Please Rate this Report

مصرف الإمارات العربية المتحدة المركزي
CENTRAL BANK OF THE U.A.E.

Financial Stability Report

2016

Please Rate this Report

Please Rate this Report

Preface

A stable and resilient financial system – able to support the growth and further diversification of the economy, gradual structural reforms, and withstand periods of macro-financial shocks – is a key objective of the Central Bank of the UAE (CBUAE). In line with the government's goal towards a greater transparency, the CBUAE has issued a financial stability report since 2012. By issuing these reports, the CBUAE provides key information to major participants in the economy in order to allow them a better understanding of the strengths and vulnerabilities of the UAE financial system and the measures introduced to address those vulnerabilities.

This year the Financial Stability Report puts a strong emphasis on the analysis of macro-financial conditions in which the financial system operates. It assesses in detail domestic credit developments, financial conditions of households and corporates, and the cyclicality of the real estate market. The analysis shows improving macro-financial environment during 2016, with encouraging signs in the status of the credit cycle and real estate markets. The macro-financial environment is expected to continue to improve in 2017 and to provide a stronger support towards achieving the 2021 UAE Vision.

The UAE banking system remains well capitalised and highly liquid, which will allow a smooth transition to the Basel III requirements. The profitability continues to be strong, despite a slight moderation partially attributable to an increase in specific provisions. The non-performing loans provision coverage of the banking system is at satisfactory level, well above 100% for the last three years.

I would like to extend my gratitude to the Securities and Commodities Authority and the Insurance Authority for their insightful analyses and continued contributions to the Financial Stability Reports.

Mubarak Rashed Al Mansoori

Governor

[Please Rate this Report]

Definition of Financial Stability

Financial stability describes a steady state in which the financial system, comprising of banks, other financial institutions and financial markets, efficiently performs its key functions, such as allocating resources, spreading risk as well as settling payments, and is able to continue to do so in the event of shocks, stress situations and periods of profound structural changes.

The report is based on data and information available as at 31 December 2016, unless otherwise stated. All amounts are in UAE Dirham unless stated otherwise.

Data source is CBUAE unless stated otherwise.

Please Rate this Report

Table of Contents

Please Rate this Report

Executive Summary

Total domestic credit expanded 6% during 2016 in line with its medium-term trend. The stability of the credit growth reflects well on the diversification of the UAE economy. The non-oil GDP grew 2.7% in 2016. The credit cycle, measured by the credit-to-non-oil-GDP gap, had been in a contractionary phase since 2009; however, during 2016 preliminary indications show that it could be bottoming out.

After a negative price correction during the previous two years, the real estate market started to stabilize in 2016. Residential real estate prices remained stable in Dubai and declined only moderately in Abu Dhabi. Furthermore, bank real estate lending increased during 2016 for both residential and commercial properties, after falling in 2014 and growing moderately in 2015, suggesting a reversal in real estate market sentiment.

Financial conditions of the household sector remained stable during 2016. UAE households increased their deposits in the UAE banking system by nearly 8%, while the growth of household loans moderated to 5%. UAE banks' lending to the corporate sector expanded at a stable rate of 6.5% in 2016, while corporate deposits increased by only 0.9%, largely reflecting the decline in deposits from government related entities.

Macrofinancial conditions in the UAE – measured by the Financial Stability Trend Index (FSTI) – improved during 2016 compared to the previous year, supported by the increase in the oil price, stabilization of the real estate market, and lower market volatility and credit spreads. The improved FSTI also benefited from stronger liquidity conditions and capital adequacy of the UAE banking sector.

The capital adequacy ratio of the UAE banking system increased further during 2016 to 18.9%. The resilience of the banking sector was also reinforced by strong liquid asset buffers with an eligible liquidity asset ratio around 6 percentage points above the regulatory requirement. The profitability continues to be strong despite a slight moderation during 2016 due to a rise in funding cost and an increase in specific provisions.

External exposure of UAE national banks increased in 2016 but remained at moderate levels of around 20% of their total balance sheet size. The growth of external assets was driven by non-resident loans and investment in financial securities. External liabilities increased as the national banks attracted more non-resident deposits and capital market funding. Interbank cross-border exposures decreased in 2016.

The Insurance Authority enacted several new regulations during 2016 in order to promote the stability and development of the insurance market. The Insurance Authority assessed the risks of insurance companies by a solvency margin model. In addition, the Insurance Authority organized an international motor insurance conference focusing on the experience in motor insurance and the role of insurance in reducing traffic accidents.

The total net profit of the companies listed on the UAE stock exchanges was lower in 2016 compared to the previous year, which is mainly attributable to the decline in profitability in the energy sector. The Abu Dhabi Securities Exchange and the Dubai Financial Market stock indices declined in the first half of 2016 but both stock market indices recovered in the second half of the year in the context of the improved outlook for oil prices.

The Central Bank published a Basel III compliant Capital Adequacy Regulation, which is effective from February 1, 2017, including a framework for Domestic Systemically Important Banks, which will further enhance financial stability in the UAE. The Central Bank will continue in its diligent approach to bank regulation and supervision in order to ensure a highly resilient banking system.

Please Rate this Report

Macro-financial Conditions

Credit Developments and Credit Cycle

Summary: *During 2016, total domestic credit expanded by 6.0% (5.3% excl. credit to government) compared to 5.8% (5.6% excl. credit to government) in 2015. The real non-oil GDP growth decelerated slightly in 2016 to 2.7%[1] from 3.2%[1] a year earlier. The stability of credit growth and non-oil-GDP growth, reflect well on the diversification of the UAE economy. The credit cycle, measured by the credit-to-GDP gap, seems to be in the later stage of a contractionary phase, with preliminary indications that it could be bottoming out.*

Credit Developments

The total domestic credit represents funds borrowed by non-bank UAE entities and comprises UAE bank loans, issuance of bonds, and lending from abroad. The total credit growth in the UAE stabilized as of 2010 at an average annual growth of around 6%. The stable credit expansion occurred in the context of the average annual expansion of the nominal non-oil-GDP during the same period of around 7% and a real non-oil-GDP of around 4%.

During 2016, total domestic credit in the UAE expanded at a rate of 6.0%, in line with the total domestic credit growth during the previous year of 5.8%. The total private credit (excl. credit to government) expanded in 2016 by 5.3%, a slight deceleration from 5.6% in 2015. Corresponding with the developments in total private credit growth, the real non-oil GDP growth decelerated slightly in 2016 to 2.7%[1] from 3.2%[1] a year earlier, with a 3.9%[1] growth in the nominal-non-oil GDP.

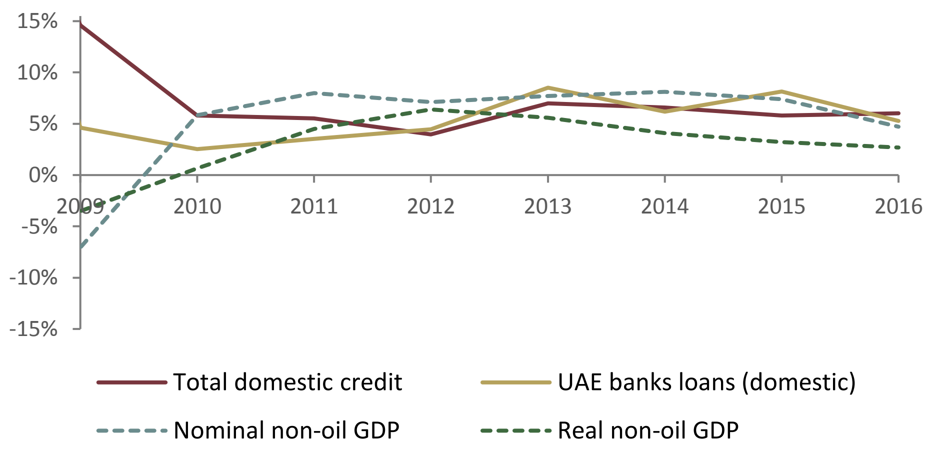


Figure 1. Change in total domestic credit, UAE bank credit (domestic), and non-oil GDP (Sources: Federal Competitiveness and Statistics Authority, Bloomberg, Staff estimates)

Approximately two-thirds of the total domestic credit is provided by UAE based banks, with the remaining one-third split between loans of UAE entities from abroad and bonds issued by UAE borrowers.[2]

[1] Federal Competitiveness and Statistics Authority (FCSA).

[Please Rate this Report](#)

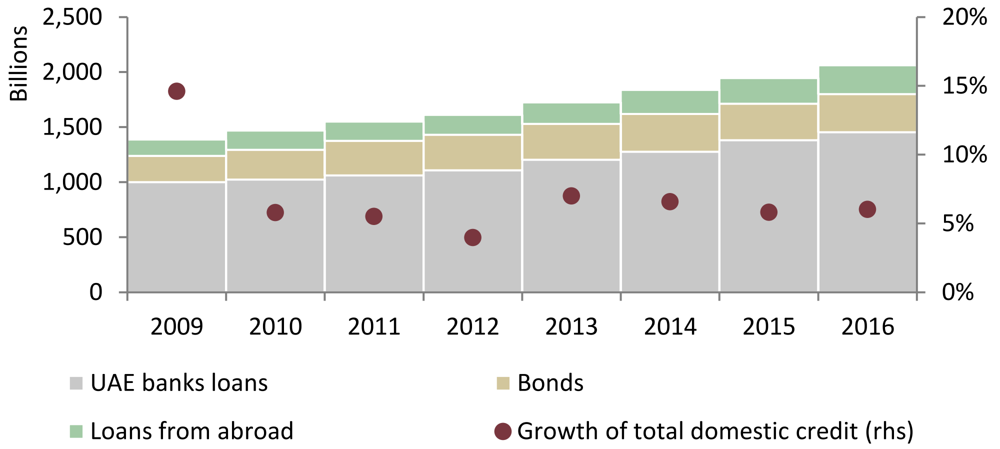


Figure 2. Total domestic credit (Sources: Bloomberg and CBUAE staff estimates)

Regarding the structure of the UAE credit market, the majority of credit is provided via bilateral domestic bank loans. The second most important source of credit is syndicated loans with the funds sourced from both domestic banks and foreign lenders. Finally, the third source of credit is the bond market, with roughly two-thirds issued by businesses and one-third by local governments.

The UAE bank loans to resident borrowers expanded 5.3% last year, a deceleration from 8.1% a year before. The syndicated loans market expanded at a faster rate of 13%, while the 4% growth of the bond market was mainly due to the issuance of local government bonds.[2]

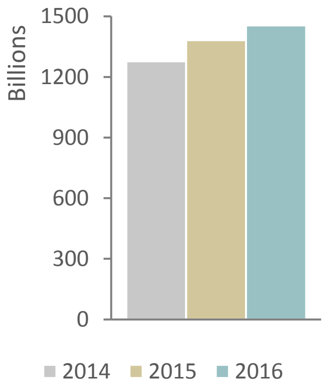


Figure 3. UAE Bank Loans (domestic)

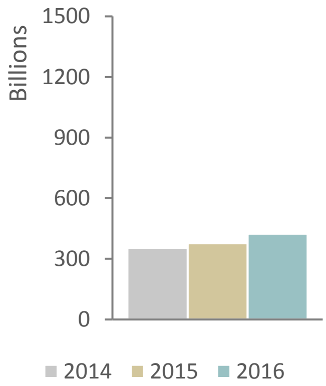


Figure 4. Syndicated Loans[3] (Sources: Bloomberg and CBUAE staff estimates)

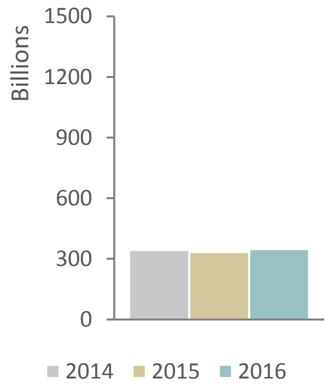


Figure 5. Bond Issuance (Sources: Bloomberg and CBUAE staff estimates)

Credit Cycle

The financial depth measured as the size of the total private credit relative to the size of the economy was at moderate levels in the 1980s and 1990s. In an entire decade, between 1991 and 2000, the total private credit as a share of non-oil-economy increased only by 3 percentage points from approximately

[2] The syndicated lending, foreign lending, and the bond market figures are based on CBUAE staff estimates.
[3] The proportion of syndicated loans sourced from UAE banks is also included in UAE Bank Loan (domestic).

45% to 48%[4], while in advanced economies with greater financial depth the corresponding ratio, at the time, was at 132% in the United States, 128% in the euro area, or 121% in Singapore.

Financial deepening, characterized by greater use of private credit in the development and diversification of the UAE non-oil economy, accelerated in the early 2000s. By the end of 2004, the share of total private credit to the non-oil GDP reached 60%. However, as of 2005 the development of the UAE non-oil economy, coincided with the heightened risk taking, resulting in an excessive growth of private-credit-to-non-oil-GDP ratio in the UAE.

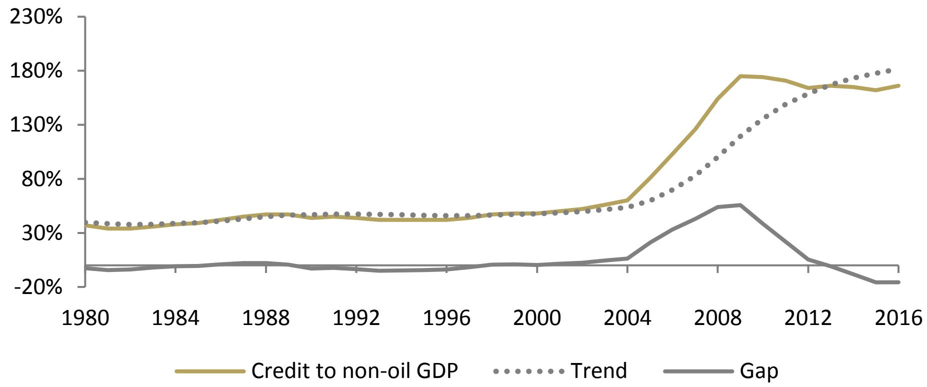


Figure 6. Total domestic credit to non-oil economy and its long-term trend and gap (Sources: Federal Competitiveness and Statistics Authority, Bloomberg and CBUAE staff estimates)[5]

The credit-to-GDP gap represents the difference between private-credit-to-non-oil-GDP and its long-term trend, measured by a one-sided Hodrick-Prescott filter. The higher the credit-to-non-oil-GDP gap, the greater is the risk of the build-up of systemic vulnerabilities. In the case of the UAE, the gap clearly demonstrated excessive credit growth as of 2005, which peaked in 2009 and fell thereafter as the credit cycle turned. At the end of 2016 the gap was minus 16%, a slight uptick from a year before suggesting a potential bottoming out of the contractionary phase.

Nonetheless, the application of the Hodrick-Prescott filter could have some limitations in countries where the cyclical component of the credit growth coincided with significant structural changes in the (non-oil) economy and financial deepening, such as in the case of the UAE. For this reason, the expansionary phase of the credit cycle might be biased upwards by the structural changes in the non-oil economy, and the current negative credit-to-non-oil-GDP gap might be slightly overstated.

Application of econometric and clustering methods suggest that a structural shift occurred approximately between 2006 and 2007. The estimation of the credit-to-non-oil-GDP gap as of the regime shift in 2007 suggests that the gap in 2016 would be around minus 5%, an increase from minus 10% a year earlier. Overall, the credit cycle in the UAE, measured by the credit-to-non-oil-GDP gap, seems to be in the later stage of the contractionary phase.

[4] In the UAE, oil GDP is excluded from the private-credit to GDP ratio; including the oil GDP would result in an even lower private-credit to GDP ratio of 34% at the time.

[5] The trend is estimated using a smoothing factor lambda of 1,600.

Please Rate this Report

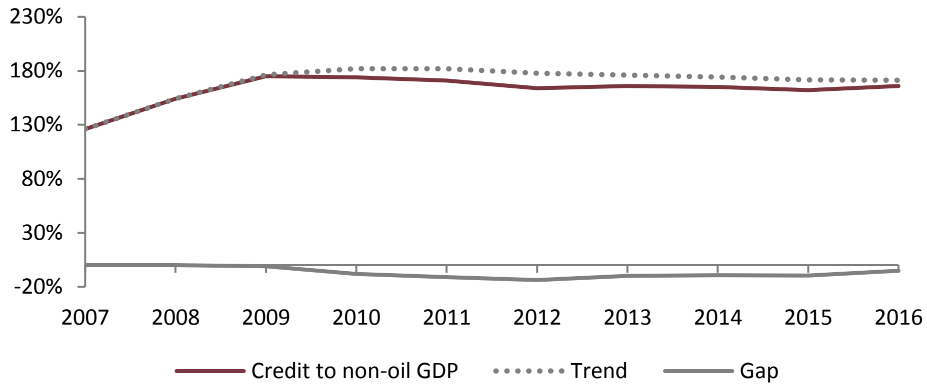


Figure 7. Total domestic credit to non-oil economy as of 2007 and its long-term trend and gap (Sources: Federal Competitiveness and Statistics Authority, Bloomberg and CBUAE staff estimates)[5]

[Please Rate this Report]

Household Sector

Summary: *Domestic Credit to households expanded 5.0% in 2016, a slowdown from 10.3% last year. Resident household deposits increased by 7.6% in 2016 compared to 2.7% a year earlier. Implicit interest rate on household loans decreased by 30 bps in 2016, suggesting a slight easing of bank lending standards for households and that the deceleration in household credit growth to 5.0% might be demand driven.*

Household Debt in the UAE

The UAE banks are the predominant source of credit to resident households, which includes UAE nationals as well as resident expatriates in the UAE. Lending to resident households represents nearly 25% of total domestic loans of UAE-based banks. A vast majority, nearly 97%, of bank loans to resident households is denominated in the local currency.

The bank loans to resident households grew 5.0% in 2016 reaching 347 billion. This is in line with the overall bank lending growth, but a slowdown from 10.3% household-loan growth a year earlier. Personal consumer loans represent around 40% of household loans, followed by real-estate loans that represent 30%, and the balance is split almost equally between credit-card loans, car loans, and other household loans[6].

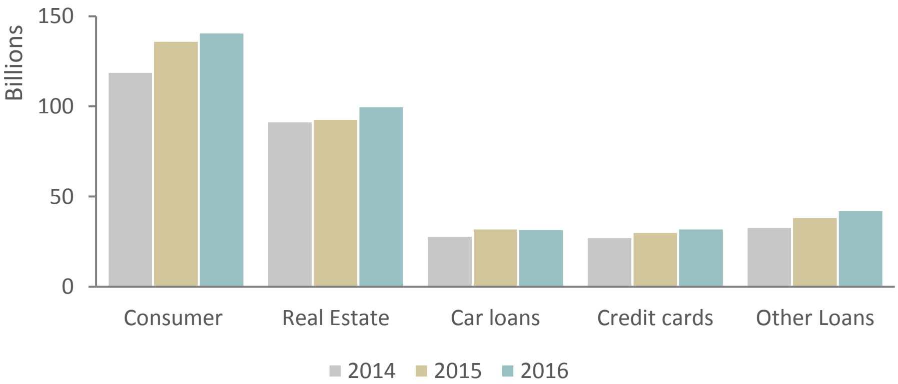


Figure 8. Breakdown of resident household loans by category[6]

Implicit average interest rate charged by banks on household loans decreased slightly during 2016 by 30 bps to 8.7%. These developments suggest a slight easing of lending and banking conditions for households.

Household Deposits in the UAE

When assessing household financial conditions, it is also useful to consider the deposits that households hold in the banking system. The level of resident household deposits reached 388 billion during 2016. On balance, household sector deposits exceeded household sector loans by 41 billion or

[6] Other household loans include overdrafts, small business loans lent to individuals, and others.

approximately 11%. Resident household deposits grew by 7.6% during the year compared to 2.7% a year before.

The demand deposits represent the largest share of resident household deposits, nearly 45%, while the share of saving deposits is around 30%, and time deposits around 25%. Local-currency denominated deposits represent around 90% of resident household deposits.

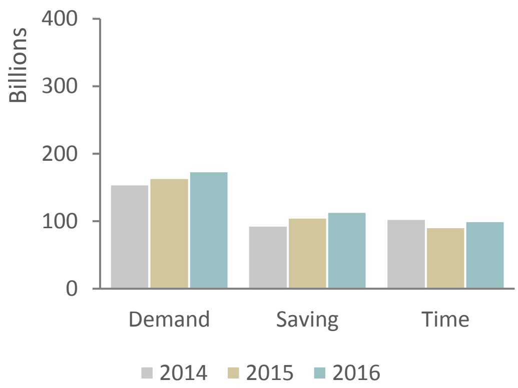


Figure 9. Breakdown of resident household deposits by type

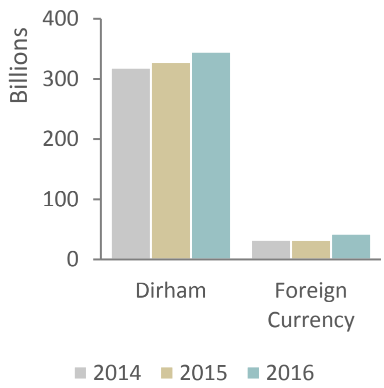


Figure 10. Breakdown of resident household deposits by currency

Corporate Sector

Summary: *UAE bank credit to corporate sector expanded 6.5% during 2016 in line with 6.6% a year before. The credit growth was particularly strong for large corporations and government related entities (GREs)[7], while credit to other types of corporates decelerated compared to previous years. Deposits of the corporate sector grew 0.9% in 2016, a slowdown from 9.7% in 2015, largely driven by the drop of deposits from GREs.*

Corporate Debt in the UAE

Corporate sector debt in the UAE consists of debt to large corporates, government related entities (GREs),[7] high net worth individuals (HNIs),[8] small and medium enterprises (SMEs), and trade bills. Almost two-thirds of all domestic loans from UAE-based banks are lent to the domestic corporate sector. Foreign currency denominated loans represent around 26% of the UAE-based bank loans to the domestic corporate sector.

The UAE banks lending to resident corporates increased 6.5% during 2016 reaching 913 billion, broadly in line with the growth rate of 6.6% during 2015. The Implicit average interest rate charged by banks on corporate loans stayed relatively stable during 2016, decreasing only slightly by 10 bps to 3.3%. Thus, the overall lending conditions for the corporate sector remained stable during 2016.

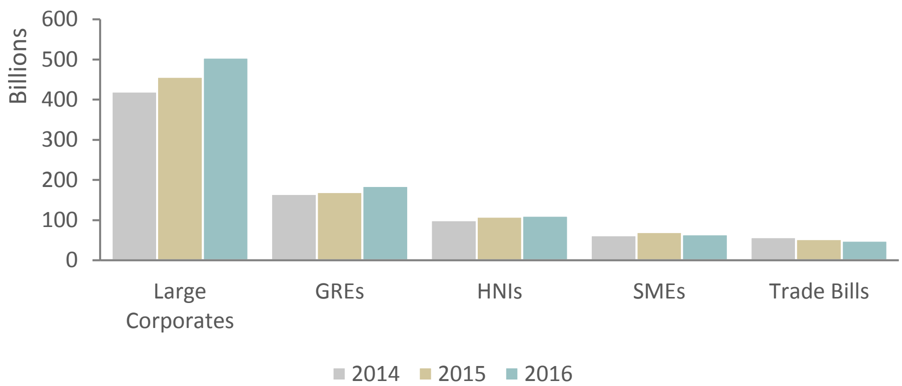


Figure 11. Breakdown of resident corporate loans by category

The previous figures do not include lending from abroad, which expanded by around 13% last year.[9] On the other hand, the amount of corporate bonds outstanding was flat during 2016.[9] Combining the estimates for lending from abroad and corporate bonds with the figures of UAE-based bank corporate lending suggest that the estimated overall corporate credit is close to 1.4 trillion compared to 1.3 trillion a year before.[9] Around two-thirds of total corporate credit is sourced from UAE-based banks, with the remaining one-third split roughly equally between foreign lending (which occurs primarily via the syndicated loans market) and corporate bonds.

[7] Government Related Entities (GREs) are commercial companies with ownership of Federal or Emirate government or Emirate Ruler holding more than 50% shares.
[8] HNIs, defined as individuals with wealth exceeding 20 million, have financial characteristics and risks that are similar to those faced by corporates. For this reason, the HNIs are included among the corporate sector in the UAE.
[9] The foreign lending and the bond market figures are based on CBUAE staff estimates.

Please Rate this Report

Corporate Deposits in the UAE

Deposits of resident corporates in the UAE banks grew 0.9% in 2016 reaching 761 billion, which is a significant deceleration from 9.1% in 2015. The slowdown is largely due to the drop in GRE deposits by 11.7%, while deposits of other resident corporates increased 5.2%.

Figure 12. Breakdown of resident corporate deposits by category

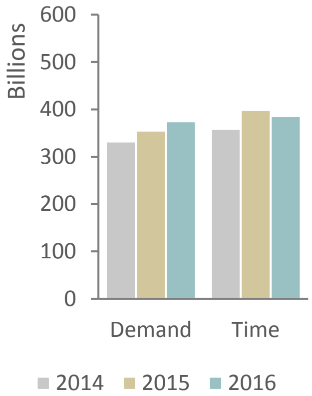


Figure 13. Breakdown of resident corporate deposits by type

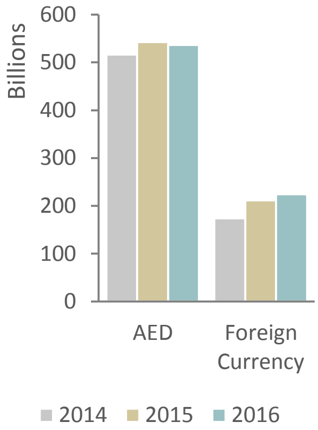


Figure 14. Breakdown of resident corporate deposits by currency

Resident corporate deposits are split approximately in half between time deposits and demand deposits, while the share of corporate saving deposits and prepayments is very small. Deposits of resident corporates in local currency – which represent around 70% of total resident corporate deposits – declined by 1.0%, while foreign currency deposits by resident corporates increased 5.8%.

This decline was also driven by GREs that reduced their dirham deposits by 17 billion and foreign currency deposits by 5 billion. Other corporates increasing their dirham deposits by 11 billion and foreign currency deposits by 18 billion.

[Please Rate this Report](#)

Real Estate Markets

Summary: *After a correction in residential real estate sales prices in 2014 and 2015, prices remained stable in Dubai and declined moderately in Abu Dhabi during 2016. Bank real estate lending, on the other hand, increased by 10% during 2016, suggesting change in market sentiment.*

Residential Real Estate Market

The decline in residential sales prices in Dubai that started in the second half of 2014, moderated during 2016 to a slower pace of -0.4%, compared to -11% during 2015. Residential real estate sales prices in Dubai dropped slightly below 14 thousands per sq.m by the end of 2016. Abu Dhabi residential sales prices decreased during the year by 3.3% to around 11.5 thousand per sq. m.[10]

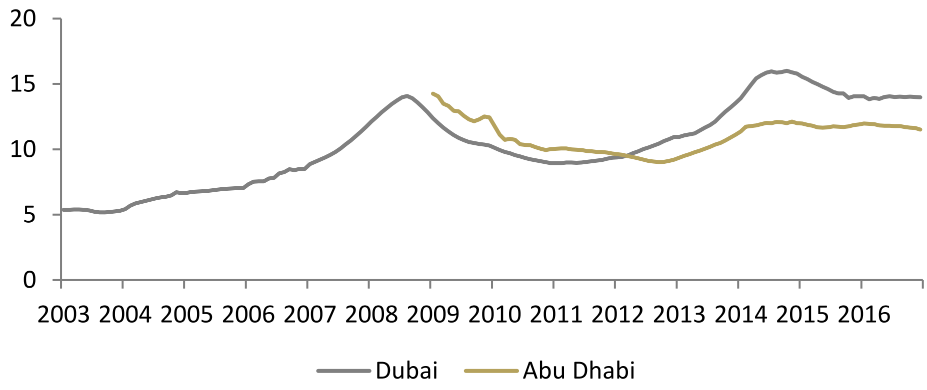


Figure 15. Average monthly prices of residential properties (thousand /sq.m) (Source: REIDIN)

Rental prices decreased in both Abu Dhabi and Dubai during 2016. Rent prices in Dubai continued in the downward trend that started in 2015, and declined 5% during 2016. Abu Dhabi rental prices remained relatively stable during 2015 but started to decline in 2016 falling by 2.5% during the year.

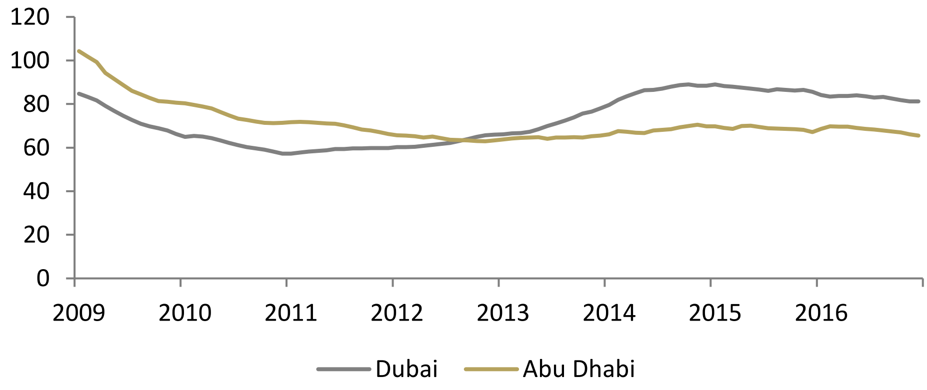


Figure 16. Monthly residential rental prices (Dirhams /sq. m.) (Source: REIDIN)

[10] The changes in residential real estate sales prices are calculated on a year-on-year basis comparing the monthly figures for December 2015 to December 2016. Comparing the quarterly averages of monthly data for Q4 2016 to Q4 2015 would arrive at slightly different figures (Dubai: 0.1%; Abu Dhabi: -2%).

Reflecting the lackluster market conditions, the number of residential property transactions in Dubai decreased by 5.8% in 2016. The supply of newly added residential units increased by 15.5%, picking up from last year's low numbers. Residential property occupancy rates remained stable in Dubai at around 90%.

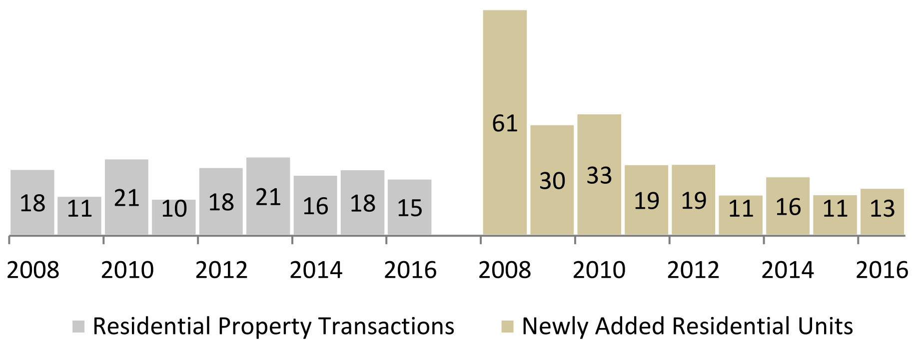


Figure 17. Dubai: number of residential property transactions (th. of units) and newly added residential property units (th. of units) (Source: REIDIN).

Commercial Real Estate Market

Office space rent prices in Dubai have been relatively stable since 2010 and continued in that trend in 2016. New office space supply increased by 0.2 million sq.m in 2016 compared to 0.5 million sq.m in 2015. Dubai office occupancy rates have been stable since 2013 at around 80%.[11]

The year 2016 was challenging for the hotel sector, particularly in Abu Dhabi. In Dubai, average daily revenue per hotel room decreased by nearly 10.5% to 550 Dirhams per night. The hotels in Abu Dhabi experienced a 19% decrease in average daily revenue per hotel room, which declined to 326 Dirhams per night.

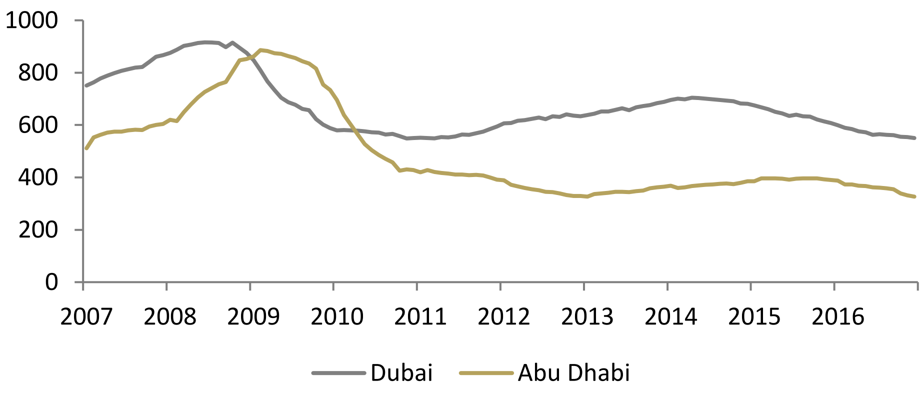


Figure 18. Average daily revenue per hotel room (Source: Smith Travel Research, Bloomberg)

The occupancy rate of hotel rooms in Dubai remained stable in 2016 at 78%. On the other hand, the number of available hotel rooms increased by 5% during 2016, potentially in preparation for Expo

[11] REIDIN

2020.[12] Hotel occupancy in Abu Dhabi decreased 3% in 2016 to 73%. The number of available hotel rooms in Abu Dhabi increased by 3%.[13]

Bank Real Estate Lending

After a 3.7% decline in 2014, the real estate lending increased 4.3% in 2015 and accelerated in 2016 growing by 10.2% The revival of real estate lending in 2016 suggests a potential change in market sentiment. Lending to real estate properties under construction went up nearly 14.9% in 2016, while lending to completed real estate properties increased by 8.7%.

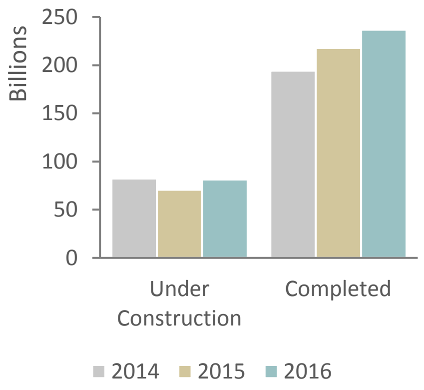


Figure 19. Real estate related lending by category

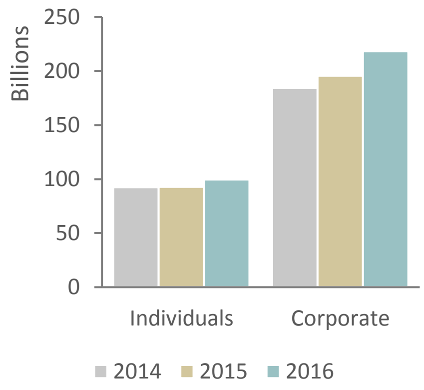


Figure 20. Real estate related lending by borrower type

UAE banks' lending for residential real estate properties continued to increase, growing by 9.9% in 2016 compared to 3.0% in 2015. Financing of commercial properties (non-residential properties, services and developers) remained strong at 9.7% unchanged from 2015.

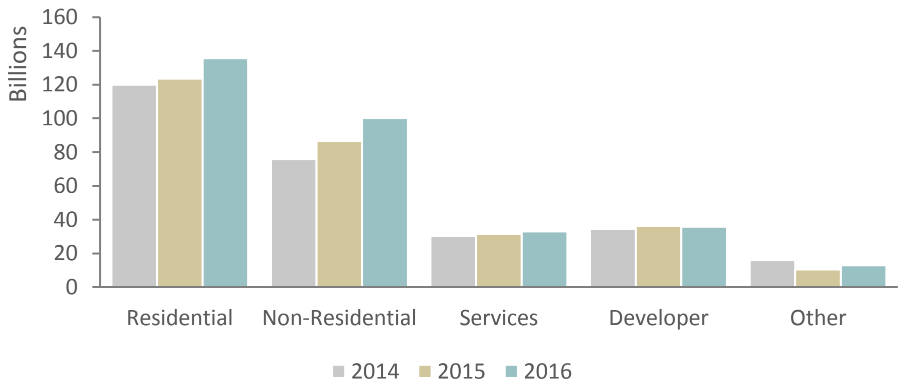


Figure 21. Real estate related borrowing by the type of property

[12] Dubai Department of Tourism and Commerce Marketing (DTCM)
[13] Abu Dhabi Tourism and Culture Authority (TCA)

Property Market Trend Assessment

In the absence of affordability indicators, a one-sided Hodrick-Prescott (HP) filter was used to determine an equilibrium value by decomposing the movement of real estate prices in Dubai and Abu Dhabi into cyclical and long term trend components.

In Dubai, the deviation of real estate prices from the long term price trend continued to lessen in 2016, which could be a further indication that the market is stabilizing.

Figure 22. Dubai average residential real estate sale price (thousand /sq. m) and long term price trend[14]

In Abu Dhabi, the deviation of real estate prices from the long term price trend, although negative, remained stable throughout 2016.

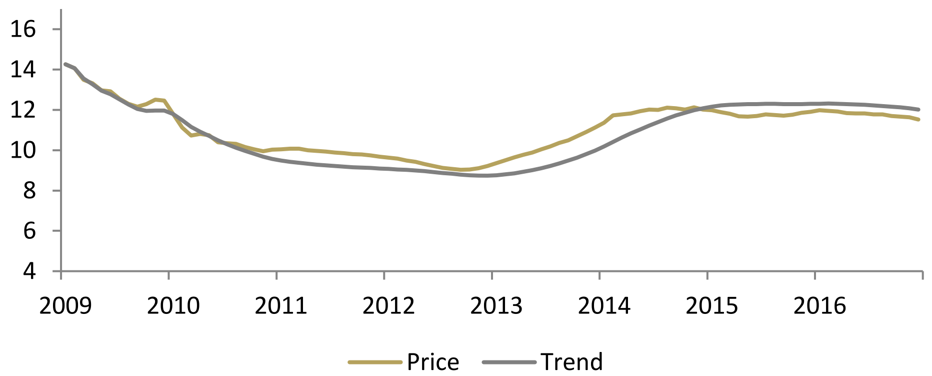


Figure 23. Abu Dhabi average residential real estate sale price (thousand /sq. m) and long term price trend[14]

[14] The trend is estimated using a smoothing factor lambda of 14,400.

[Please Rate this Report](#)

Financial Stability Trend Index

Summary: *The Financial Stability Trend Index (FSTI) is a composite indictor of the macro-financial environment in the UAE. The FSTI suggests improved financial stability conditions during 2016, in particular due to the stabilization of oil and real estate prices as well as higher capital adequacy and liquidity buffers of the UAE banks and lower stock market volatility.*

The Financial Stability Trend Index (FSTI) is a composite quantitative measure of financial stability developed by the CBUAE. The FSTI combines eighteen[15] macro-financial indicators that represent the UAE banking system, economic trends, and financial market developments with regard to their implications for financial stability.

The FSTI values above zero suggest that the macro-financial conditions are broadly supportive of financial stability, while zero represents the neutral level.[16] The index does not intend to predict the occurrence of a crisis but rather assesses if the current macro-financial conditions are supportive of financial stability.

The FSTI remained in the negative territory through the first three quarters of 2016 following a drop below zero during 2015. However, the macro-financial environment started to gradually improve as of the second quarter of 2016 and the FSTI moved above zero during the last quarter of 2016.

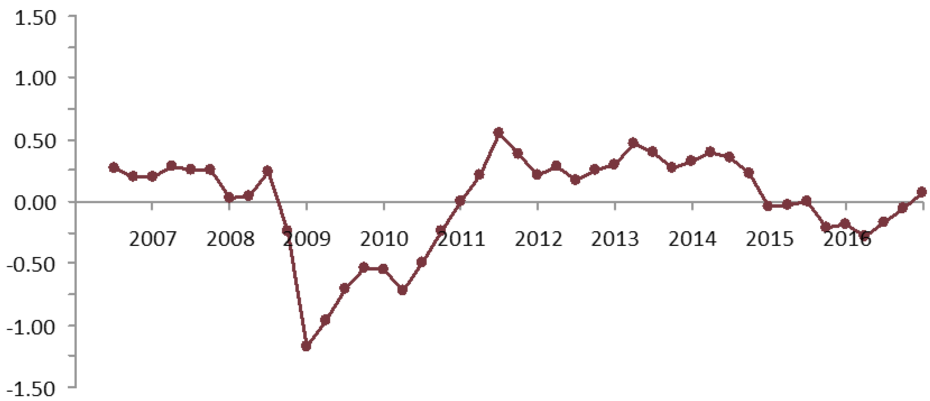


Figure 24. The UAE FSTI

The main drivers of the improvement in the FSTI during 2016 were the improving oil price, stabilization of the real-estate market prices, stronger liquidity conditions of the UAE banks, and improvement of the bank capital adequacy. Furthermore, the stock market was less volatile than a year ago and the sovereign CDS spreads narrowed.

On the downside, the banking sector experienced a higher growth of new NPLs during 2016 compared to 2015 and slight moderation in profitability.

[15] Compared to last year, the FSTI includes an additional variable covering Abu Dhabi real-estate prices.
[16] An increase in the FSTI indicates improving macro-financial conditions and vice-versa.

[Please Rate this Report](#)

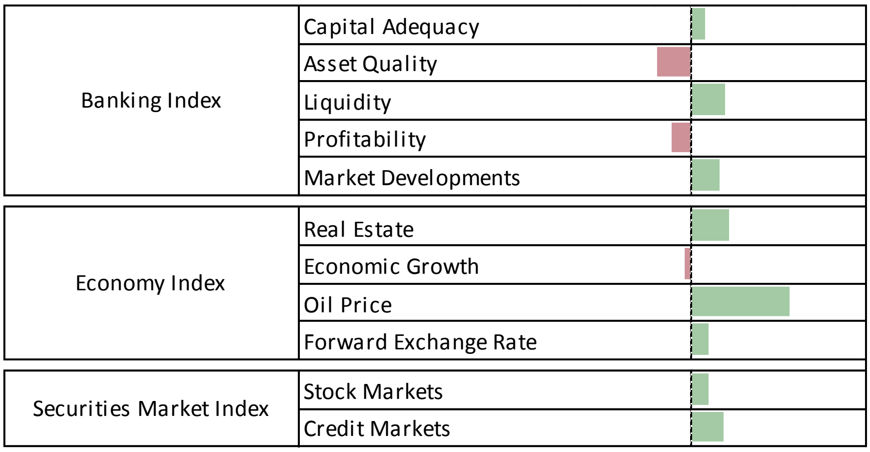


Figure 25. The impact of various macro-financial indicators on the change in the FSTI during 2016

Overall, the FSTI suggested more supportive conditions for financial stability then a year ago. The banking sector sub-index remained relatively stable with improved capital adequacy and liquidity conditions. The economic and securities-market sub-indices improved during the year, helped by the stabilization of the oil and real estate prices, and lower market volatility.

Figure 26. The sub-indices of the UAE FSTI

Box 1: The FSTI Methodology

The following set of eighteen macro-financial variables currently comprises the FSTI composite index for the UAE.

Sub index	Category	Indicator
Banking Index	Capital Adequacy	Capital adequacy ratio
	Asset Quality	Ratio of impairment charge-to-total assets
		Y-o-Y growth of non-performing loans
	Liquidity	Ratio of net foreign interbank-to-total loans
		Ratio of liquid assets-to-total liabilities
		Ratio of total loans-to-total deposits
	Profitability	Return on assets
		Ratio of non-interest expense-to-gross income
	Market Developments	Index for market implied probability of default for banks
		Volatility of banking sector[17]
Economy Index	Real Estate	Deviation of real estate prices from long term trend (Dubai)
		Deviation of real estate prices from long term trend (Abu Dhabi)[18]
	Real Sector	Economic Conditions Index [19]
		Y-o-Y change in spot oil price
		One year forward rate of USD/AED
Securities Market Index	Stock Markets	Price – earnings ratio
		Realized market volatility – 90 days
	Credit Markets	Five year credit default swaps for government bonds

The following variables were singly modified compared to last year to further improve the FSTI:

- Deviation of real estate prices from long-term trend (Abu Dhabi): The development of the real estate prices in Abu Dhabi has been included this year improving the coverage of the UAE real-estate market.
- Deviation of real estate prices from long-term trend: These variables were calculated using a higher de-trending coefficient that is better alighted with the length of the business and real-estate cycles.
- Volatility of banking sector to overall stock market volatility: This variable has been limited to the volatility of the banking sector alone as it is believed to be a better reflection of the sentiment in the banking sector.
- Ratio of current account balance-to-GDP: This variable has been replaced by the Economic Conditions Index (ECI) developed by the CBUAE, which is a more reliable proxy of quarterly economic conditions.

Further details on the methodology and the variables can be found in FSR 2015.

[17] In the previous FSTI, this was "Volatility of the banking sector-to-overall stock market volatility".
[18] This is a new variable included this year to widen the coverage of the UAE real estate markets.
[19] In the previous FSTI, this was "Ratio of current account balance-to-GDP".

[Please Rate this Report](#)

Financial System Assessment

Banking Sector

Summary: *The banking sector remained well capitalised with substantial liquid asset buffers and highly profitable, despite changing global monetary conditions and a more challenging economic environment. While UAE-based banks continued to grow, branches of foreign banks shrank their lending for the second year in a row.*

Total assets of the sector expanded by 5.5% to 2,614 billion although at a slower pace compared to previous years but remained at a satisfactory level, considering the more challenging business environment that banks faced in 2016.

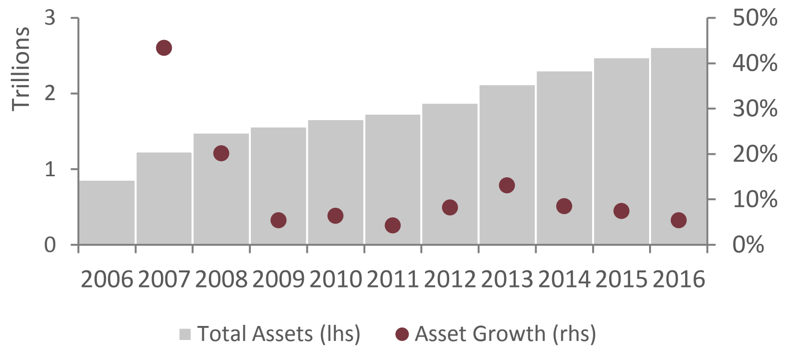


Figure 27. Total bank assets and asset growth rate

Lending and Funding Condition

Slower lending was a major contributor to the slower asset growth. Overall lending growth slowed down from 7.8% in 2015 to 6.0% in 2016. UAE national banks continued to expand their lending at 8.0% in 2016, compared to 9.8% the previous year. However, UAE branches of foreign banks decreased their loan exposures for the second year in a row: -6.3% in 2016 and -3.0% in 2015. The top three as well as six out of top ten largest UAE branches of foreign banks reduced their loan exposures in 2016.

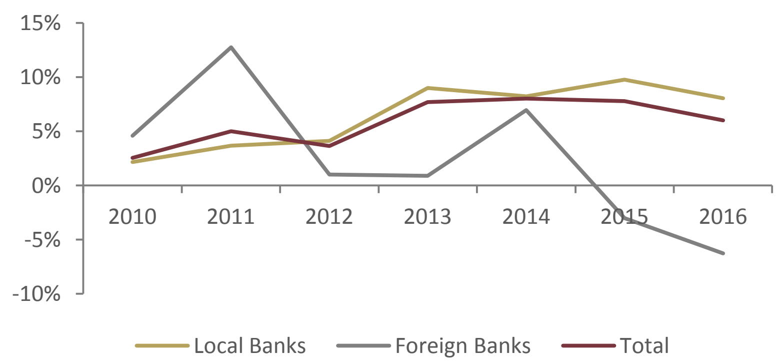


Figure 28. Annual growth rates of total loans in UAE banks

UAE bank lending to resident borrowers grew by only 5.3% (2015: 8.1%) over the year while lending to non-residents increased by 15.9%, although from a lower base representing less than 8% of the total loan book. Both local and foreign banks expanded their lending to non-residents. The deceleration in domestic loan growth with relatively rapid growth of lending to non-residents as well as the retreat of foreign bank lending suggests that certain borrowers were affected by tighter credit standards or their demand for credit weakened.

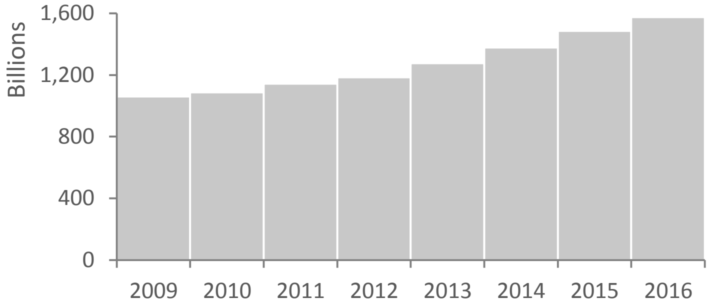


Figure 29. Total Loans

While all sectors – individuals, businesses and government – grew at similar rates (5-6%), there seems to be a divergence between different types of businesses. Loans to large corporations increased by nearly 11%, while loans to non-banking financial institutions, small and medium enterprises and trade financing all dropped in 2016 by 14%, 7% and 6% respectively.

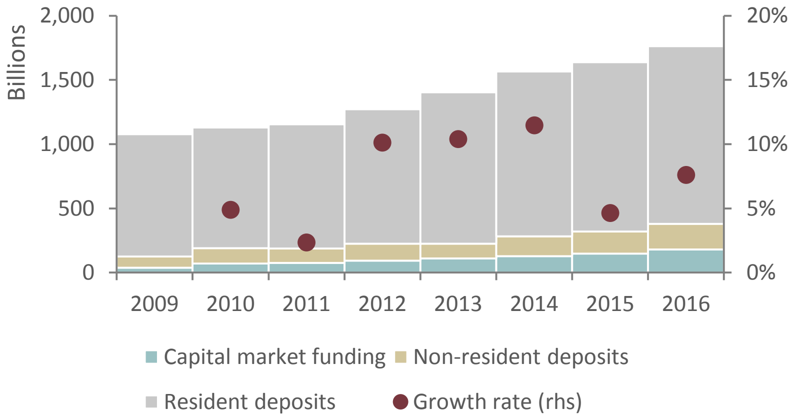


Figure 30. Total funding breakdown

Funding profile of UAE banks remained broadly unchanged in 2016, 89 billion increase in lending was matched by 93 billion increase in deposits. In addition, banks attracted more than 31 billion of capital market funding. As a result, total funding increased by 7.6% in 2016. As in the case of lending, there is a sharp divergence between the UAE based banks and UAE branches of foreign banks that experienced a 5.1% drop in funding.

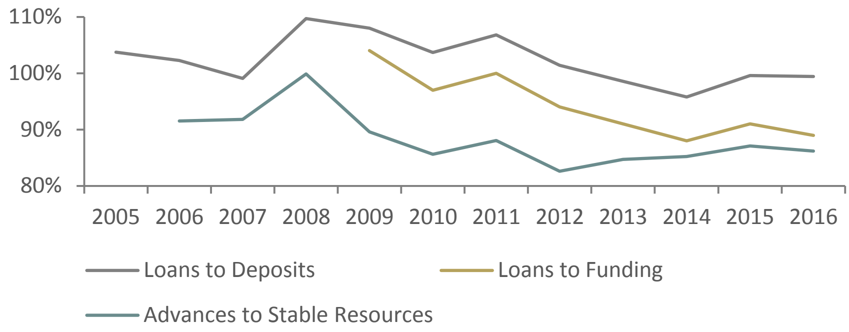


Figure 31. Lending and funding ratios

Due to closely matched growth rates in deposits and loans, the Loan-to-Deposit ratio remained mostly unchanged in 2016 at 99.4%, while the Loans-to -Funding ratio dropped by 2pp to 89%. The overall deposit structure remained largely unchanged with growth similar in both demand and term deposits.

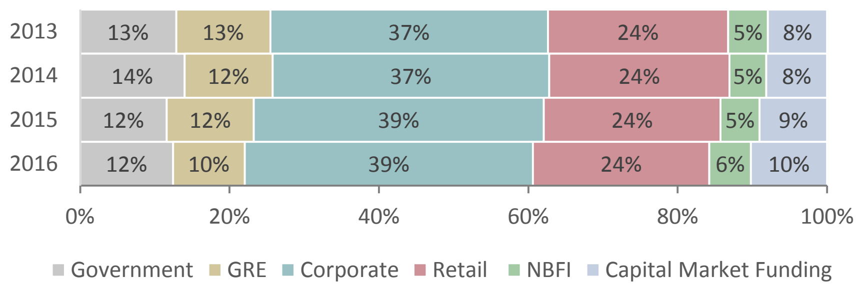


Figure 32. Funding profile of the UAE banks.

Funding diversification continued to increase in 2016. Capital market funding – a highly attractive form of funding from the liquidity management perspective that provides medium term funding with highly predictive outflows – increased to 10% of total funding. The 10% share of capital market funding in total funding is still relatively small, thus its effects on bank balance sheets are beneficial.

Liquidity Risk

Liquidity conditions remained highly stable through 2016. A comparison of EIBOR and LIBOR shows that the interest rate differential, which indicates the interbank liquidity situation, was highly stable through the year.

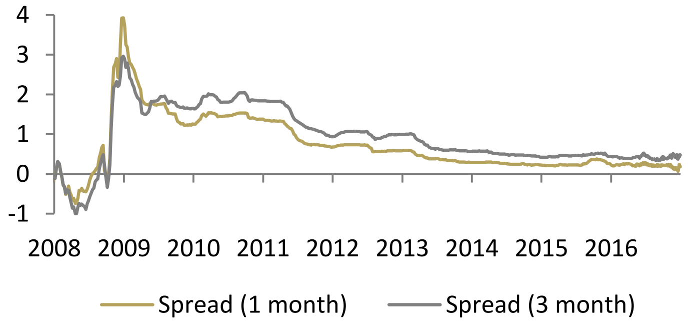


Figure 33. Spread between EIBOR and LIBOR (pp).

Please Rate this Report

All banks complied with an Eligible Liquid Asset Ratio (ELAR) of 10% throughout the year with the majority of banks holding at least 2-3 pp excess buffers. The proportion of liquid assets to total liabilities held by the banks increased over the year if temporary spikes in liquid asset holdings at the end of 2015 are eliminated.

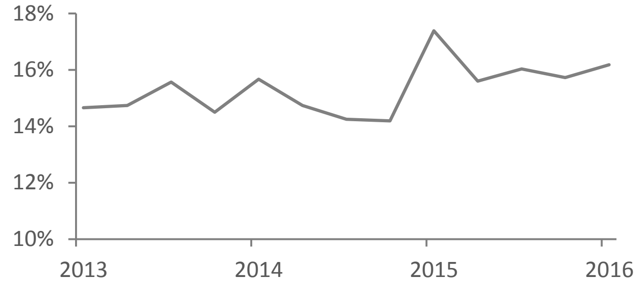


Figure 34. Eligible Liquid Asset Ratio

Short term liquidity stress test based on the Liquidity Coverage Ratio (LCR) assumptions indicates that while High Quality Liquid Assets (HQLA) increased at the end of the year, outflow coverage decreased. It indicated that purchase of the liquid assets at the end of the year, was financed with short-term liabilities. The effect is most obvious at the end of 2015, but noticeable at the end of 2016 as well.

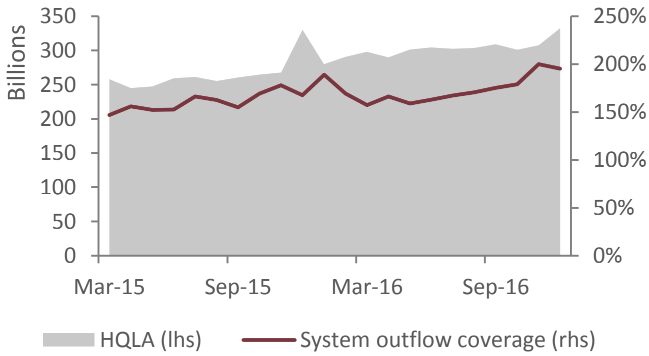
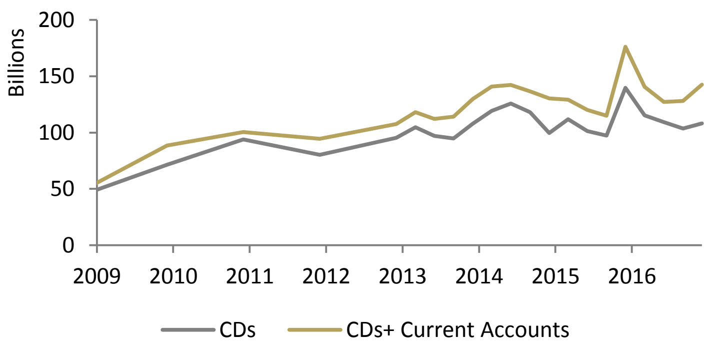


Figure 35. Stock of HQLA and system outflow coverage

Estimated average outflow coverage also increased in 2015 from 168% to 195%. This was influenced by both increased share of liquid assets in the asset mix and changing liability structure due to a move to longer term Capital Market Funding. Only two small banks were below 100% outflow coverage at the end of 2016.



[Please Rate this Report](#)

Figure 36. Certificates of deposits and current balances with the CBUAE

Most of the liquid assets of the UAE banks are held in the form of regulatory reserves, excess reserves and Certificates of Deposits (CDs). In the absence of a developed dirham bond market, CDs are likely to maintain their importance and be a primary indicator for liquidity conditions in UAE Dirham. If adjusted for the end of year surges, the amount of CDs held indicate a constant improvement in Dirham liquidity in 2016.

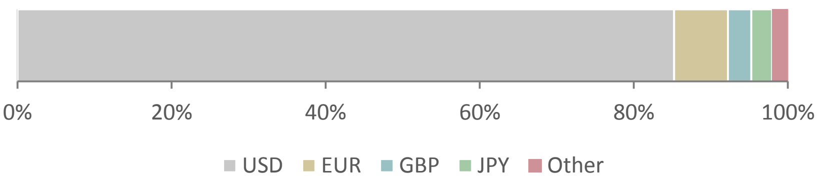


Figure 37. Denomination of investment portfolios of UAE banks

Foreign currency liquid assets are predominantly held in the form of debt securities. Due to the peg, majority (85% at the end of 2016) of bank investments are held in USD denominated debt securities.

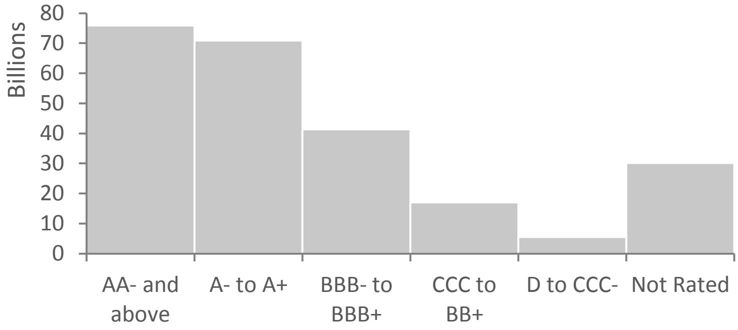


Figure 38. Credit quality of UAE banks investment portfolio

At the end of 2016, UAE banks' holding of debt securities amounted to 242 billion with 87% rated by at least one external credit rating agency. Investment grade debt securities represented 77% of total investment portfolio or 188 billion. Only 69 billion of the investments are included in the calculation of Eligible Liquid Assets regulatory ratio, with the remaining providing additional liquidity cushion.

Net foreign interbank position includes lending to/borrowing from banks abroad and to foreign branches of local banks. UAE local banks have reached a net interbank position of 45 billion by the end of 2016 (2015: -2.2 billion). This reflects improved liquidity of UAE banks in 2016.

[Please Rate this Report](#)

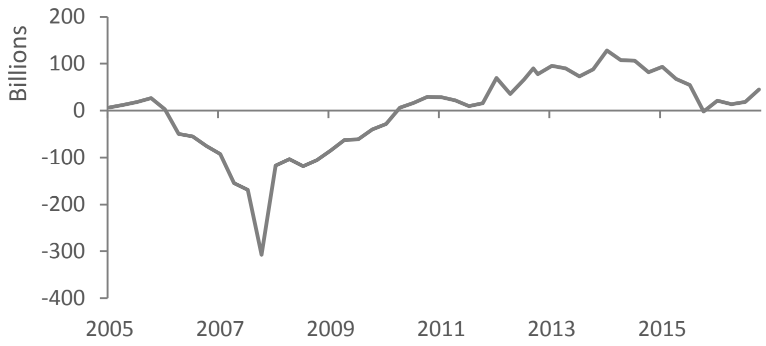


Figure 39. Net interbank lending by local banks

Profitability

Impacts of a relatively challenging economic environment are most noticeable in the profitability of UAE banks – the net profits dropped 6% for the second year in a row.

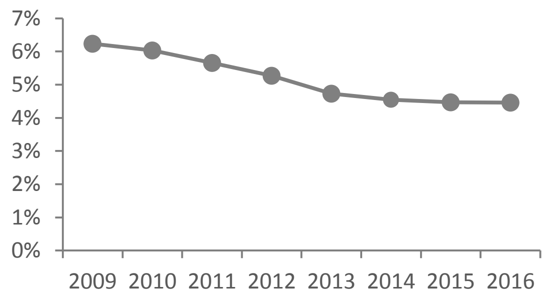


Figure 40. Gross interest margin

Pressures to the profitability of the banks came from multiple channels. Gross interest margin remained unchanged, while rising funding costs, led to a decrease of net interest margin to 2.7%, the lowest level since 2009.

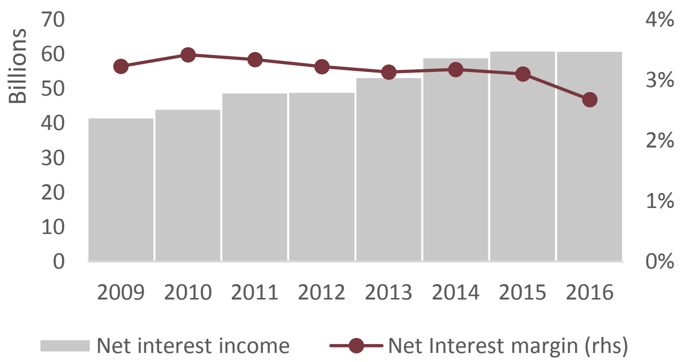


Figure 41. Total net interest income and net interest margin of the UAE banks.

A driver behind the compression of net interest margins is due to a lag in adjusting the loan rates. While funding, especially short-term deposits, adjust to market conditions immediately, loans are repriced according to agreed schedules.

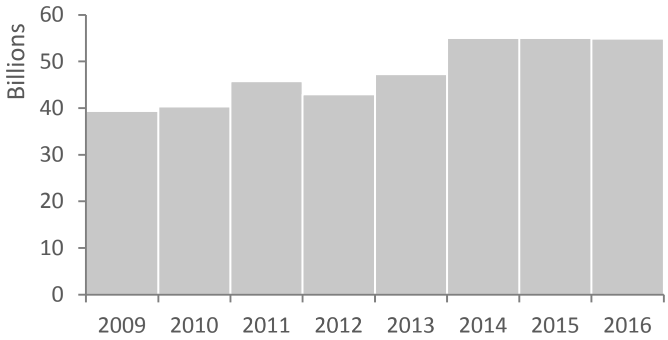


Figure 42. Operating profit before impairment

Despite pressures on the interest income, operating profits before impairment remained unchanged in 2016, as a result of a moderate 2% increase in other operating income and stable operating expenses.

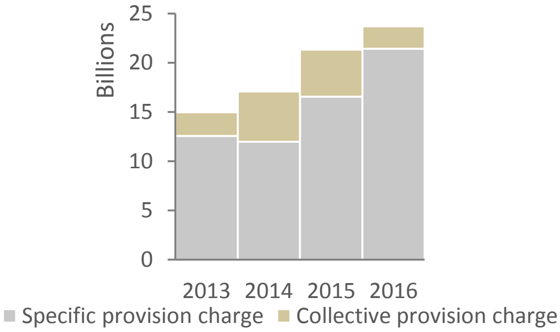


Figure 43. Gross impairment charges for loans & advances

The major contributor to the decrease in net profits of UAE banks was a rise in provisioning rates due to deteriorating asset quality. Net impairment charge increased from 17 billion in 2015 to 19 billion in 2016. Specific provisions reached 21 billion in 2016, 29% increase when compared to 2015. In addition, write-offs of bad debts reached 2 billion or 149% more than in 2015. Impact on profitability was mitigated by lower collective and general provisions, which decreased to 2 billion or 52% less than in 2015, as well as increased recoveries that reached 7 billion or 29% more compared to 2015.

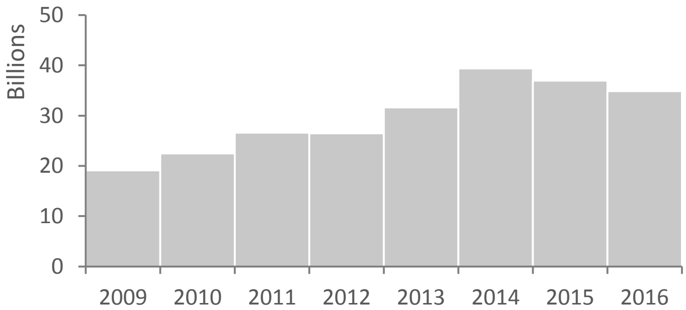


Figure 44. Net profits

As a result net profits of the banks dropped by 6% to 35 billion. Nonetheless, the UAE banking sector profitability remained strong with the return on equity at 10.4%. The profitability of individual banks, however, is highly dependent on the size of the bank, with lower profitability and losses disproportionally affecting the small banks.

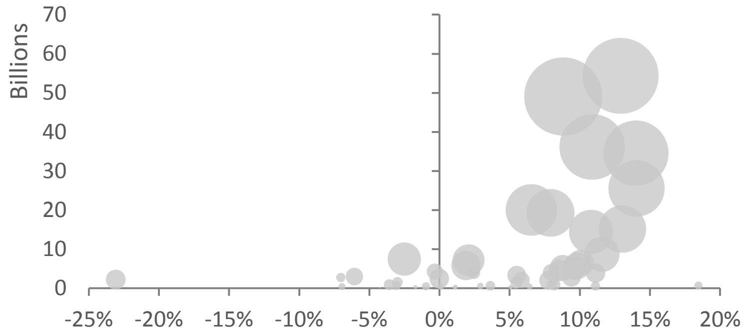


Figure 45. Net profit to Capital base (x axis) relative to Capital Base (y axis) and Risk Weighted Assets (bubble area)

Asset Quality

Asset quality weakened slightly in 2016, due to deterioration in the small and medium enterprises (SMEs) loan quality. After two years of decline, classified loans increased by 8% in 2016 reaching 100 billion or 6.4% of total loans, compared to 6.2% in 2015.

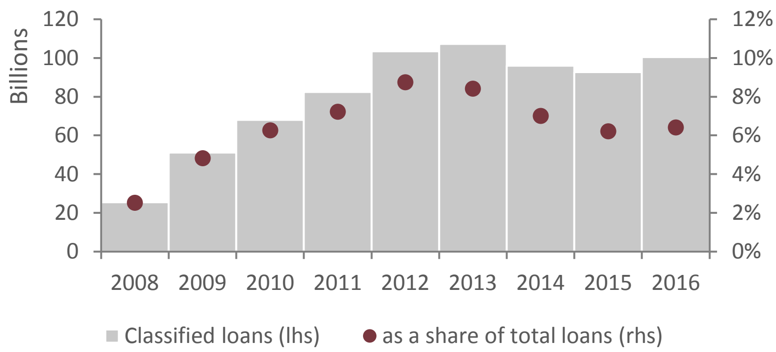


Figure 46. NPL and as share of total loans

Nearly all the increase in classified loans came from the SMEs sector, where default rates increased from near 4% in mid-2015 to above 10% throughout 2016. As of December 2016, more than 20% of exposures to SMEs were classified as non-performing.

Figure 47. Rescheduled loans

[Please Rate this Report](#)

In addition to reversal of the trend in classified loans, rescheduled loans also started to grow in 2016. While rescheduled loans are not necessarily classified as nonperforming and therefore provision is not required, it provides an indication how many performing borrowers may be experiencing cash flow difficulties. Rescheduled loans increased by 16% and reached 80 billion in 2016.

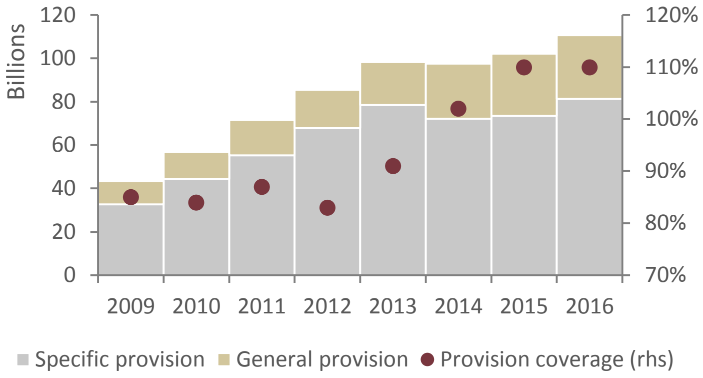


Figure 48. UAE banks stock of provisions and provision coverage

As a result of deterioration in asset quality, loan provisions increased by 8%. The increase in the specific provisions was almost equivalent to the increase in classified loans, with a coverage ratio remaining stable at 110%.

Capital

UAE banks remain well capitalised with the total capital adequacy ratio rising by 0.6 pp to 18.9% and a Tier 1 ratio rising by 0.7 pp to 17.3% during 2016.

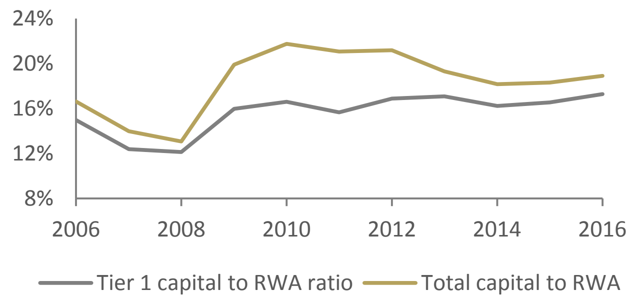


Figure 49. Tier 1 and total capital adequacy ratios (calculated according to Basel I requirement before 2011 and Basel II onwards).

At the end of 2016, there were two small banks with observed capital ratios below 14%. All the big and medium-sized banks had capital adequacy ratios above 15% indicating substantial loss absorption capacity.

Performance of the Islamic Banks

Islamic bank assets grew 8.9% in 2016 (2015: 15%) to 505 billion. Assets of the Islamic banks constituted 19.3% (2015: 18.7%) of the banking system assets and 21.3% (2015: 20.6%) of lending.

[Please Rate this Report](#)

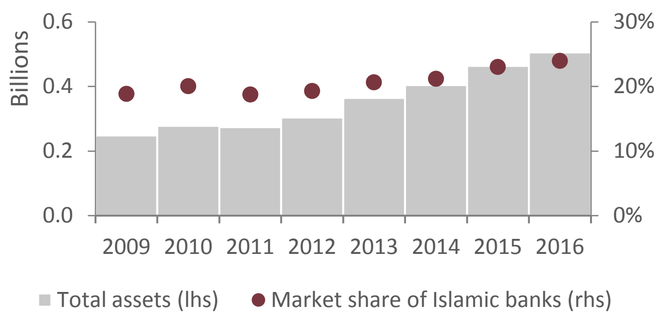


Figure 50. Growth of Islamic bank assets

Deposits rose in 2016 by 4.8% (2015: 16.6%) to 349 billion and accounted for 22.3% (2015: 22.6%) of the banking deposits. The capital adequacy ratio (CAR) of Islamic banks increased to 17.1% at the end of 2016 (2015: 15.6%) and the Tier-1 capital ratio increased to 16.5% in 2016.

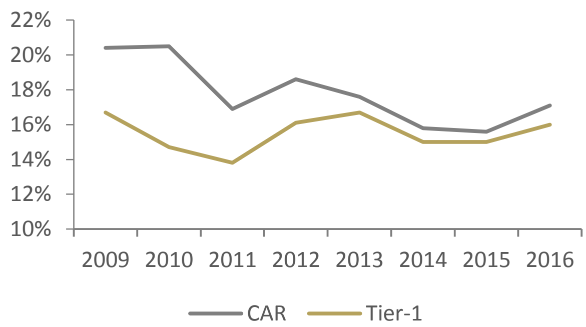


Figure 51. Islamic banks capital adequacy

The ratio of financing (loan) to deposits increased to 96.3% in 2016. (2015: 92.2%).

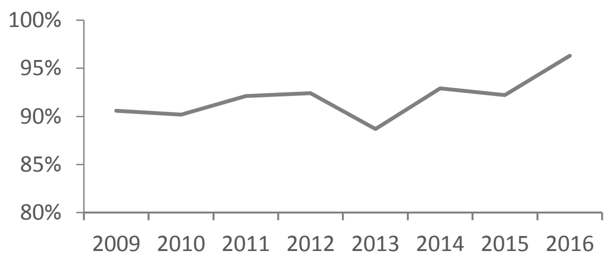


Figure 52. Islamic banks' financing to deposit ratio

The return on assets for Islamic banks decreased to 1.4% in 2016(2015: 1.5%), while the return on equity decreased from to 10.9% in 2016 (2015:14%).

Please Rate this Report

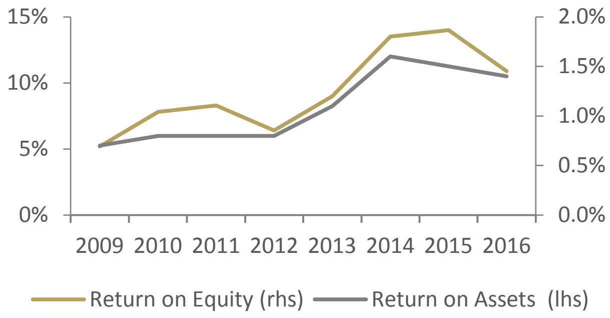


Figure 53. Return on equity and return on assets of Islamic banks

Please Rate this Report

External Exposure

Summary: *External exposure of UAE national banks increased in 2016. External assets grew 13%, driven by growth in non-resident loans and investment in financial securities. External liabilities grew at a slower pace of 6%, largely due to the increase in non-resident deposits and capital market funding. On the other hand, external interbank exposures declined during 2016.*

Overview

External exposures[20] of UAE national banks expanded in 2016. External assets growth was 13%, which was faster compared to 2015 (3%). External liabilities grew at 6%, a slower pace compared to the growth in 2015 (32%). As a share of total balance sheet size of national banks, external assets accounted for 19.9% (2015: 18.9%) and external liabilities accounted for 21.8% respectively (2015: 22.0%).

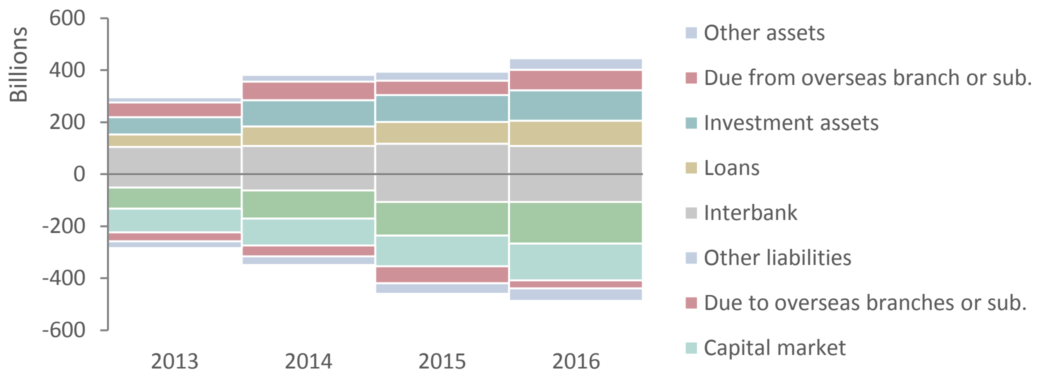


Figure 54. UAE national banks' external assets and liabilities

External Assets

Loans to non-residents represent around 22% of external assets of UAE national banks. Growth in non-resident loans of UAE national banks in 2016 of 17.4% was higher compared to the previous year (10.7%). Its share to total bank loans increased to 8.4% (2015: 6.5%).

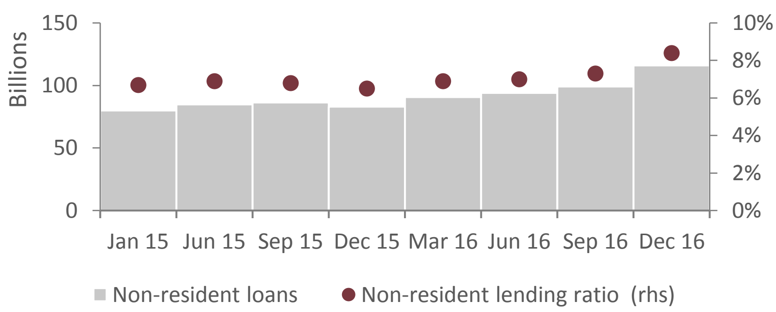


Figure 55. UAE national banks' non-resident loan and share of non-resident loans to total loans

[20] External exposures include non-resident assets and liabilities of UAE national banks.

Non-resident loans were mostly to non-resident corporates with a share of about 70% of total non-resident loans. Lending in this category increased 17.6% in 2016 compared to the 7.4% growth in 2015.

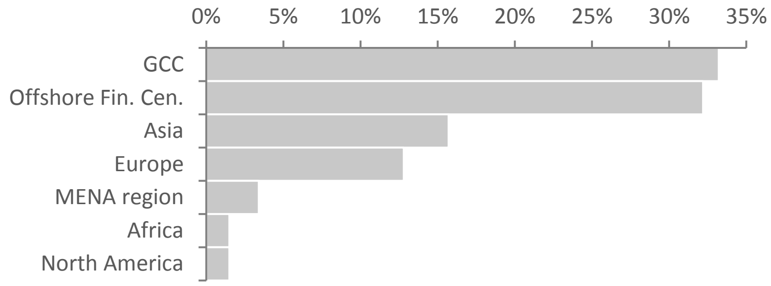


Figure 56. UAE national banks' non-resident loan composition by region

Investments in financial securities issued abroad represent 26% of UAE national banks' external assets. These investments grew 12% during 2016 with the majority (more than 90%) of the assets held in the form of debt securities. These debt securities are mainly rated investment grade (89%).

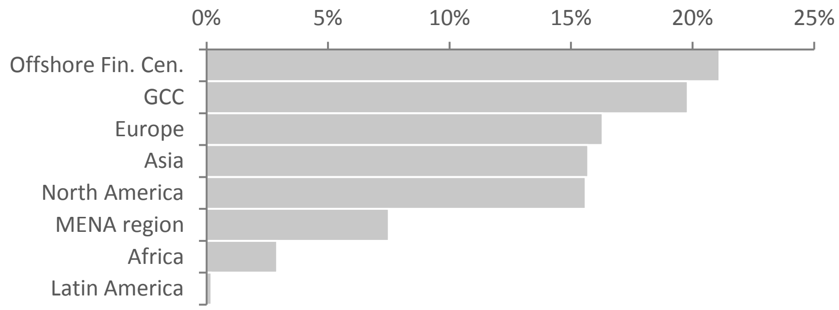


Figure 57. UAE national banks' holding of debt securities issued by foreign entities by region

Another major component of external assets is interbank lending with a 24% share of UAE national banks' external assets (2015: 30%). UAE national banks' interbank lending abroad increased about 8% in 2015, but during 2016 interbank lending exposures reversed, with a decline of 7.4%.

External Liabilities

External liabilities of UAE national banks were mostly in the form of non-resident deposits, capital market funding and interbank liabilities. Composition of external liabilities remained stable with non-resident deposits accounting for the highest share (33%), followed by capital market funding (30%) and interbank borrowing (22%).

During 2016, non-resident deposits grew by 24.4%, faster than recorded in 2015 (18.6%). The non-resident deposits were mainly raised from GCC countries (24.6%) followed by Asian countries (23.8%) and their liabilities are mainly in the shorter term maturities (0 to 3 months).

[Please Rate this Report](#)

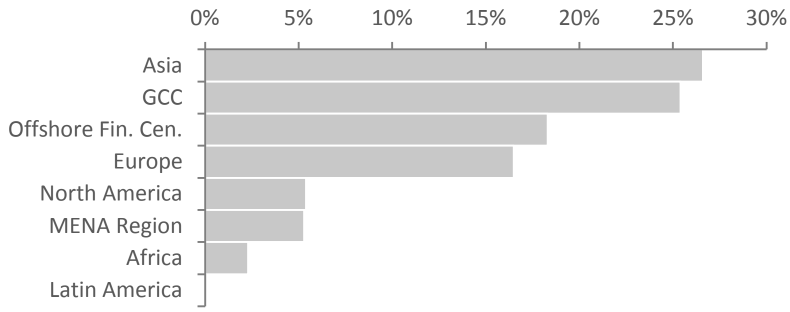


Figure 58. UAE national banks' non-resident deposits by region

Capital market funding of UAE national banks' grew 19.1% in 2016 (2015: 16.2%). The growth in capital market funding raised abroad is partly underpinned by the shallow domestic bond market.

Share of non-resident funding to total funding of UAE national banks increased in 2016 to 19.6% (2015: 17.6). Non-resident funding is split almost equally between capital markets funding and non-resident deposits.

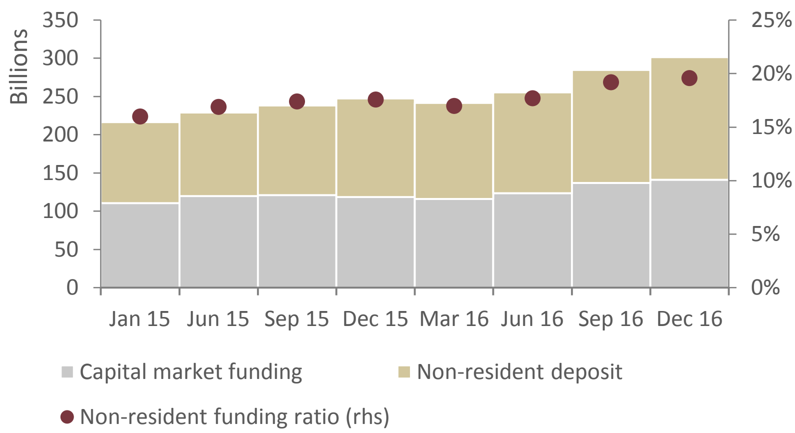


Figure 59. UAE national banks non-resident funding and the share of non-resident funding to total funding

No significant change was recorded in UAE national banks' external interbank liabilities in 2016, which contracted by 0.7%. Share of external interbank liabilities relative to total external liabilities remained stable in 2016 at 22% (2015: 23%).

The relatively fast growth of non-resident deposits and capital market funding of UAE national banks in 2016 was offset by the reduction in the amount due to overseas branches and subsidiaries, resulting in a slower growth of the total external liabilities of 6% in 2016.

Potential spillover impact arising from external funding shocks to UAE national banks is limited. Banks would maintain an overall liquidity coverage ratio of more than 100% even under a severe scenario of non-resident deposit outflows.

[Please Rate this Report](#)

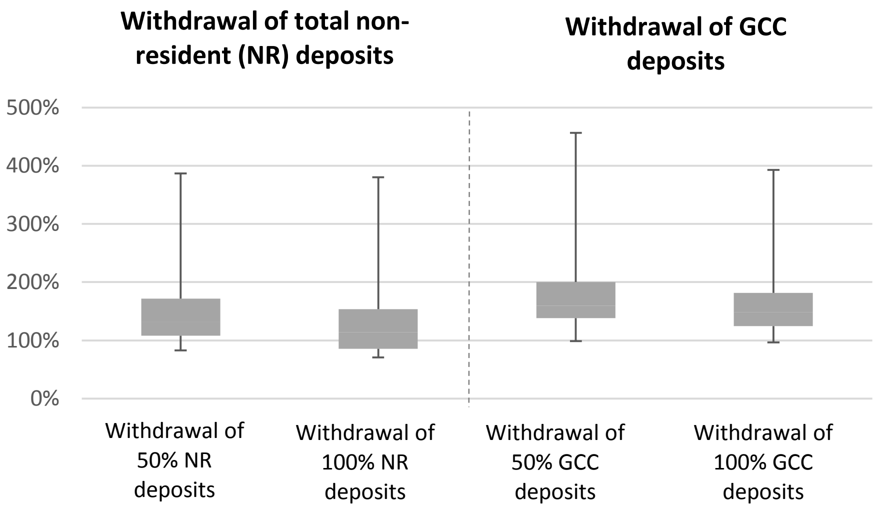


Figure 60. Estimated liquidity coverage of UAE national banks based on severe scenarios of non-resident deposit withdrawal shocks. Only national UAE banks with non-resident deposits are included in the analysis.

Interconnectedness

Summary: *The UAE domestic interbank market has remained well functioning and liquid during 2016. The interconnectedness of the UAE banks is represented by a 'core-periphery' network, within which three large banks dominate the scene as liquidity intermediaries.*

Greater interconnectedness means that stresses tend to spread more rapidly and extensively across the financial system via so-called domino effects. The most common type of direct interconnectedness is credit exposures through lending and other activities such as securities financing transactions and derivatives.

Banks are also indirectly connected to each other by other banks' behavior. Examples of such interconnectedness is fire sales of certain assets by one bank forcing the others to mark-to-market their portfolios at lower values.

The greater the degree of interconnectedness between banks, the greater the likelihood that a default by one bank could trigger contagion to other banks. In the UAE, three banks mainly function as core banks, whose distress could propagate throughout the network.

The UAE interbank system closely resembles a core-periphery network, in which core banks are connected to all banks in the network and peripheral banks are mainly connected to the 'core' banks. Core-periphery networks tend to be robust because core banks can act as buffers against contagion; they are also potentially fragile because a core bank's distress could propagate throughout the network.

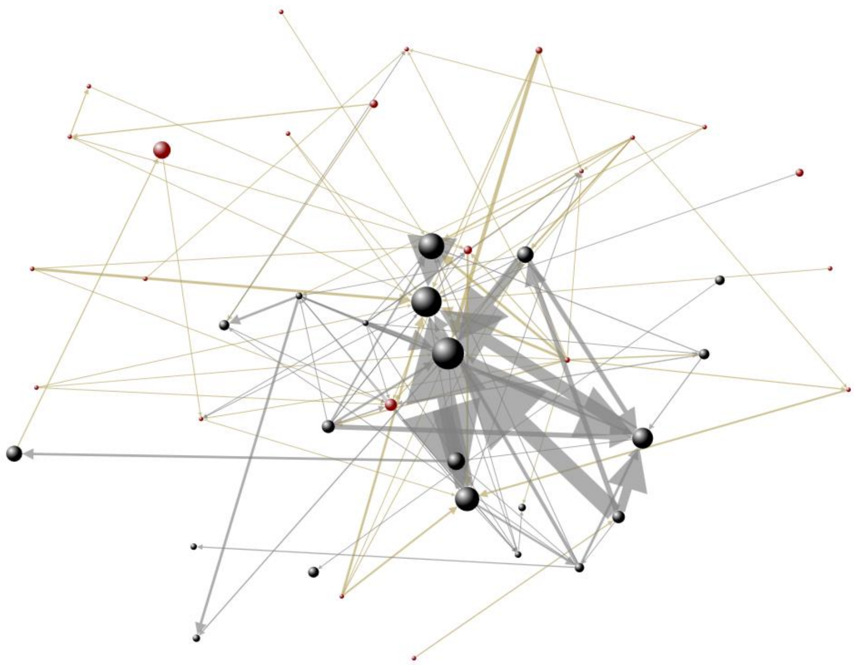


Figure 61. Domestic Interbank interconnectedness[21]

[21] Banks are represented in nodes based on the bank's relative asset size, the directed links between them represent the existence of a netted bilateral interbank exposure, while the thickness of each link represents the relative size of that exposure. Local banks connections are illustrated in grey while foreign banks are illustrated in light brown. Black nodes are for local banks while maroon ones are for foreign banks. (Data as of December 2016)

[Please Rate this Report](#)

The cumulative volume of the interbank market has been slowly decreasing in the past three years reaching 681 billion during 2016[22]. The number of transactions of the interbank market was 4,517 in 2016. This is a 2.9% increase compared to 2015.

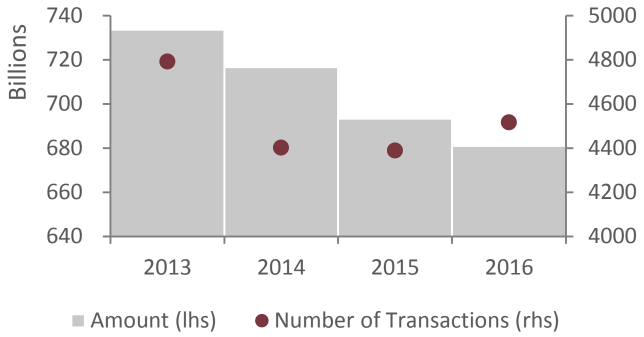


Figure 62. Cumulative volume and number of interbank transactions in UAEFTS interbank

Market remained short term oriented with an average tenor of the interbank transactions below 10 days in 2016.

[22] The borrowing and the repayment of any interbank transaction is considered to be one transaction in value and number.

[Please Rate this Report]

Box 2 : UAE Domestic Interbank Network Analysis

In order to gain a deeper understanding of the dynamics of the interbank system, a range of commonly used indicators of cohesion, centrality and distribution as aggregate network measures are considered.

Degree centrality in terms of the interbank network indicates the number of other banks that a given bank has lending and borrowing relationships with. The average bank participating in the interbank market has 4.1 connections (in-out) with other banks.

The average number of nodes in the UAE interbank market is 38 meaning there are on average 38 active participating banks in the interbank market at any point in time.

Betweenness centrality is an indicator of a bank's centrality in a network, defined as the number of shortest paths from all banks to all others that pass through that bank. This indicator captures the frequency with which a given bank lies on the shortest path between all sets of possible bank pairs within the sample.

Clustering coefficient measures the density of connections around a single bank and enables us to determine the proportions of the nearest neighbors of a bank that are linked to each other. The average clustering coefficient in the UAE is 0.21. In other words, it means that any two banks that already transact with a third bank are 21% likely to maintain this relationship than to establish a new connection with any other bank in the network.

Another measure of the interbank networks is diameter and average path distance. These two measures help in identifying how quickly the information is spread through the entire network. A network diameter can be interpreted as the largest intermediation chain in the network (shortest distance between the two most distant nodes in the network). This indicator averaged at 5.2 during 2016. As the network diameter gets larger, the harder it is for liquidity to flow from one extreme to another.

The average path distance can be seen as the average length of the intermediation chains that are taking place among the market participants. This number has slightly increased recently to average around 2.14 in 2016.

Network density is an aggregate measure of connectivity, which represents the probability of any two random banks within the market transacting with each other. This indicator has been around 10.6% during 2016. It is computed as the number of links observed in the network at a given time divided by the total number of possible links. For the high-density interbank network reflecting a very active interbank market with many borrowing/lending relationships amongst participants this indicator is high.

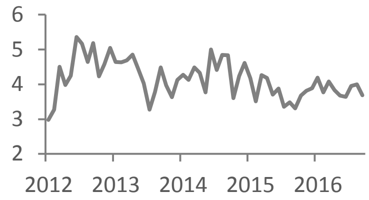


Figure 63. Average (In-Out) Degree

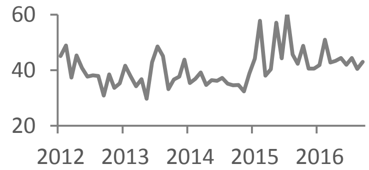


Figure 64. Average Betweenness Centrality

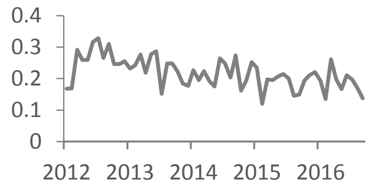


Figure 65. Average Clustering Coefficient

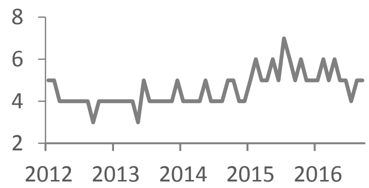


Figure 66. Diameter

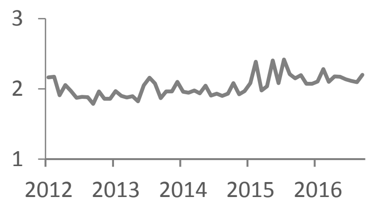


Figure 67. Average path distance (rhs)

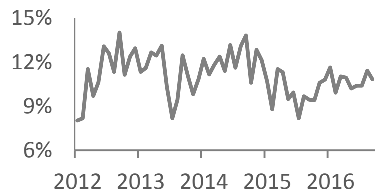


Figure 68.Network Density

Shadow Banking

Summary: *Prospect for the shadow banking industry [23] in the UAE to transmit risks and shocks to the financial system continues to be limited. Shadow banking risk profile and linkages with the domestic financial system have remained unchanged in 2016. The sector assets size continues to shrink, -3.5% in 2016. (2015: - 3.4%)*

Overview

The Financial Stability Board (FSB) defines shadow banking as a system of credit intermediation that involves entities and activities that are outside of the banking system. In its efforts to address shadow banking risks posed by non-bank financial entities, the FSB developed an enhanced framework[24] to better identify shadow banking entities based on economic functions.

Asset size of the sector accounts for a very small fraction of the financial system, about 2.4% (2015: 3%) compared to total banking system assets. Finance companies represent the majority (72.1%) of the total shadow banking sector assets. Lending, investments in equity and debt instruments remained the sector's major financial intermediation activities.

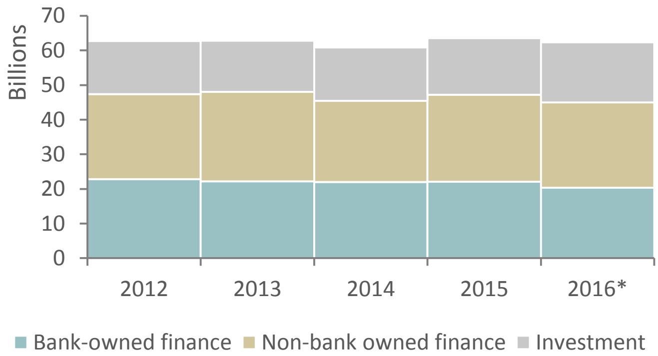


Figure 69. Assets of finance and investment companies (*2016 data as of third quarter).

Finance companies

Finance companies' assets overall declined by 4.4% in 2016. The sector is influenced by the dynamics of two major players; these two players represent about 27% of the sector's asset size and are concentrated in real estate lending. Assets of the two major players continued to contract by 12% in 2016 (2015: -21.4%). Funding structure of the two major finance companies remained unchanged in 2016. The two major players differ as the bank-owned finance company funding comes mainly from the parent banking owner. Similar to other non-bank owned financed companies, the other finance company's funding structure resembles that of other non-bank finance companies and is comprised predominantly of customer deposits.

[23] Shadow banking system for the purpose of this assessment covers finance and investment companies which have a regulatory requirement by the CBUAE to report data. Data used for this assessment is up to 3Q 2016

[24] Refer to CBUAE's Financial Stability Report 2015

Please Rate this Report

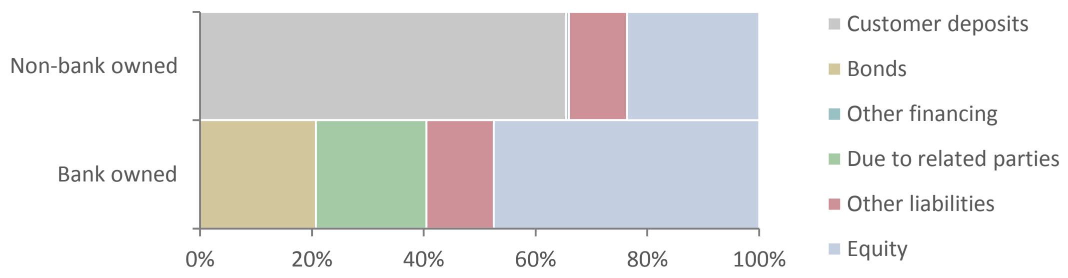


Figure 70 Funding structure of finance companies (two major players)

In terms of asset quality, no significant change was seen in the two major players as their NPL ratios were almost unchanged while provisioning levels improved.

Lending by the remaining finance companies remains well dispersed across asset categories. Lending of bank-owned finance companies contracted by 3.2% in 2016, driven by a decrease in vehicle and business loan segments. Non-bank owned finance companies' recorded a moderate growth in lending by 1.3% with loan composition remaining unchanged. Business loans cover about 39% of the portfolio.

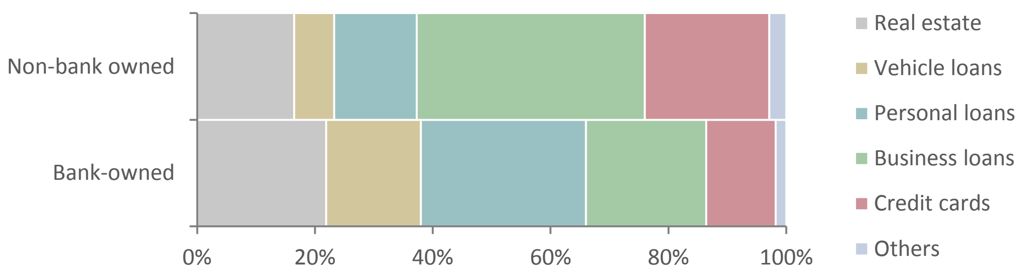


Figure 71. Finance companies' loan portfolio composition (excluding the two major players)

For the other finance companies, the bulk of non-bank owned finance companies' funding comes from corporate customer deposits which grew 2.1% and constitute close to half of their total funding source. Similar growth trend is evident in customer deposits for bank-owned finance companies, however they only represent 13% of total funding, with the dominant share of their funding coming from the parent banking owner.

Non-bank owned finance companies are exposed to liquidity risk due to an asset liability mismatch, where a large term deposit base (0 to 1 year maturity) is used to fund their longer term assets (more than 10 year tenures).

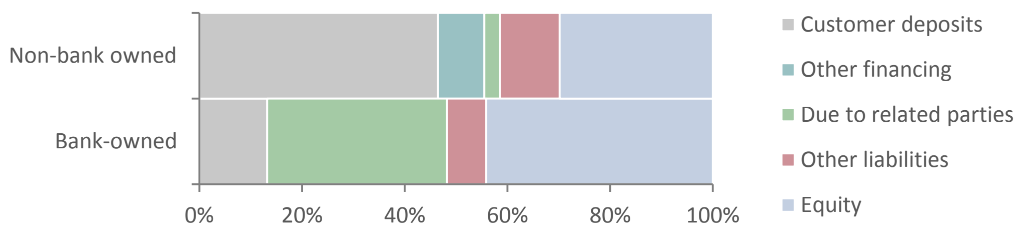


Figure 72. Funding structure of finance companies (excluding the two major players)

The less favourable economic condition recorded in 2016 translated into a deterioration in the asset quality of other finance companies, with NPL ratios increasing for both bank and non-bank owned companies. The NPL ratios increased 2.6 and 3.7 pp for bank-owned and non-bank owned finance companies, respectively. Non-bank owned finance companies exposure to business sector contributed to the higher growth of their NPL ratio. The deterioration is nevertheless supported by a parallel increase in the provisioning levels.

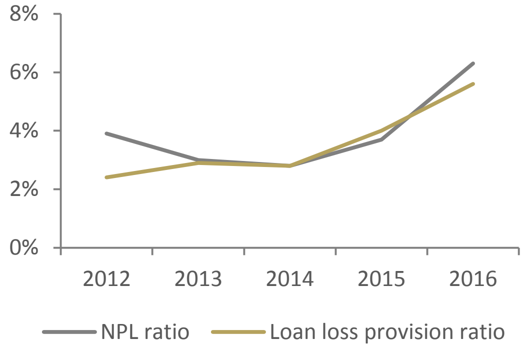


Figure 73. Asset quality of bank-owned owned (excluding the 2 major players)

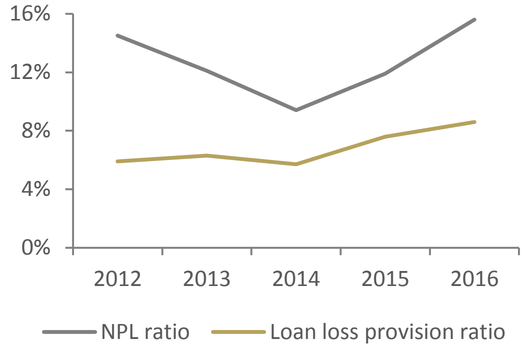


Figure 74. Asset quality of non-bank (excluding the 2 major players)

Finance companies' capital position remained strong with an improvement in the capital adequacy ratio to 33.8% (2015: 32.7%). The overall leverage position also reflects a similar trend, with leverage ratio returning to 2014 level of 1.7 (2015: 1.9).

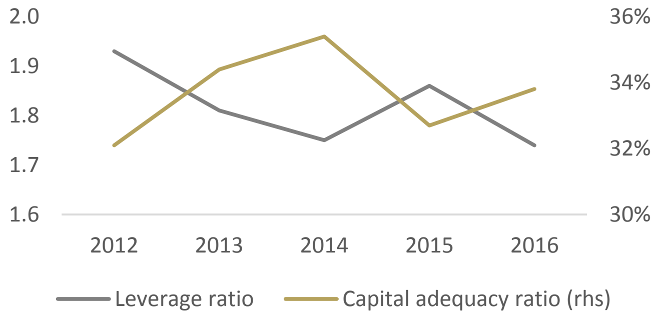


Figure 7. Capital and leverage position of finance companies (excluding the two major players)

Investment companies

Investment companies in the UAE are offering asset management and advisory services. Only one company offers a saving scheme where it operates as an outlet for retail investors to invest in short-term instruments. In this regard, the assessment focuses on investment companies offering asset management and advisory services. Growth in the sector continued with asset size expanding by 4.5% in 2016 (2015: 4.8%). Asset composition remained unchanged reflecting no aggressive risk taking behaviour to seek higher investment yields. Investment in financial assets, properties and associates total 40% of total assets.

Please Rate this Report

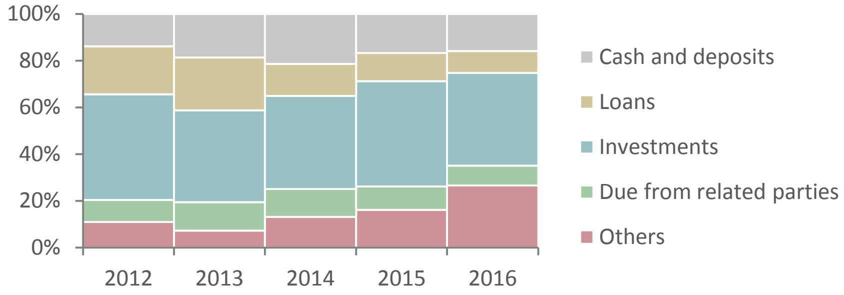


Figure 9. Asset composition of investment companies

The sector profitability peaked in 2014. It recorded lower profitability thereafter. Profitability deteriorated further in 2016, driven by losses on investments and a 35% drop in processing and other fees.

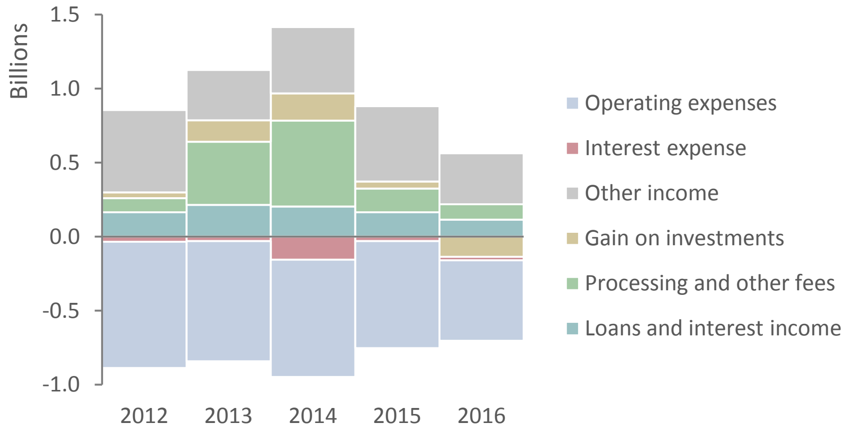


Figure 10. Investment companies' profitability components

[Please Rate this Report]

Financial Market Infrastructure and Payments

Summary: *The UAE payment systems remained resilient and continued to operate without major disruptions. The primary payment systems; UAEFTS and ICSS maintained high system availability during the year, with 4.8% growth in transactions and 31% increase in value of cheques presented respectively. In January 2017, CBUAE issued regulation on Stored Values and Electronic Payment Systems, in support of fostering a conducive digital payment operating environment.*

UAE Payment Systems Landscape

The UAE authorities have worked extensively towards diversifying the payment systems with a pool of options available to the different stakeholders. The CBUAE has played a key role in this significant development, managing, and operating various payment systems, and leading the efforts along with the other authorities in order to agree on a clear roadmap for the payment systems innovation and development.

In the UAE, the retail payments platform witnessed a great deal of innovation in the last few years. Besides usage of payment cards, new products using mobile technologies have emerged. The introduction of payment methods using mobile phones, wearable products (e.g. Smart watches) was welcomed by retail users. CBUAE embarked on formalizing a comprehensive regulation on Digital Payments (Regulation issued in January 2017) in support of providing a conducive digital payment operating environment. This move was also taken as a step to support the Smart Government initiatives launched by the UAE particularly focusing on e-Govt and m-Govt strategies.

At the regional level, CBUAE continues its involvement in the regional payment initiative i.e. GCC-RTGS project. This project aims at enabling real-time processing of cross border payments among GCC countries using their domestic currencies. The main objective of this project is to increase the integration of domestic payment systems across all GCC countries and to enhance the effectiveness and efficiency of the already existing payment and settlement systems.

On the same note, the CBUAE continues to play a key role in supporting the efforts to integrate the Arab Regional Payment ecosystem. To this effect, CBUAE participates actively in the Arab Regional Payment System project that envisages integrating the clearing and settlement of cross-border payments in the Arab region by facilitating the clearing and settlement of intra-regional cross border payments.

CBUAE currently operates the following payment systems, which continue to function smoothly and have maintained high system availability:

1. UAEFTS (UAE Funds Transfer System- the retail & large value payment system- the only RTGS system).
2. ICCS (Image Cheque Clearing System)
3. UAEDDS (UAE Direct Debit System)
4. WPS (Wages Protection System)
5. UAE Switch- for switching ATM withdrawals of debit cards issued by different banks in the country

[Please Rate this Report](#)

UAE Funds Transfer System (UAEFTS)

The UAEFTS system continued to perform smoothly in 2016 at 100% availability. The total number of bank-to-bank transfers were around 433 thousand with a turnover of 7.1 trillion. The volume showed a marginal increase of 4.84% from the previous year whereas the total transaction value was 9.49% more than the previous year.

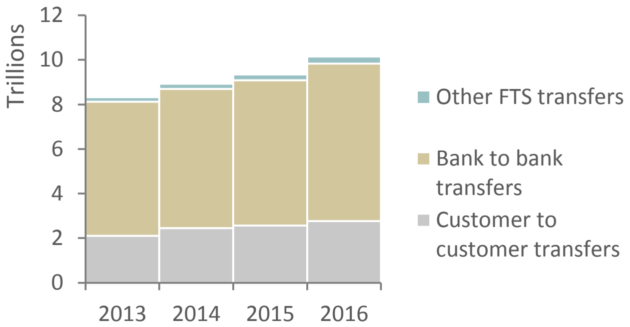


Figure 75. Value of transactions in the FTS system

Image Cheque Clearing System (ICCS)

The ICCS reduces the dependence of the payment infrastructure on physical movement of paper and therefore facilitates shorter clearing and settlement cycles. It also facilitates quicker realization of funds on these items. In the year 2016, value of cheques presented through the system increased 31%, while the share of dishonoured cheques increased from 4.2% to 4.8%.

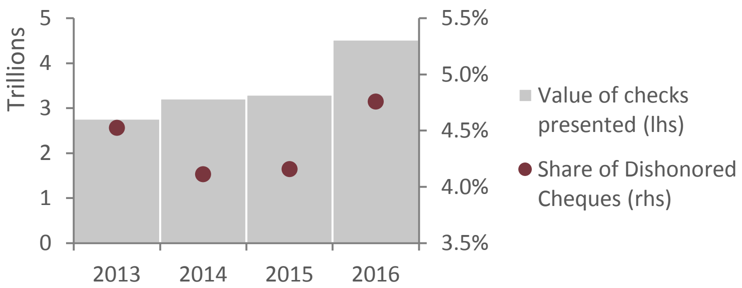


Figure 76. Performance of the ICCS system: total value if presented checks and share of dishonoured checks (%).

UAE Direct Debit System (UAEDDS)

The amount of presented claims increased two fold in 2016, to approximately 25 billion, with share of dishonoured claims rising as well to about 45%.

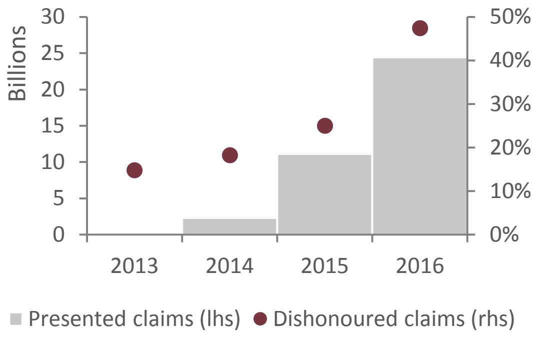


Figure 77. Presented claims and share of dishonoured claims the DDS

Wages Protection System (WPS)

The objective of WPS is to provide a safe, secure, efficient and robust mechanism to streamline the timely payment of wages to employees. Usage of the WPS improved over 4 years, with the value of transactions gradually increasing.

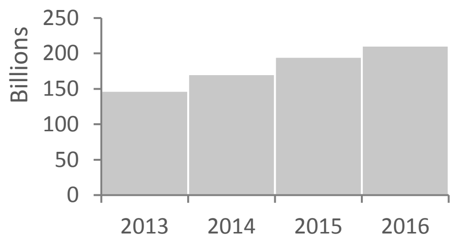


Figure 78. Value of transaction on WPS

UAE Switch

Use of the network has grown over the years so that during 2016, monthly transaction volumes are over 1.7 million balance enquiries and 9.2 million cash withdrawals worth 132.6 billion.

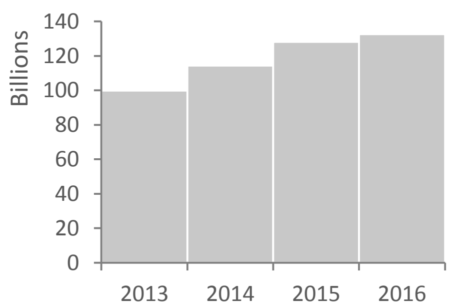


Figure 79. Cash withdrawals made by UAE card holders in the UAE.

Payment Cards in the UAE

The CBUAE has made relentless efforts in improving the security measures for payment card usage and minimizing the number of card frauds in the UAE. In this direction, the CBUAE mandated that all cards issued in the UAE must comply with EMV standards with Chip & PIN technology. While almost all the back-end systems and POS terminals have become fully compliant with EMV requirements, there have been significant improvements in issuing/re-carding the debit, credit and prepaid cards issued in the UAE. In 2016, share of prepaid cards that were compliant with the EMV standards have increased, from 26% in 2015 to 29% in 2016.

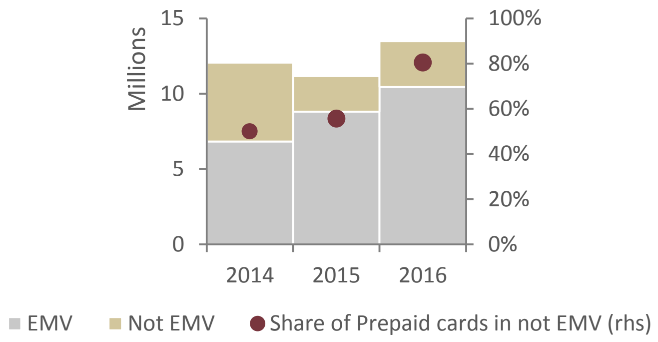


Figure 80. Number of EMV and not EMV compliant cards issued (credit, debit and prepaid) and share of prepaid cards among EMV cards

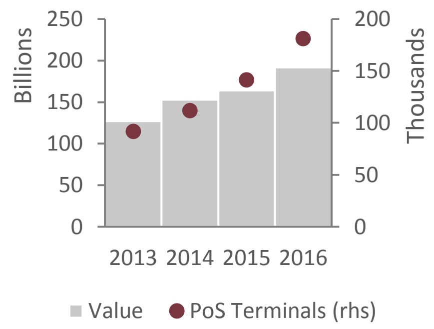


Figure 81. Value of PoS transactions and number of PoS terminals

CBUAE identified two systems i.e. UAEFTS and ICCS as systemically important and started implementing various risk management measures in order to render them safe, resilient and sound. In 2016, the Payment System Oversight Unit of the CBUAE assessed the two systems based on the assessment methodology introduced by the BIS as per the PFMI of 2012. The overall assessment conducted by the CBUAE of the major payment systems using the PFMI 2012 assessment methodology shows that these systems are relatively sound, and are not a source of any potential risk that might affect the stability of the financial system in the country.

Various actions have been taken by the CBUAE and the banking community to reach the above results. A list of measures is included below:

a) The operating time window is set such that the retail customers can make funds transfer up to 4.30 PM on a working day and the interbank funds transfer can be completed up to 5.30 PM. This measure helped the participant banks to adequately fund their settlement account and avoid liquidity and settlement risk.
b) All other net settlement systems including the ICCS system close before the UAEFTS settles thereby all the participants have ample time and opportunity to arrange for liquidity should there be a need for additional funds in their currents accounts maintained with the CBUAE.

c) The deadline for participants to avail intraday credit facility including overdraft in their current accounts maintained with the CBUAE is up to 5.30 PM. This is to further reduce the liquidity constraint of participants who have net obligations in settlement of their commitments under various other net settlement systems.
d) In addition to the regular overdraft facility availed by the participants, the CBUAE permits USD/AED swap facility for Dirham liquidity. Such swap arrangements involved a simultaneous sale and forward purchase of USD against the purchase/forward sale of equivalent dirham amount for a fixed term at specified forward rates.
e) Participants can also sell USD currencies and get dirham credits to their current account to manage their liquidity requirements.
f) CBUAE issued Certificate of Deposits (CDs) and Islamic CDs can also be used by eligible participants to access liquidity directly with the credit going to their current accounts. The terms for such repos are overnight, one month and three months.
g) Eligible participants can also avail Interim Marginal Lending Facility (for conventional banks) and Collateralized Murabaha Facility (for Islamic Banks) by pledging approved securities in favour of the Central Bank. For this purpose, they can pledge the securities through a tripartite agreement with Euroclear Bank SA/NV in Belgium and Clearstream Bank SA in Luxembourg.
h) The CBUAE has implemented a comprehensive default management procedure for ICCS. This is to help the CBUAE to avoid any systemic risk in the payments area even in the case of a bank becoming bankrupt and failing to meet its commitments under ICCS. Such procedures for the RTGS system (UAEFTS) will be introduced in the year 2017.
i) As a part of enhancing the governance process for all the payment infrastructures it operates, the CBUAE has established Consultative Working Groups (CWGs) for each payment system. The groups' responsibilities extend to reviewing the existing operating terms and conditions of the payment system they represent besides suggesting appropriate measures to improve the safety and resilience of the payment system.
j) In order to discipline erring participants who are in breach of the rulebook terms and conditions of each payment system, the CBUAE enforces a noncompliance fee for each occasion of such violation. This serves as a deterrent to all the erring members and results in significantly reducing the number of violations.

Major Achievements accomplished during 2016

In 2016, many actions and initiatives were undertaken towards enhancing the various payment and settlement systems currently operated by the CBUAE in order to increase the efficiency of the non-cash government payments, and to provide the necessary infrastructure to support innovation and diversity in the different payment channels. The most important accomplishments are:

a) The CBUAE has successfully issued the regulatory framework on Stored Values & Electronic Payment Systems effective from January 2017.
b) Expanded the activity of the UAE national switch for ATM transactions (UAE Switch) by linking with China Union Pay Network. This facilitated cards issued by the majority of banks in China to use the ATM network of the UAE in a very smooth, speedy and efficient manner.
c) The CBUAE successfully launched the phase 1 of the UAE Payment Gateway system that allows the processing of E-Commerce transactions at merchants level by using current and

savings accounts held in any bank in the UAE without a need for bilateral agreements between the two sides. The onboarding of merchants and banks in this system is progressing and the work towards finalizing the requirements for phase 2 of the project has been engaged with the target for 2017 to enable using cards in the payment of e-commerce transactions.

d) The CBUAE supported the implementation phase of the GCC RTGS system that will link the payment systems in GCC countries. The CBUAE worked towards achieving the milestones set in the regional project. The solution provider was selected and the project kicked-off.

e) The CBUAE has signed an MOU with Emirates Identity Authority to develop, improve and simplify the procedures for authenticating and validating customers' identity by relying only on the ID card issued by the Emirates Identity Authority as a major source of identification in the field of financial services provided by banking institutions in the UAE, with the objective of enhancing and diversifying these services.

f) In cooperation with the financial community in the UAE, the Central Bank undertook many improvements in certain payment processing procedures in payments systems via UAEDDS, UAEFTS, ICCS and WPS towards increasing the efficiency of these systems and the benefit of the end users.

g) CBUAE provided its full support towards enabling the active participation of federal ministries and other government agencies in the UAEFTS to directly process their payment orders through the system. The objective being the electronic transformation of services proposed by these institutions and improving the efficiency in the processing. During 2016, nearly the entire payments flow from the Ministry of Finance was directed through the UAEFTS, while other ministries are in the process.

New initiatives planned for 2017

The Central Bank's priorities in payment systems field for the year 2017 are:

a) To have a contingency planning to encompass the management of operational risk more broadly, including cyber risk. The emphasis is on operational risk and the appropriate framework through which it can be evaluated.

b) In order to initiate the implementation of the new regulatory framework for Stored Values and Electronic Payment Schemes effective 1st January 2017, the CBUAE is poised to engage with the market players according an established agenda towards licensing them based on the nature of their solutions and the type of services offered to the public. The process will be done progressively with the objective to ensure the digital payments market comes under a well-established regulatory framework.

c) With the focus on integrating various payment processes in the UAE, the integration of cash leg portion of the securities settlement in UAEFTS, the only RTGS payment system of the country.

[Please Rate this Report](#)

Regulatory Developments

Basel III Capital Accord Implementation

Summary: *As part of the Central Bank commitment to fully implement the Basel III capital standards in the UAE by the end of 2018, The Central Bank published "Regulations re Capital Adequacy" that created the foundation of Basel III capital framework, strengthening the capital quality and introducing capital buffers on top of the minimum capital requirements.*

Ensuring Capital Adequacy of Banks

Capital Adequacy is a key pillar for ensuring the safety and soundness of banks. The Central Bank required until 31st January 2017 all banks operating in the UAE to comply with the Basel II Standardized approach in assessing their regulatory capital adequacy. This includes a thorough review of the Central Bank's Pillar II responsibilities as regards the ICAAP (Internal Capital Adequacy Assessment Process).

The Central Bank has now published a new Basel III compliant Capital Adequacy Regulation, which is effective from 1 February 2017. The Central Bank has also developed a Basel compliant framework for Domestic Systemically Important Banks (D-SIBs). The designated D-SIB banks are required to hold an additional capital buffer on top of the Basel III minimum and buffer capital requirements.

Credit Risk

In the UAE regulatory framework, banks use the standardized approach for regulatory reporting. From a Credit Risk Weighted Asset (RWA) perspective, the most dominant assets class is Claims on Corporates which accounts for approximately 40% of the total credit RWA.

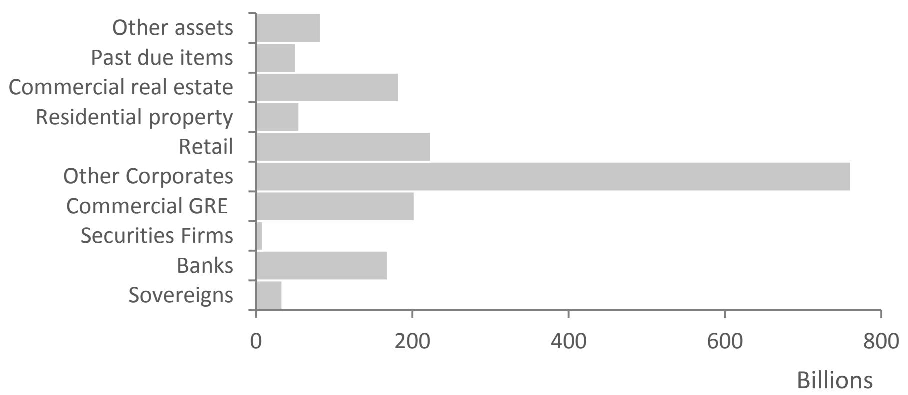


Figure 82. Credit RWA: Asset wise Classification

As of 2016, there has been no significant change in the collective distribution of RWA among banks in the UAE. During 2016, claims on corporates still remain the highest followed by claims on retail and claims on commercial GREs.

Please Rate this Report

Market Risk

Banks in the UAE have traditionally had limited exposure to Market Risk due to the lack of large proprietary books as well as a policy of customer driven matched deals or fully hedged positions, however, this is changing. Under the regulatory framework employed in the UAE, banks use the standardized approach in assessing market risk under Pillar I and their individual internal models are assessed under the ICAAP review.

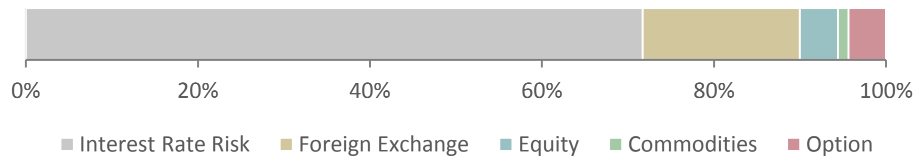


Figure 83. Market Risk: RWA Classification

The largest market risk type is interest rate risk which is 72% of the total market risk equivalent weighted assets followed by foreign exchange risk which is 18%.

Operational Risk

Based on the regulatory framework employed in the UAE, banks implement the following approaches to calculate the equivalent risk weighted assets relating to operational risk:

1. Basic Indicator Approach (BIA)
2. The standardized approach

Of which 66% implement the Basic Indicator Approach.

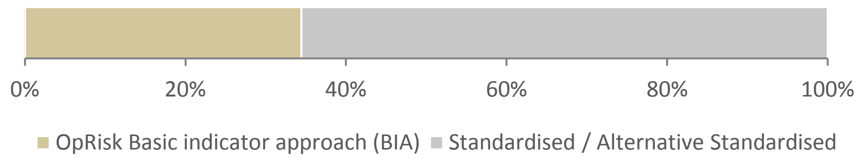


Figure 84. Operational Risk

Capital Composition

During 2016 banks have issued further Tier 1 capital all of which will be eligible to meet Basel III requirements when published in 2017. As for 2016, the composition of capital is 91% comprising of Tier 1 and 9% as Tier 2 after deductions.

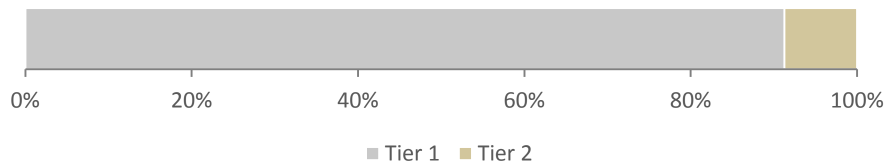


Figure 85. Capital Decomposition

Please Rate this Report

Basel III Capital Adequacy Regulation

The Central Bank is fully committed to implement the Basel III capital standards in the UAE by end 2018. The major Central Bank policy for driving the full Basel III capital implementation in the UAE and setting out the new capital adequacy framework for banks was published in early 2017. The 'Regulations re Capital Adequacy' create the foundation of the Basel III capital framework in the UAE, strengthening the capital quality and introducing capital buffers on top of the minimum capital requirements.

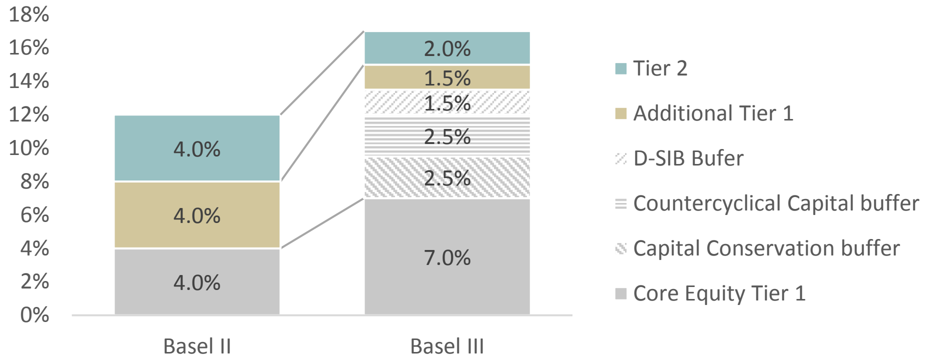


Figure 86. Basel II and Basel III Capital Requirements

The Central Bank developed also a new framework for identifying Domestic Systemically Important Banks, which is planned for publication in Q2 2017. All capital requirements will be phased in from 2017 till 2019:

Table 1. Minimum Transitional Arrangements

Capital Element	2016	2017	2018	2019
Minimum Common Equity Tier 1 Ratio	-	7.0%	7.0%	7.0%
Minimum Tier 1 Capital Ratio	8.0%	8.5%	8.5%	8.5%
Minimum Capital Adequacy Ratio	12.0%	10.5%	10.5%	10.5%
Capital Conservation Buffer	-	1.25%	1.875%	2.5%
Domestic Systemically Important Banks Buffer; in percentage of individual capital surcharge	-	50%	75%	100%
Countercyclical buffer:				
possible	-	0% - 1.25%	0% - 1.875%	0% - 2.5%
actual value	-	0%		

The Central Bank has developed a formal work programme to engage with banks to manage the implementation process of Basel III, in line with the following timeframe:

- (1) Pillar 1 Capital Supply Standards, (2) Pillar 1 Capital Requirements Standard and (3) Leverage Ratio Regulation in 2017
- (4) Pillar 2 Standard and (5) Pillar 3 Standard in 2018

The capital standards will define in detail the Tier capital components, the consolidation, capital deductions and transition periods. This will also include minimum requirements for Tier capital issuances in the UAE. The Pillar 1 capital requirements will complement and finalise the Basel III compliant Pillar 1 implementation.

The capital regulation and standards are complemented by a Leverage Ratio that serves as a backstop to the capital measurement under Pillar 1, and is intended to constrain excess leverage in the banking system and provide an extra layer of protection for banks.

The Pillar 2 and Pillar 3 standards form part of the Basel III framework and will be implemented by end of 2018.

Domestic Systemically Important Banks Framework

Summary: *The CBUAE developed domestic systemically important banks (D-SIBs) methodology as part of the Basel III implementation in the UAE. The CBUAE identified three banks as systemically important, with different capital surcharges phased-in over the next three years.*

Methodology

The Domestic Systemically Important Banks (D-SIBS) framework issued by the Basel Committee for Banking Supervision (BCBS) in October 2012 is the guide in developing a methodology for the UAE. The framework is principles based and deviations to accommodate domestic circumstances are acceptable.

The CBUAE developed a specific methodology that assesses the impact of a bank failure on the UAE economy. The assessment covered national banks at their consolidated group level; while foreign banks were assessed at their UAE branch level.

Table 2. List of UAE D-SIB criteria and indicators

D-SIB criteria and indicators	
Size (weight 30%)	Bank's share of consolidated assets to total banks consolidated assets.
Interconnectedness (weight 25%)	Bank's share of interbank domestic assets relative to total banks interbank domestic assets. Bank's share of interbank domestic liabilities relative to total banks interbank domestic liabilities.
Substitutability (weight 25%)	Bank's share of number of resident deposit accounts (Government, GREs and Private) to total banks number of resident deposit accounts. Bank's share of number of resident consumer loans to total banks number of resident consumer loans. Bank's share of number of payment settlements to total banks number of payment settlements.
Complexity (weight 10%)	Bank's share of total banks derivatives net notional amount. Bank's share of total banks holding of traded and available for sale securities. Bank's share of total banks Market Risk Weighted Assets. Bank's share of cross border assets.
Supervisory overlay (weight 10%)	Bank's share of exposure to its top borrower to total banks top borrowers' exposures.

D-SIBs assessment considered all of the four criteria recommended by BCBS – size, interconnectedness, substitutability, complexity. In addition, one criterion – supervisory overlay – was added to adjust for the UAE local market characteristics.

The score of each indicator is weighted equally across each criterion to arrive at the criterion total score. To obtain the total D-SIB score, the weight applied to each criterion were 30% for size, 25% for interconnectedness and substitutability, and 10% for complexity and supervisory overlay.

Clustering statistical methods and benchmarking with international and regional practices were used to assess the optimal quantitative thresholds to identify banks with higher loss absorbency requirements. A cut-off score of 600 out of 10,000 basis points (bps) was applied to classify banks as D-SIB. To determine capital requirements for individual classified institutions 600bps wide buckets were identified that correspond to additional capital requirements

The assessment methodology will be reviewed annually. The indicators used and the buckets will be revised in line with the changing nature of the banks' activities as well as depth and breadth of data available to the CBUAE.

Regulatory Implications

To ensure higher level of loss absorbency D-SIBs are subject to higher capital requirements. Depending on the bucket the banks will be required to hold from 0.5% to 2% additional Common Equity Tier I (CET1) starting 2019 when Basel III capital requirements are fully implemented in the UAE with a transitional period as of 2017.

Table 3. Minimum transitional arrangements

Bucket	Score Range	Basel III 2017 (50%)	Basel III 2018 (75%)	Basel III 2019 (100%)
Bucket 1	601 – 1,200	0.25%	0.375%	0.5%
Bucket 2	1,201 – 1,800	0.50%	0.75%	1.0%
Bucket 3	1,801 – 2,400	0.75%	1.125%	1.5%
Bucket 4	2,401 – 3,000	1.0%	1.5%	2.0%

In addition to capital requirements those institutions designated as D-SIBs will be subject to stricter supervisory regime. Such supervisory implications may include, but not limited to:

- stricter liquidity requirements,
- recovery planning,
- enhanced / additional disclosure and reporting, and
- more intense and more frequent on-site and off-site supervision.

Please Rate this Report

Regulatory Stress Testing Framework in the UAE

Summary: *The CBUAE has developed a regulatory stress-testing framework to provide a quantitative, forward-looking assessment of the capacity of UAE banks to withstand a severe yet plausible deterioration in macro-economic conditions. The framework covers credit risk and market risk and is conducted through the top-down stress test and bottom-up stress test. Short term liquidity stress test is covered in the banking sector section.*

Introduction and Overview

The regulatory stress testing was introduced in the UAE in 2015. The CBUAE uses macroeconomic stress testing to assess the resilience of the banking system to major macroeconomic shocks and to identify potential vulnerabilities within the banking sector. Stress testing complements other tools developed by the CBUAE in its analysis of idiosyncratic and systemic risks and spillover impacts.

The CBUAE uses both top-down stress test and bottom-up approaches to assess how banks' portfolios react to given macro-economic scenarios and to provide a quantitative, forward-looking assessment of the capital adequacy of individual banks.

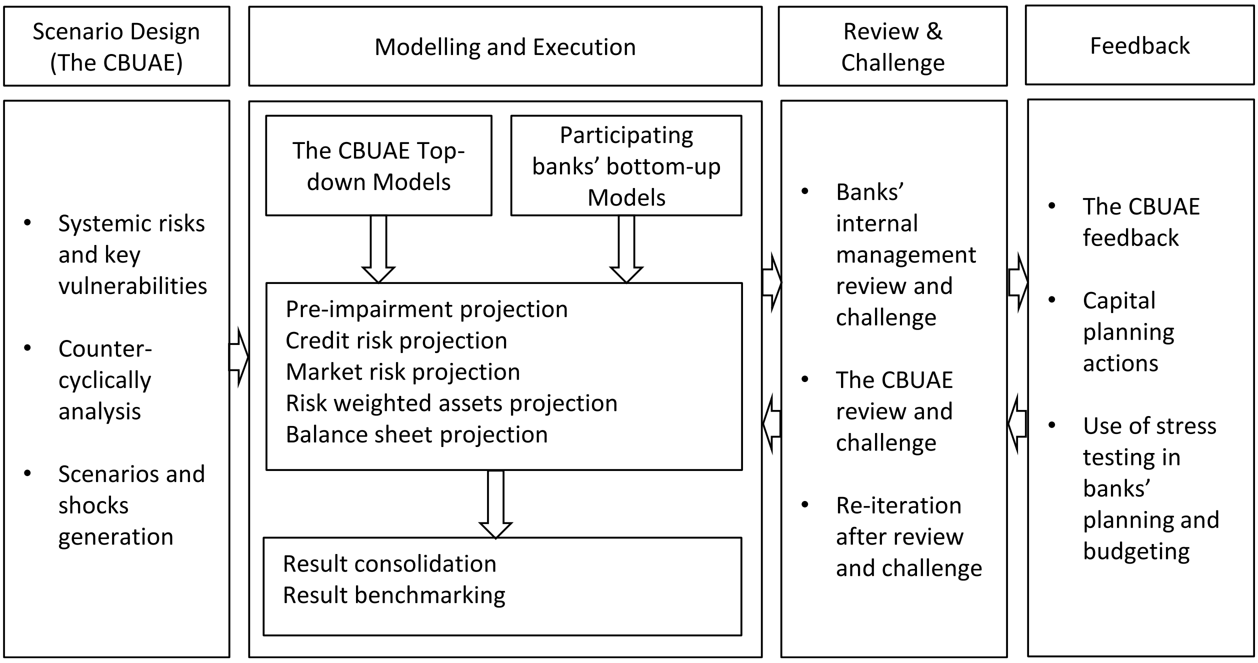


Figure 87. The CBUAE Stress Testing Framework

In the top-down stress testing approach, the CBUAE applies uniform and consistent model assumptions to assess the impact of a scenario on banks' capital adequacy. However, the top-down stress test might not fully capture some specific characteristics of individual bank portfolios due to the limited granularity of the data collected. It is therefore necessary, that banks perform their own stress test using the macro-economic scenarios provided by the CBUAE. This approach recognizes that banks are in the best position to assess the impact of stress scenarios on their own portfolios. The two types of stress tests complement each other and provide a more complete picture on possible shortage of capital.

The Purpose of the Stress Test

The regulatory stress tests serve the purposes to facilitate analysis of the financial stability in the UAE banking sector. Stress tests are conducted on an annual basis across the UAE banks. The assessment builds banks capabilities on capital planning to prepare for severe yet plausible economic conditions and ensure sufficient capital adequacy at both system-wide and individual-institution level.

One of the financial stability objectives of the CBUAE is to identify, monitor and take actions to reduce systemic risks and enhance resilience of the financial system. The stress tests provide a mechanism through which the CBUAE can achieve its financial stability objective. In the scenario design phase, possible material threats to UAE banks are considered. The results of stress tests provide useful information on how well banks are capitalized to withstand adverse market conditions. Policy interventions to recapitalize banks failing the test improves resilience of the financial system. The stress tests improve the public understanding of the range of severe conditions that banks are able to withstand and strengthen market confidence in the banking system. Finally, it provides an integrated process for decision-making on bank capital adequacy which improves risk and capital management practices within banks.

Scope and Risk Coverage

Under the framework only UAE national banks are included in a stress test.

In the current state of development of the stress testing framework, the CBUAE focuses on solvency stress testing, i.e. the impact of macroeconomic scenario on banks' capital adequacy ratios. The predominant risk for UAE banks is credit risk in the banking book which account for approximately 90% of total risk weighted assets in 2016. Given the importance of market risk in the trading book and banks' investment portfolio, these risks will be covered in the 2017 stress test. In addition, the CBUAE is developing a liquidity risk stress testing framework by incorporating multi-year macroeconomic scenarios.

Scenario Design

The first stage in a stress test is to design severe yet plausible scenarios. The two most important steps are (1) identification and selection of a set of risk factors to be explored by the test and (2) calibration of the severity of shocks.

A common set of scenarios is applied to all banks. These would include a baseline scenario and an adverse scenario. The CBUAE uses financial stability surveillance and economic research to identify relevant risk factors in a stress test. The baseline scenario incorporates the CBUAE economic forecast and assesses banks' capital adequacy under normal market conditions, whereas the adverse scenario explores a range of risks that are the most material threats to the UAE banking sector.

One of the principles of designing an adverse scenario is to take into account the cyclical nature of credit and financial markets. The severity of an adverse scenario should be in line with the level of risks in the markets, i.e. less severe at the bottom of a cycle and more severe at the top of a cycle.

Please Rate this Report

Box 3: 2017 UAE Stress Test Adverse Scenario

The theme of the 2017 UAE stress test adverse scenario is **Monetary Tightening and Global Economic Slowdown.**

The narrative of the scenario is the following:

- Positive job data and higher than expected inflation lead to a sudden and more significant than expected monetary tightening by the FED. Global capital markets react negatively to tightening and confidence deteriorates sharply.
- Furthermore, trade conflicts between major economies results in weakening demand for oil and other commodities.

Monetary tightening and trade conflicts have the following impact on the UAE economy:

- Lower foreign capital flows and tighter credit conditions hurt corporate and consumers demand growth in the UAE.
- Oil price decreases caused by weak demand (strong dollar to some extent) and global economic slowdown.

UAE economy is affected by lower oil price and weak export/tourism due to a strong dollar.

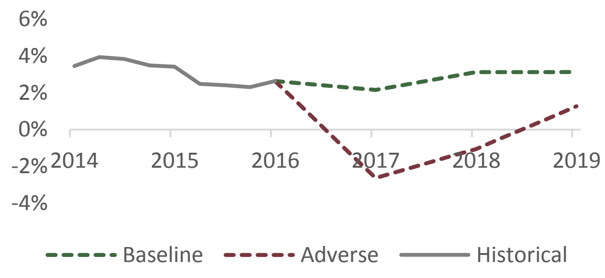


Figure 88. Real GDP growth proxy. ECI is used from Q4 2014 - Q3 2016, while Real GDP growth is used from Q4 2016 - Q4 2018

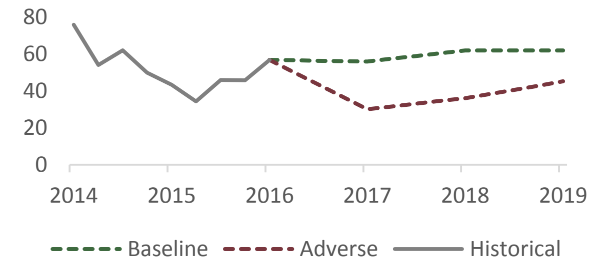


Figure 89. Oil price (USD/barrel). Based on ICE Brent Bloomberg commodity price forecast.

Table 4. Selected market risk shocks

Interest rate	
AED and USD	+200 bps
The rest of the world	+100 bps
Foreign Exchange	
JPY	+10%
The rest of the world	-10%

Stress Testing Modelling

Bottom-up stress testing models

The advantage of a bottom-up stress test is that banks have access to granular data and high degree of understanding of the characteristics of underlying portfolios being assessed.

The CBUAE expects that each participating bank uses a suite of quantitative models to translate these scenarios into impacts on banks' profitability and capital ratios. The risk types including credit risk in the banking book, market risk in the trading book and investment portfolio should be covered in the modelling process. In addition, pre-impairment profit needs to be linked to given macroeconomic scenarios. Besides quantitative models, the CBUAE expects that banks' judgment and expert overlay play a role in model building process and in combining stress testing results. Using purely mechanical rules is not sufficient especially when these rules contradict economic theory.

The purpose of the bottom-up stress test is also to encourage banks to incorporate stress testing to their risk management framework. The stress testing analysis should be used for risk identification and control to complement other risk management tools, and contribute to capital planning.

Top-down stress testing models

The CBUAE employs a suite of stress testing models to ensure consistency of results from bottom-up stress test across all participating banks. Credit risk models use econometric techniques to link probability of default of relevant asset categories and macroeconomic variables. Market risk on the other hand uses full revaluation data derived from banks pricing models. The CBUAE continues to improve its capabilities and develops new models.

Stress Test Review and Challenge

Under the stress testing framework, participating banks should have a thorough internal governance and review process to ensure the quality of the stress testing results. Banks need to document the methodologies and key assumptions made in deriving the stress testing results. Sufficient internal challenge on assumptions and key judgments used to translate scenario shocks into projected losses should be documented. Independent audit and model validation should be performed by banks on their models and processes.

The engagement of banks' senior management is also important in the review process. Senior management needs to identify any realistic management actions that could be taken to maintain or restore their capital adequacy in a stress scenario.

The CBUAE Feedback and Policy Actions

Each participating bank needs to provide the CBUAE with sufficiently granular outputs and qualitative explanatory information to allow a detailed review. The results submitted by banks are compared with the CBUAE internal calculation and benchmarked to their peers. The CBUAE would make final decision on policy actions against capital shortage either through new capital issuance or revised dividend distribution plan. The aggregate results will be disclosed in the Financial Stability Report from 2018 onwards. The disclosure of aggregate stress testing results can help stakeholders understand the reasons for the CBUAE policy actions and ensure market confidence in the UAE banking sector.

Please Rate this Report

IFRS 9

Summary: *The IFRS 9 brings structural accounting changes related to the classification, measurement and impairment of financial assets that will affect the banking industry in the way it provisions and classifies its loans and investments. A proper and consistent application of the new standard will take effect as of January 2018.*

IFRS 9 – Background

The International Accounting Standards Board (IASB) has made substantial changes to their requirements in respect of the classification and measurement of financial instruments as well as measurement of impairment on financial assets measured at amortized cost ("financial assets") under the new accounting standard - IFRS 9: Financial Instruments. IFRS 9 was issued in 2009 and effective date is January 1, 2018.

IFRS 9 mandates major changes in three main categories of accounting for financial instruments:

Classification and Measurement of Financial Assets

Examples of financial assets that are impacted by this standard include corporate, commercial and all retail loans including mortgages, equities, bonds (fixed income), derivatives (e.g. stock options; swaps), and foreign exchange positions. Financial assets will be measured at either amortized cost or fair value depending on the type of cash flows generated and the business model used.

Impairment & Staging

IFRS 9 replaces the "actual incurred loss" accounting model for credit deterioration with an "expected credit loss" model that requires forecasting/projection of loss allowances for loan portfolios based on various risk and economic factors. The type of expected loss calculations (projections) required depends on the degree of credit deterioration of each individual financial asset (e.g. loans), with three stages of deterioration (impairment) defined.

Under IFRS 9, institutions will be required to move from a backward looking incurred loss-provisioning model under IAS 39 to a forward-looking expected loss based provisioning model. The 'three stage' expected credit losses (ECL) model applies as follows at the end of each reporting period:

- Stage 1: Credit risk has not increased significantly since initial recognition – recognize 12 months of ECL.
- Stage 2: Credit risk has increased significantly since initial recognition – recognize lifetime ECL.
- Stage 3: Financial asset is credit impaired – recognize lifetime expected losses.

Hedge Accounting

Improvement areas under IFRS 9 include a greater number of accepted types of hedge transactions, less P&L volatility resulting from hedge accounting, and significantly simplified methods for testing and accounting for the effectiveness of hedges that is more aligned with risk management needs.

IFRS 9 and Financial Stability

Loan loss provisioning will have an effect on financial stability only to the extent that it has an influence on banks' real decisions in terms of investment, funding, and dividend policies. Earlier and higher reported loan losses would reduce a bank's reported earnings and equity capital, which in turn, may induce a bank to undertake a combination of issuing new equity capital, reducing its dividends, and reducing its risky investments, conservative actions that it otherwise might not undertake. These actions reduce the risk of bank failure and not the change in the reported loan losses under IFRS 9.

IFRS 9 is more closely aligned with bank supervision objectives, incorporates earlier and larger impairment allowances, and thus, is likely to mitigate the procyclical tendencies of the IAS 39 incurred loss approach. Combined with improved transparency, IFRS 9 might enhance financial stability. However, the potential benefits of the standard will crucially depend on its proper and consistent application.

Key Challenges for UAE institutions

Complexity

IFRS 9 implementation is a complex exercise, requiring coordination on a group level as well as coordination of several departments within local entities and allocation of sufficient staffing capacity. Institutions in UAE will need to dedicate sufficient resources and time into developing an appropriate approach and its systems.

Data

IFRS 9 implementation will be demanding in terms of retrieving both historical data (used for recognition of credit deterioration) and data for the forward-looking element of impairment.

Modelling

Calculation of lifetime and 12-month expected credit losses for the entire portfolio would require the institutions to adjust the current and/or build new PD, LGD and exposure models. Models will need to be validated and tested in advance to prove reliance. Consistency in application of assumptions in the modelling process will be an issue for the industry and the regulator alike.

Disclosures

New extensive disclosures will be required to improve comparability of information provided by different entities. These disclosures will be very demanding on data necessary to comply with all requirements.

[Please Rate this Report]

Central Bank of UAE initiatives

IFRS 9 initial impact assessment & discussions with Auditors

The Central Bank of the UAE requested UAE Banks & Financial Institutions to assess the impact of the introduction of IFRS 9 and assess their preparedness to meet the effective date of implementation of January 1, 2018. CBUAE issued circular 89/2016 on May 10, 2016 where all banks and finance companies were required to perform a high level quantitative impact analysis (QIA) as at March 31, 2016, and report their estimated financial impact on the impairment charge and regulatory capital due to additional provisioning requirements. Additionally, the banks and finance companies were required to provide an assessment of the incremental costs for system implementation, policy changes and anticipated increase in staff costs. All institutions were required to submit their initial impact, after review by an auditor, to the Central Bank by November 30, 2016 for assessing a consolidated impact on the UAE banking sector. Based on the inputs received from the banks and finance companies a consolidated impact was prepared for initial review and assessment.

In summary, most of the larger banks were better placed in ensuring readiness by the implementation date while some of the smaller institutions faced a greater challenge.

IFRS Workshop

CBUAE hosted an IFRS 9 workshop over 2 days on August 1 and 2, 2016 for all banks and finance companies. Representatives from the institutions' Finance and Risk Departments attended the workshop.

The workshop was delivered by KPMG, EY and the CBUAE. The agenda included a background of IFRS 9 requirements, the business and technical implications, the challenges facing the industry, the road to implementation of IFRS 9 and the regulatory view and impact on capital.

CBUAE action plan

The CBUAE intends to continue to require banks to hold a general provision of 1.5% of Credit Risk Weighted Assets until the implementation of IFRS 9 by the institutions in UAE is fully implemented to the satisfaction of the Central Bank.

The CBUAE will perform further reviews of the banks implementation plans as part of the 2017 examination program to assess readiness of institutions.

The CBUAE will also continue to co-ordinate with the audit firms to ensure that institutions will be ready for the 2018 implementation.

Please Rate this Report

The Insurance Sector[25]

In continuation of the legislative framework of the insurance sector in the UAE, and the new regulatory decisions aiming to enhance the competitive environment of the UAE insurance sector and develop its status regionally and globally, and to facilitate the implementation of legal procedures that serve the economic development and contribute in developing the performance of the insurance sector into more advanced and developed levels. In order to promote the insurance sector's legislative environment, the Insurance Authority has completed a set of legislations during 2016 that regulate insurance activities in the UAE insurance market, the most important of which are:

Separation between insurance of persons and property insurance

The Insurance Authority Board of Directors' Decision No. 10 of 2016 has regulated the instructions related to existing companies, which combine the insurance of persons and fund accumulation with property and liability insurance. The decision states that such companies shall fully separate between the insurance of persons and fund accumulation and the insurance of property and liability in terms of the technical, financial, technological, administrative, and legal procedures and the related regulations, operations, technical, administrative, and financial cadres with the exemption given to the general manager of the company. It also states that such companies shall prepare all the reports and financial statements on a unified basis and on a separate basis for the insurance of persons and fund accumulation operations and the insurance of property and liability operations.

Revision of Pricing Policy

The Insurance Authority Board of Directors issued its Decision No. 11 of 2016 concerning the pricing policy applied by insurance companies in the classes of property and liability insurance. The decision has resolved that insurance companies that transact the business of property and liability insurance should revise their pricing policy, and explain the principles and rules adopted in setting the prices, assess such policy and submit proposals for the amendment thereof, if necessary, by an Actuary licensed and registered with the Insurance Authority.

According to the Decision, the company must review and assess its pricing policy twice in each fiscal year. The first revision shall be made by the end of the first half of the year, and the second revision at the end of December.

The report of the Actuary on the revision and assessment of the pricing policy of the company shall include as a minimum the following:

- Determine the adequacy of the risk factors taken into account when setting the prices.
- Determine and examine the adequacy of the ratios of general and administrative expenses, ratios of re-insurance expenses and other expenses of third party administrators taken into account within the prices charged.

[25] Contributed by the Insurance Authority.

- Disclose the specific profit margin in the price.
- Assess the process used in taking into account the claims' history when setting the prices and disclosing the expected inflation ratios, in addition to determining the process of establishing the provision for the incurred but not reported claims.
- Examine the adequacy of the prices of each insurance product separately.
- Assess the impact of the pricing policy of the company on its financial position.
- Assess the appropriateness of the pricing policy of the company to protect the rights of policyholders and pay off the due compensations.
- Any other items which the Actuary deems necessary to perform his functions.

Elapse of Impact of the Disciplinary Sanctions

Insurance Authority Board of Directors has adopted Decision No. (12) of 2016 concerning the Elapse of Impact of the Disciplinary Sanctions imposed on Insurance-Related Professions. This will take place after the elapse of a specific period of time, depending on the type of sanction, given to respective companies to adjust their status.

Unified system for motor insurance policies

In late September 2016, Insurance Authority Board of Directors has adopted Decisions No. (30) & (31) of 2016 concerning the issuance of a unified system for motor insurance policies and motor insurance premiums. This marked a significant shift in developing regulatory bases and technical rules to enhance the performance of the UAE insurance market and motor insurance sector and protect the rights of policyholders. The decisions contain items and provisions that increase the competitiveness level of the UAE economy and are in line with the best international practices prevalent in the insurance industry worldwide.

The International Motor Insurance Conference

Under the kind patronage of HH Lieutenant General Sheikh Saif bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Interior, the UAE Insurance Authority (IA) organized the International Motor Insurance conference - under the theme of "New Insurance Concept for Better Future" which aimed to show the UAE's experience in motor insurance and the role insurance plays in reducing traffic accidents. The Conference aimed at founding a global reference to improve the insurance industry, specifically the motor insurance legal and technical aspects. It also targeted the launching of an international platform for the exchange of skills, know-how, and expertise between the key persons and industry experts, besides formulating a new concept to develop the motor insurance sector regionally and globally.

Current risks in insurance market

The Insurance Authority assesses the companies' risks by using the Solvency Margin Model approved by Insurance Authority based on the following principles:

[Please Rate this Report](#)

- To calculate the Solvency Capital Requirements based on the assumption that the company will continue operation on going concern basis.
- Solvency Capital Requirements shall be examined to make sure that the company is taking into consideration all measurable potential risks that could be faced from both current and new businesses within the next twelve month period. Solvency must correspond to the value vulnerable to risks in basic own funds of the company at a confidence level of (99.5%) over a one year period.
- The risks are limited to underwriting, investment, credit and operational risks.

Estimated risks volume during 2016 are expected to increase 25% against an increase in total premiums of 11%.

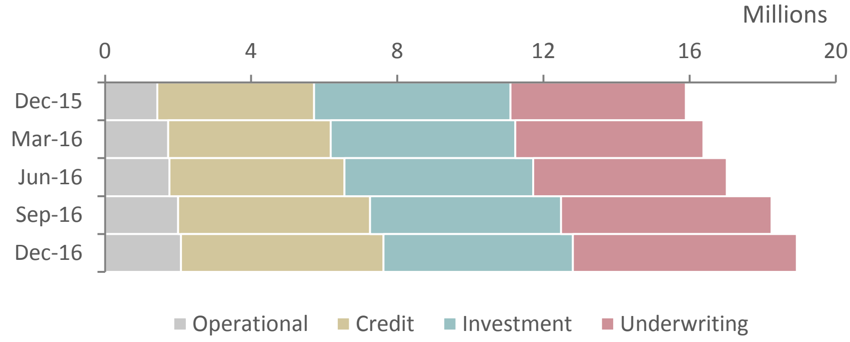


Figure 90. Risk Volumes by type of risk.

Investment risks dropped from 33.9% to 27.4% as a result of abiding by investment limits instructions. Credit risks and operational risks increased as a result of the companies abiding by accumulating sufficient provisions, which comes with the end of the deadline given to companies to adjust their statuses by the end of 2016.

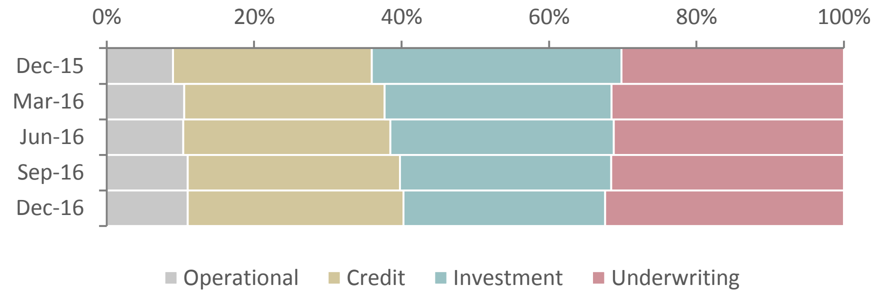


Figure 91. Risk ratios by type of risk

Please Rate this Report

UAE Stock Markets[26]

Performance of UAE Listed PJSCs

Out of 125 public shareholding companies listed in Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) 110 are UAE incorporated and 15 are foreign companies.

The total net profit achieved by UAE listed companies (in ADX and DFM) is 44.1 billion in 2016 compared to 62.9 billion achieved in 2015. The main rationale behind the sharp reduction in net profits in 2016 are losses generated in the energy sector in the sum of 18.6 billion in 2016 (2015: losses amounting to 1.3 billion). Furthermore, net profit in 2016 was also affected by declines in net profit in the banking, real estate and consumer staples sectors.

Table 5. Net profit of UAE listed companies in ADX and DFM by sector (in millions)

Sector	2015	2016	Change (value)	Change (%)
Banks	37,876	35,906	(1,970)	-5%
Consumer Staples	441	(98)	(539)	-122%
Energy	(1,265)	(18,556)	(17,291)	-1367%
Industry	1,111	610	(502)	-45%
Insurance	(144)	751	894	623%
Investment and Financial Services	1,783	1,746	(37)	-2%
Real Estate	10,576	9,946	(630)	-6%
Services	1,469	1,411	(58)	-4%
Telecommunication	10,204	11,240	1,036	10%
Transportation	843	1,098	255	30%
Total (ADX & DFM)	62,894	44,052	(18,842)	(30%)

The banking sector contributed 82% of total net profit achieved in 2016 followed by the telecommunications sector (26%), and the real estate sector (23%).

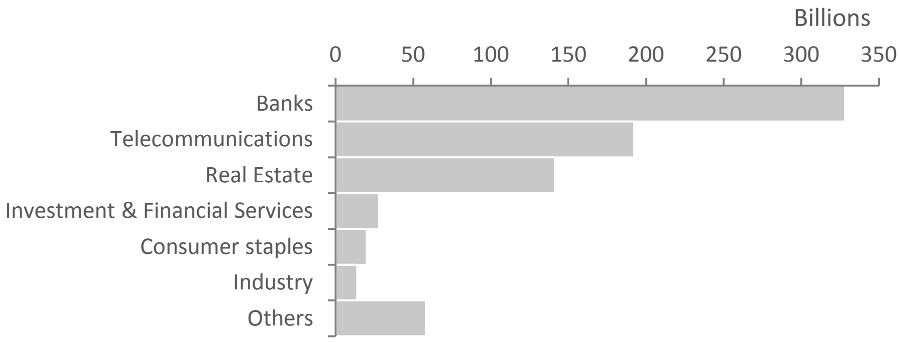


Figure 92. Market capitalization of sectors in publicly listed companies in ADX & DFM in 2016

[26] Contributed by the Securities and Commodities Authority.

The banking sector in the UAE accounted for the majority of the total market capitalization representing 42% or 328 billion as at December 2016. Telecommunications accounted for 25% or 192 billion and the real estate sector, in third place, accounted for 18% at 141 billion in 2016. Total market capitalization as at December 2016 was 781.6 billion (excluding dual listed companies).

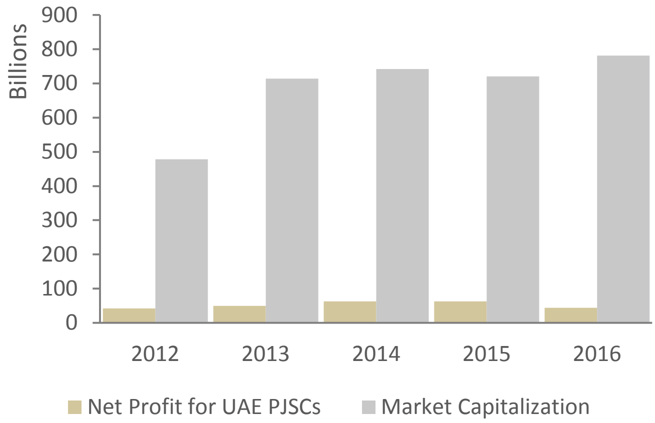


Figure 93. Net Profit and Market Capitalization for UAE listed publicly listed companies in ADX / DFM

Performance of companies listed in ADX and DFM

Both ADX & DFM indexes show similar trends in closing prices in 2016 - Although, the year started with a sharp reduction, prices have picked up and stabilized after May 2016 due to positive future outlook and policies undertaken by major oil supplying countries to increase oil prices.

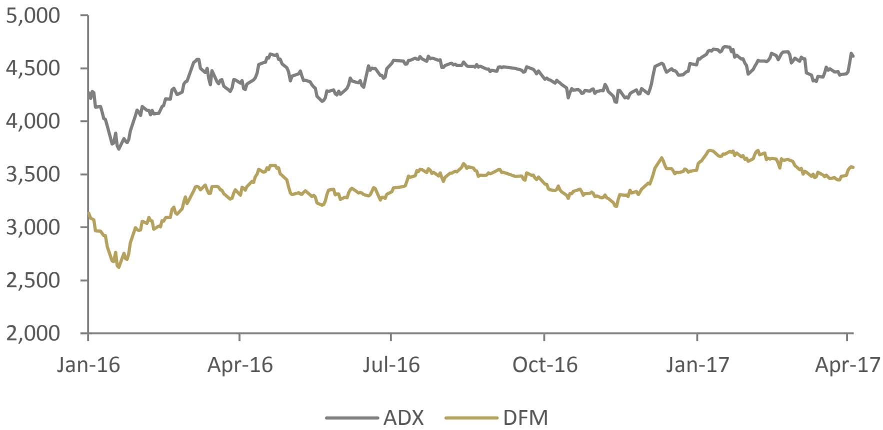


Figure 94. Performance of Abu Dhabi Exchange (ADX) and Dubai Financial Market (DFM)

DFM and ADX Trading Values and Volumes

The trading activity was heaviest in Q1 and Q4 with a subdued activity in Q3 of 2016. Furthermore, traded values on the DFM are greater than those on the ADX and contributed to the majority of trading activity in the UAE.

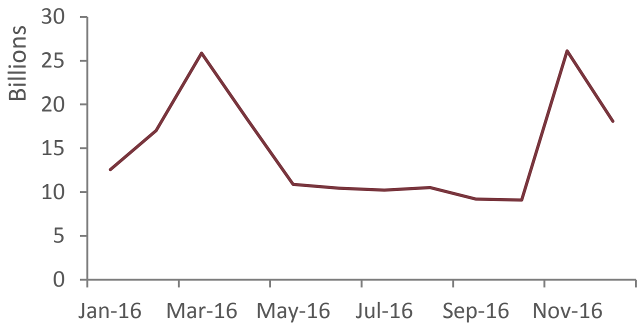


Figure 95. Total value of trades on both ADX and DFM stock exchanges during 2016

The total value of trades traded on both the ADX and DFM stock exchanges amounted to 178.3 billion from the beginning of January up until Dec 31st 2016 compared to the 209.4 billion during the same period in 2015. Heaviest trading took place during the months of March and November 2016.

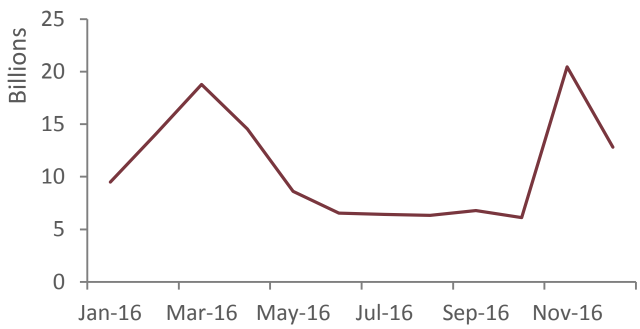


Figure 96. Total volume of trades on both ADX and DFM stock exchanges during 2016

The total volume of shares traded from January 2016 to December 2016 was 131.0 billion compared to 125.6 billion volume of shares during the same period in 2015.

Highest volume of trade was recorded in November 2016 at 20.4 billion with the lowest volume traded recorded in August 2016 at approximately 6.3 billion.

Regulatory Developments by the SCA

Capital Market Developments in the UAE during 2016

Growth in capital markets in the UAE over the past few years can be attributed to the UAE's solid institutional and legal infrastructure (including an outward-oriented trade policy, free capital mobility, intellectual property rights protection, a solid judicial and legal system, etc.) combined with a strong performance by publicly held companies, which has made the market more attractive to both domestic and international investors.

The main developments include the following:

a) Promote the competitiveness of the UAE in the financial sector to 28th place on the WEF Global Competitiveness report and to the 9th place in investor protection in the WB Ease of Doing Business report.

b) European Commission (EC) granting equivalent status to the UAE'S regulatory framework for Central-counterparties for clearing (CCPs) under ESMA's EMIR regulations
c) SCA issued regulations for the following:
   - Issuance of stocks regulations (IPO and SEO) along with underwriting and book building.
   - Registration of Auditors of Public Shareholding Companies and Mutual Funds.
   - New corporate governance rules.
   - Controls for the Publication of Names of Violators of the Authority Law and Regulations.
   - Investment Funds regulation and its appendices for specialized funds.
   - The Financial Advisory: Issuance Manager, The Management Company which is licensed by the Authority to practice the activity of establishing and management of mutual funds.
   - Regulatory controls for financial activities and services (Fit & Proper criteria).

New Grievances Committee created by SCA to promote transparency

SCA created a new committee to deal with grievances related to financial market transactions. As part of its efforts to constantly improve its procedures and promote transparency, the Securities and Commodities Authority (SCA) has enhanced its internal regulatory procedures to deal with irregularities, complaints, and grievances related to transactions taking place in UAE-based securities exchanges by updating the decisions regulating them. The committee includes a number of concerned department managers and a group of specialized experts to accelerate grievance procedures while ensuring the highest levels of accuracy and soundness of the decisions made by the committee in this regard.

SCA approves new initiatives of the Dubai Gold and Commodities Exchange (DGCX)

UAE has the presence of the region's first and diversified commodities exchange, the Dubai Gold and Commodities Exchange (DGCX), which continued its journey of greater achievements by recording an annual trading volume of 19.7 million contracts and an average daily trading of 76,835 contracts. SCA approved the listing of the first International Gold Futures contract denominated and settled in Chinese Yuan on the DGCX, apart from granting permission to list Quanto contracts. DGCX was awarded the "Regional Exchange of year 2016" award by Global Investor.

The SCA Board Approves Regulations for Central Clearing Houses

The regulations address separating clearing and settlement functions, transferring securities ownership, and depositories. The regulations permit the incorporation of companies independent from securities exchanges to handle clearing transactions under a license from SCA.

SCA is Elected Member of the Steering Committee of the IOSCO MMoU Monitoring Group.

The Securities and Commodities Authority (SCA) won membership in the Steering Committee of the MMoU Monitoring Group as a representative of the Africa/Middle East Regional Committee (AMERC), which is constituted by the International Organization of Securities Commissions (IOSCO), in recognition of its outstanding efforts in putting into effect the terms of the MMoU to which all IOSCO members are signatories.

Emerging Risks in the UAE Capital Market

Cybersecurity

Due to increased sophistication and continuous developments in technology, cybersecurity has become an issue in the capital markets and for regulators as well. It is estimated that global cybercrime damage costs will hit 6 tUSD annually by 2021. To control and cut down cybersecurity issues it is important to assess the current level of preparedness and take action accordingly. Furthermore, sufficient systems should be implemented and global safety standards must be followed. In addition, both institutional and regular investors should be made aware of cyber security issues and how to handle them.

New Technologies

New Technologies in the financial sector such as Blockchain, robo-advice and High Frequency Trading (HFT) need to be assessed for their effects on market structure. One of the main issues is whether regulators should adopt a wait-and-see approach or intervene with these new innovations. One of the solutions adopted by foreign capital markets is creating regulatory sand boxes where these new innovations are tested and adapted to suit market needs.

Effects of international developments and regulations

Due to globalization and ease of access to international capital markets, it is important to assess the effects of international developments and regulations and adjust accordingly. Some of the possible extraterritorial effects of international developments include Europe’s MiFID II, OTC Derivatives regulation, Basel III implementation and Basel IV, US Fiduciary Rules and Common Reporting Standards. In addition, there are other international developments which could have an impact on UAE capital markets such as Brexit, other EU political concerns, and change in the US regulatory policies.

Macroeconomic Risks

One of the main macroeconomic risks that affects the UAE capital market are oil prices. Financial resources available to regulators are shrinking especially with constrained government funding due to reduced oil prices. In addition, global economic growth is volatile and uncertain. Furthermore, it is difficult to attract investors in a rising interest rate environment.

How SCA dealt with some emerging risks

- Low oil price effect on government budgets: SCA responded by restructuring, redeployment of staff, the transfer of operational regulatory functions to the markets as self-regulatory organizations (SROs), adjusting the distribution of the commission revenues and rationalization of expenditures.
- Cyber threats: SCA issued a circular to staff on the measures to be taken to protect internal data and systems, and deployed protective programs and response and recovery programs.
- Violations: carrying out proactive inspections of regulated entities incl. listed companies, prompt action taken against offences, grave breaches taken to judicial authorities.
- Foreign investments: issued regulations for CCP with recognition from the European Commission helped retain foreign investments as local clearing of their transactions is now possible.
- Investor protection :
    - comprehensive regulations issued for investment funds in line with EU UCITS,
    - registration of all investment funds,
    - issued regulations for promotion activities,
    - investor protection Scheme is under issuance.
- Minority shareholder protection: SCA issued updated rules for the approval and disclosure of related party transactions.
- New technologies: crowdfunding, blockchain, SCA conducting research, roundtable discussions, proposal for regulatory sandbox.
- Companies Law and Insolvency Law: SCA contributed to the issuance of these laws and updated/issued regulations accordingly to facilitate and overcome obstacles to investment.

Regulatory changes and initiatives

The supervision department developed many control measures to reduce risk on capital markets like:

- Risk based audit; the inspection department applied the risk based inspection planning.
- Regular measurement of the extent to which the firms applying:
    - account segregation rules,
    - margin trading rules,
    - aging rules,
    - capital adequacy,
    - statements of accounts.
- Dormant Accounts of the Brokerage Firms' Clients rule.
- Outsourcing policy.
- In house built Inspection reporting system.
- Internal auditor report each quarter to measure compliance and risk, which contributes to the achievement of self-regulated companies.

[Please Rate this Report](#)

- Review Custodian firms statement of accounts quarterly.
- Review firm's vulnerability assessment & penetration reports (twice a year).
- Review firms settlement with markets.
- Market Surveillance Software Update:
    - SCA has been using smarts (offsite) for 10 years and recently has made a decision to purchase the full SMARTS versions (onsite).
    - The full SMARTS versions will provide SCA with many useful options and extra type of readymade reports and alerts that assist in analyzing market activity for potential manipulations.
    - Nowadays SCA can use the smarts programing language (Alice language) to generate any type of alerts and reports compatible with our markets.
    - SCA Trading Data Became more secure by building onsite servers to restore and retrieve Data without needing third party servers (offsite severs).

Please Rate this Report

Appendices

Annex: List of Acronyms

Table 6. List of Acronyms

Acronym	Description
ADX	Abu Dhabi Securities Exchange
AED	Arab Emirates Dirham
AMERC	Africa / Middle-East Regional Committee
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BIA	Basic Indicator Approach
BPS	Basis Points
CAR	Capital Adequacy Ratio
CBUAE	Central Bank of the UAE
CCP	Central Counterparties
CDS	Credit Default Swap
CDs	Certificate of Deposits
CET I	Common Equity Tier I
DFM	Dubai Financial Market
DGCX	Dubai Gold & Commodities Exchange
D-SIBS	Domestic Systemically Important Banks
DTCM	Department of Tourism and Commerce Marketing
EC	European Commission
ECB	European Central Bank
ECI	Economic Conditions Index
ECL	Expected Credit Losses
EIBOR	Emirates Interbank Offered Rate
ELAR	Eligible Liquid Assets Ratio
EMIR	European Markets Infrastructure Regulation
EMV	Europay, MasterCard, and Visa
ESMA	European Securities and Markets Authority
FSB	Financial Stability Board
FSTI	Financial Stability Trend Index
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GREs	Government-Related Entities
HFT	High Frequency Trading
HQLA	High-Quality Liquid Assets
IA	Insurance Authority
IAS	International Accounting Standard
IASB	International Accounting Standards Board
ICAAP	Internal Capital Adequacy Assessment Process
ICCS	Image Cheque Clearing System
IOSCO	International Organization of Securities Commissions
IFRS	International Financial Reporting Standards
JPY	The Japanese Yen

Please Rate this Report

LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
LIBOR	London Interbank Offered Rate
MiFID	Markets in Financial Instruments Directive
MOL	Ministry of Labor
NPLs	Non-Performing Loans
OTC	Over the Counter
P&L	Profit and Loss
PD	Probability of Default
PFMI	Principles for Financial Market Infrastructures
POS	Point of Sale
QIA	Quantitative Impact Analysis
ROA	Return on Assets
RTGS	Real Time Gross Settlement
RWA	Risk Weighted Assets
SCA	Securities and Commodities Authority
SMEs	Small and Medium Enterprises
SROs	Self-regulatory Organizations
TCA	Abu Dhabi Tourism & Culture Authority
UAE	United Arab Emirates
UAEDDS	UAE Direct Debit System
UAEFTS	UAE Funds Transfer System
UCITS	Undertakings for Collective Investment in Transferable Securities
US	United States of America
USD	The US Dollar
WB	World Bank
WEF	World Economic Forum
WPS	Wages Protection System