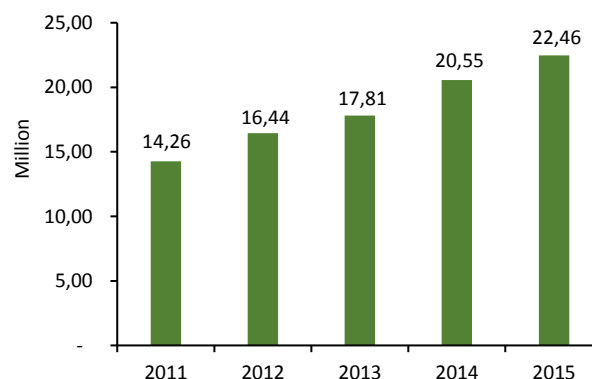
7.1 SARIE

SARIE payment system is a Real-Time Gross Settlement (RTGS) platform by which Saudi commercial banks settle their interbank payments. The SAMA fully owned and operated payment system has helped increase security of settlements and reduce risks associated with them. SARIE also provides a medium through which stock trade transactions can be settled. The integration between SARIE and other payment systems adds to the efforts of mitigating the systemic risk in the cyber sphere. As far as security measures are concerned, SAMA has incorporated a number of features to ensure the high level of safety is met. These features include the use of digital signatures, encrypted communication lines, secure access protocols with contingency provided through dual configuration, and contingency sites.

7.2 MADA

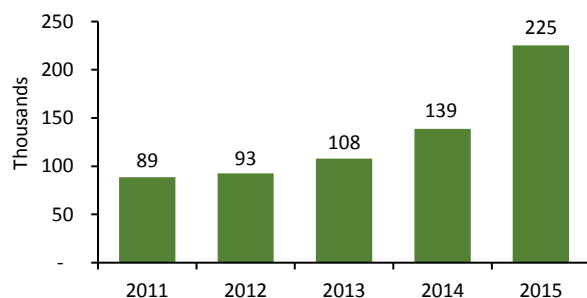
MADA is the new identity of the Saudi Payment Network, which facilitate national and international card payments. It was launched to boost resilience, speed, security and acceptance of the payment system. One of MADA's merits has been the positive growth of cards issued and transactions processed through point-of-sale (POS) terminals and automated teller machines (ATMs). The total number of issued MADA cards was 22.46 million in 2015, up by 56 percent from 2011 (**Chart 7.1**).

Chart 7.1: Number of Issued MADA Cards



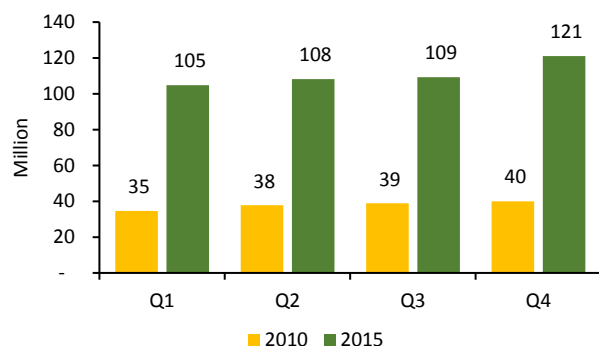
The launch of MADA has supported growth in electronic banking services by promoting increases in POS terminals installations and transactions. POS terminals installations grew by around 87 thousand to a total of SAR 225,372 in 2015, up 62 percent from 2014 and 154 percent from 2011 (**Chart 7.2**). Operational aspects have also improved, as the time taken to complete a POS transaction decreased to typically 6 seconds.

Chart 7.2: Number of POS Terminals



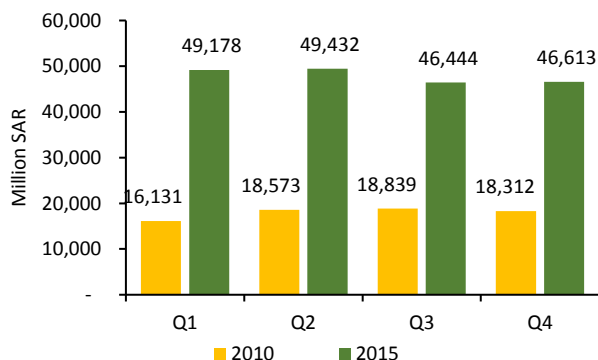
The number of POS transactions continued to show rapid growth, registering 193 percent to 443.2 million in 2015 from 151.2 million in 2010 (**Chart 7.3**).

Chart 7.3: Number of POS Transactions



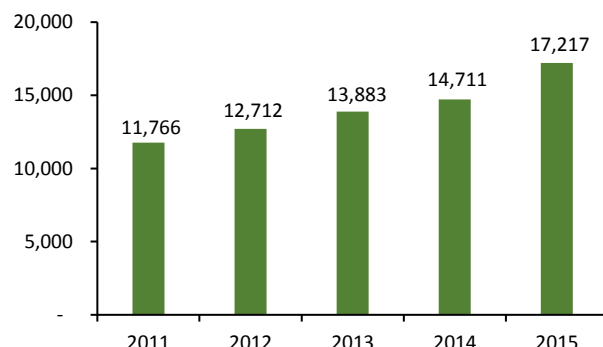
The value of POS transactions also climbed 143 percent to SAR 191.6 billion in 2015 from SAR 71.85 billion in 2010 (**Chart 7.4**).

Chart 7.4: Value of POS transactions



As for ATMs, the number of ATMs increased to 17,217 in 2015, up 46 percent from 11,766 in 2011 (**Chart 7.5**).

Chart 7.5: Number of Automated Teller Machine (ATMs)



The MADA (Card Payments) FMI operates to best of breed security protocols, to counter physical and cyber threats.

These include EMV architecture on all issued cards, two factor authentication on all card payments, limitation on Card Not Present (CNP) payment on debit cards and one-time passwords (OTP) solutions on credit cards ecommerce. In addition, the Payment Card Industry Data Security Standard (PCI-DSS) apply to all card data.

7.3 SADAD Payment System:

The SADAD system is unique in terms of design and creativity, as it is one of the first fully integrated centralized system in the world for Electronic Bill Presentments and Payments (EBPP) and similar payments in the kingdom. The system provides a single link to all domestic banks for the provision of payment services through all of their channels (internet, telephone banking, ATMs and branches). This enables any billing entity to connect with all domestic banks and have access to all of their customers in the Kingdom, once it is linked to the system. This allows any customer to pay commercial bills or to pay for government and public services through any bank in the Kingdom. The number of billers subscribed in the system is 146 from different sectors, including 50 government authorities, and the number is growing. In the last year, the total number of bills processed by SADAD was 172.4 million with a value of SAR 210.3 billion.

SADAD has achieved a number of international awards in the delivery of services and e-Economy. It was awarded the 2008 United Nations Public Service Award as the best government project in the Improving the Delivery of Services category for Western Asia region, due to its role in improving the public service in the Kingdom. The system also won the 2009 GCC e-

Government Award in the e-Economy category during the first GCC e-Government Conference. In addition, SADAD won the Best Smart Government Project Award during the Cards and Payments Conference held in 2014 in Dubai. Since its launch, the total number of transactions processed by SADAD was 977.5 million with a value of SAR 959.7 billion until the end of 2015.

In order to cope with the rapid developments in payment systems within the Saudi and global markets, SAMA introduced SADAD Account service. The service provides a secure online payment facility for both merchants and consumers with no need for cards or cash. The service ensures that the consumer's e-commerce-related bank account will be debited and the merchant account will be credited accordingly. This service is based on the prepaid account architecture and provides SMEs with payments solutions with the aim of supporting economic growth and the digital economy noting their importance and increasing significance to the Kingdom of Saudi Arabia.

7.4 Mobile Banking

SAMA continues to advance its e-services and its prudential standards and controls. In continuation of SAMA's approach in raising the level of e-services provided by banks operating in the Kingdom through their different electronic channels and utilizing the state-of-the-art technologies available and best international practices applied in this regard, SAMA has been keen to set security and prudential standards and controls for all banks to comply with when providing mobile banking service to customers. SAMA has set forth criteria for mobile banking application development that should be followed by domestic banks who wish to introduce mobile banking to their customers. These criteria include the following:

- Downloading mobile banking app only through an official store specific to the operating system.
- Using application authentication mechanism.
- Committing to monitor, detect and remove any copied or non-genuine app duplicating the bank's app in app stores or other sources (e.g. websites).
- Implementing latest technologies that protect banks apps for smartphones, including:
 - Sandboxing technology to confront any dangerous software targeting the customers' devices
 - No caching technology to prevent temporary storage of any data entered by app users.
- Not integrating the mobile banking app with any other app.
- Conducting security awareness campaigns for mobile banking through different bank channels. Such campaigns give information about how to use the app, the only source for download, and the importance of updating it. Furthermore, educating customers on the need to maintain and not to disclose their personal banking information.

In addition, providing instant SMS notification service for all banking transactions conducted for bank accounts and credit card individual accounts. The following prudential measures must be taken to prevent SMS contents to be misused:

- Bank's commitment to activate the service automatically for all customers, and informing them that they can deactivate it if they wish so.
- SMS messages must not include the account balance and the number of credit card or current account.
- SMS messages must include (date, time, amount and the type of the transaction).