



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

Financial Stability Report

2014

Preface

Financial stability is a key objective of the Central Bank, and it is my pleasure to share with you this Financial Stability Report which covers the key developments that impacted the stance of financial and monetary stability in the UAE during 2014.

In this report we share our assessment of risk in the financial system and provide an insight into key economic sectors integral to the financial stability in the UAE.

This year we have elected to expand the economic section to address key economic developments in 2014 including the decline in oil prices and the heightened volatility in global financial markets.

The report contains an analysis of systemic risk, a review of financial soundness indicators, an insight into our regulatory developments, and an update on the real estate sector. In addition to these recurring parts of the report, we have included a number of new sections covering the development of a financial stability trend index, the growth and prospects of Islamic banking, the adoption of macro-economic stress testing in the UAE, and an overview of the shadow banking sector.

The report demonstrates that financial stability in the UAE was well maintained in 2014 and we see no imminent threat or a significant build-up of vulnerabilities that could impact financial stability.

The UAE economy remained on solid ground in 2014, despite the decline in oil prices as the country has successfully managed to diversify its economy away from oil into other sectors such as tourism, trade and transport. Conditions in 2015 have softened, however, this follows a strong year and would be consistent with a more sustainable medium term growth path.

Finally, I would like to thank the Securities and Commodities Authority and the Insurance Authority for their contributions to this report.

Mubarak Khamis Al Mansouri

Governor

Objective of this Financial Stability Report

By issuing this report, Central Bank of the UAE intends to provide key information to major participants in the industry in order to allow them a better understanding of risks in the UAE financial sector.

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 2014, unless otherwise stated.

Data source is Central Bank of the UAE unless stated otherwise.

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Executive Summary

The key drivers of global economic growth shifted from emerging market economies to advanced economies in 2014, as growth momentum in key emerging markets appeared to wane. In comparison, growth among advanced economies exhibited some improvement, though with growth and monetary policy divergence between the US and other major economies. Despite improved conditions, however, soft inflation persisted, with key central banks continuing to maintain an accommodative monetary policy stance.

Although economic growth softened in aggregate in 2014, UAE economic conditions remained buoyant throughout the year with non-hydrocarbon economic activity expanding at a solid pace and relatively benign inflation. Drivers of UAE economic growth have shifted towards domestic factors and this has helped shield the UAE economy from the decline in oil prices.

Systemic risk remains subdued in the UAE; credit growth remains at the level supportive of the UAE economy. When compared to the GDP, the credit to GDP ratio is also close to its long term trend.

A review of financial soundness indicators in the UAE revealed that the banking sector remains in good shape. The banking system was well capitalised with an average capital adequacy ratio of 18.2% (T1 16.2%). Return on Assets (ROA) and Return on Equity (ROE) stood at 1.7% and 13.6%, respectively, as at the end of 2014. Non-performing loans have declined significantly to 7% and remain fully provisioned.

Banking system liquidity remains at comfortable levels with the ratio of liquid assets to total assets at 15.6% as at the end of 2014. The funding profile of UAE banks remains prudent and well diversified with the loan to deposit ratio at less than 100% and limited reliance on foreign and capital market funding.

Islamic banks had total assets of AED 404 billion as at the end of 2014; constituting 17.5% of banking sector assets and 19.2% of banking system lending.

The Central Bank has developed a Financial Stability Trend Index (FSTI) which applies quantitative methods and combines nine indicators to arrive at the financial stability stance in the UAE.

The UAE banking sector is becoming more integrated into global financial markets. Foreign exposures of UAE banks represent limited financial stability concerns as they are well diversified and are primarily to the Gulf Cooperation Council (GCC), major financial hubs; and core trading partners.

Shadow banking in the UAE represents less than 3% of the total financial system assets and its participants are subject to Central Bank regulation.

After the rise in property prices in both Abu Dhabi and Dubai in 2013 and the first half of 2014, the prices stabilised in the second half of the year.

The Central Bank has embarked on a process of updating its regulatory framework in line with Basel III standards and international best practices. Key areas of reform include capital, liquidity, risk management and corporate governance as well as regulations applicable to non-bank financial institutions.

Macro-economic stress testing has been introduced to assess the capacity of UAE banks to withstand a severe yet plausible deterioration in macro-economic conditions. The approach consists of two parts; a bottom up approach, where economic scenarios are given to banks along with general assumptions to apply on their own portfolios. In addition, a top down approach is used, where the Central Bank performs a uniform stress test based on data collected from banks. The outcome is an assessment as to the banks' risk exposure and adequacy of their capital positions.

The Insurance Authority has issued comprehensive financial regulation in 2014 which aims to protect the rights of policy holders and shareholders. This regulation is in line with international best practice.

Despite the heightened volatility and the decline in volumes, the UAE stock market grew at 6% in 2014. The decrease in oil prices has negatively affected market sentiment although listed companies achieved strong profits in 2014. Such strong profits have encouraged foreign and institutional investors to continue to be net buyers of UAE stocks for the fourth year in row.

Economic and Monetary Developments

Global Environment

Summary

The key drivers of global economic growth shifted from emerging market economies to advanced economies in 2014, as growth momentum in key emerging markets appeared to wane. In comparison, growth among advanced economies exhibited some improvement, though with clear growth and monetary policy divergence between the US and other major economies. Despite improved conditions, however, soft inflation persisted, with key central banks continuing to maintain an accommodative monetary policy stance. Maintenance of accommodative monetary policy settings and an expansion of key central banks balance sheets provided sufficient support for asset prices, particularly in fixed income markets.

Global Economic Conditions and Monetary Policy

In aggregate, global economic growth maintained a similar momentum as that experienced in 2013, with the global economy growing at 3.4% in 2014. Growth in 2014 was supported by an acceleration of growth in advanced economies, which expanded 1.8% in 2014. The US economy registered growth of 2.4% in 2014, with household consumption and private investment benefiting from on-going jobs growth, easy financial conditions and rising disposable incomes. The pace of fiscal contraction, which had been a major drag on aggregate economic activity in previous years, slowed. Offsetting this, a higher US dollar through the year resulted in a negative contribution of net exports to GDP. In line with the on-going, yet gradual, recovery, the Federal Open Market Committee (FOMC) continued its gradual process of policy normalization, ending its asset purchase program in October.

Despite an improved outturn in growth, economic slack persisted with capacity utilisation and real wage growth still below pre-crisis levels. Consequently, core inflation remained soft, increasing only 1.4% in 2014. With inflation continuing to run below target, the FOMC opted to maintain its 0-0.25% target for the Fed Funds Rate.

Euro-zone economic activity showed signs of improvement in 2014 though growth remained weak, at 0.9%. Much of the growth was accounted for by an improvement in consumer spending, with a marked improvement in retail sales and consumer confidence relative to 2013. Private investment growth also lifted, though remained somewhat constrained by tight credit conditions. Despite a marginal improvement in growth, excess capacity, particularly in the periphery economies, continued to weigh on inflation. As a result, deflationary pressure mounted which was further buoyed by falling oil prices towards the latter part of 2014. The European Central Bank (ECB) opted to ease policy rates on two occasions through the year. In addition, the ECB announced a widening of its scope of asset purchases, resulting in an expansion of its balance sheet.

In Japan, a hike in the Consumption Tax (CT) saw a notable reduction in private consumption expenditure and residential property investment in 2014. The resultant fall in private consumption saw economic activity contract 0.1% through the year. With economic conditions deteriorating more than expected following the CT hike, the Bank of Japan opted to expand its pace of monetary expansion. Subsequently, the Yen softened significantly against most trading partners in late 2014, resulting in a sizeable improvement in net trade. Nonetheless, this did little to offset the weakness emanating from domestic demand.



Figure 1. GDP Growth of US, Euro and Japan (Source: Bloomberg)

Economic growth in the major emerging market economies moderated in 2014, with significant implications for global commodities markets and inflation. In China, the world's second largest economy, economic growth slowed to 7.4% as previous excesses in investment, credit and real estate unwound. There were signs that the composition of economic activity shifted towards domestic consumption, which accounted for approximately half of GDP in 2014. Growth of fixed asset investment, on the other hand, weakened. Such conditions, coupled with softer oil prices, saw a weakening in non-food inflation, with likely implications for export prices. Such conditions led the People's Bank of China to lower its benchmark lending and deposit rates through the year.

India grew at a solid pace, with GDP increasing 7.1% in 2014. However, the GDP measure reflects a change in methodology and is higher than the Reserve Bank of India's (RBI) growth projection of around 5.5 per cent. Other measures of Indian economic activity suggested a less buoyant picture, with both industrial production and trade suggesting a much weaker outcome through the second half of the year. Nonetheless, economic conditions likely stabilised following RBI actions in addressing a sharply depreciating rupee and excessive inflation through tighter monetary policy. In other key emerging markets, such as Russia, South Africa, Brazil and Turkey, the pace of economic expansion slowed while monetary policy was tightened.

Economic conditions within the Gulf Cooperation Council (GCC), accounting for approximately half of UAE non-hydrocarbon exports, remained buoyant through 2014. Lower oil prices and its associated effect on the hydrocarbon sector saw aggregate economic growth soften across the region. Nonetheless, given the size and scale of investment

projects within the region, growth rates across most GCC countries remained strong, with most GCC countries recording growth rates of 3% or higher.

Financial Markets

Aided by easy monetary policy, sentiment within global financial markets remained buoyant throughout 2014. Such a global environment was largely supportive of fixed income markets, while some equities markets also recorded solid growth. Volatility was relatively subdued throughout the year across most asset classes though increased towards the end of the year.

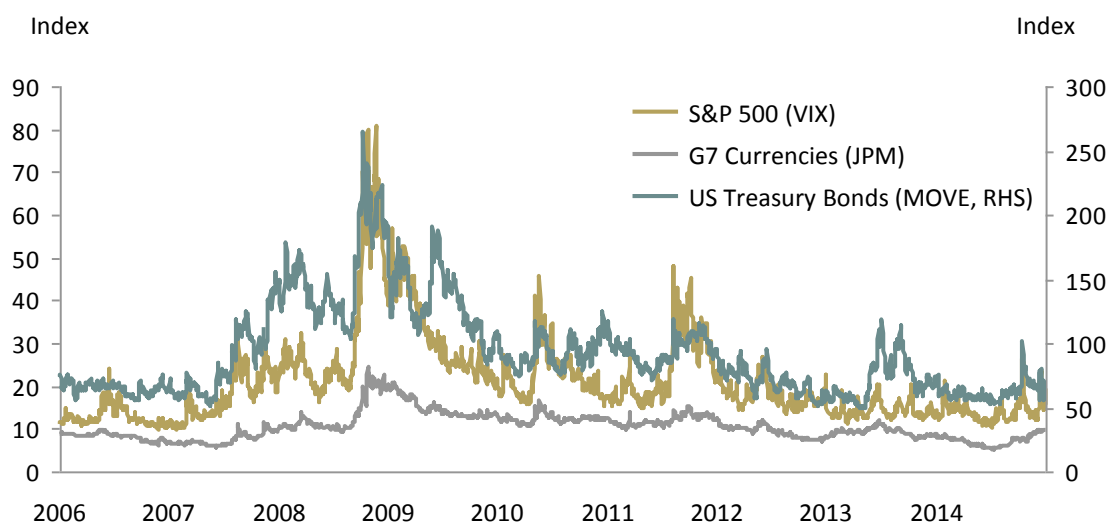


Figure 2. Volatility Indices (Source: Bloomberg)

Bond yields in most sovereign debt markets exhibited a downward trend through the course of 2014, due to the implementation of easier monetary policy across key central banks driving a search for yield. This was most notable in Europe, where government bond yields turned negative towards the end of the year for the core sovereigns for tenors up to two years. With low or negative returns on offer in the 'safer' European sovereign debt markets, demand for riskier periphery debt intensified, as spreads between periphery economies and Germany narrowed, while fears of a spillover from Greece did not appear to phase markets.

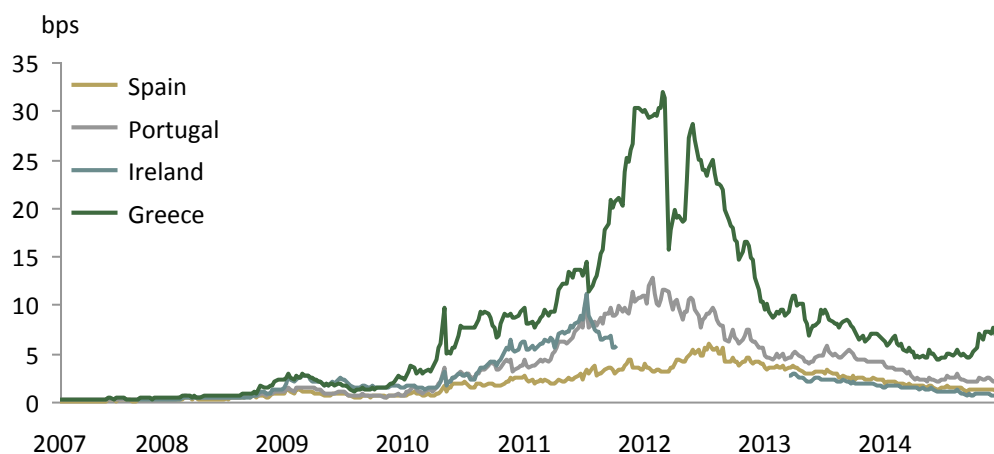


Figure 3. Euro-zone Periphery Spreads to Germany (Source: Bloomberg)

Falling Euro-zone rates likely impacted sovereign yields elsewhere, such as the US and UK, as investors switched away from low or negative yielding European markets. In Japan, yields on Japanese Government Bonds (JGBs) followed the broad trend of other advanced economies, aided domestically by a more accommodative monetary policy stance.

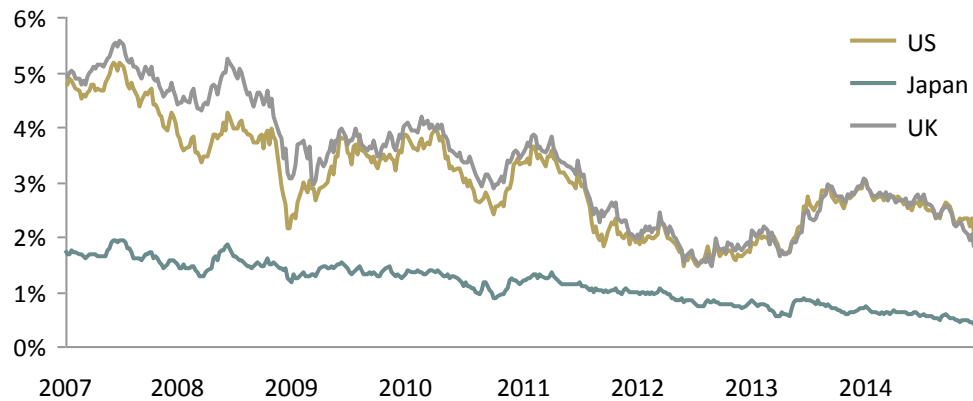


Figure 4. Yields on Advanced Economy 10 Year Bonds (Source: Bloomberg)

In contrast to the major advanced economies, the direction of sovereign yields in the major emerging markets was mixed in 2014. In India, Indonesia and South Africa, sovereign yields generally followed the path of US Treasury yields. Brazilian and Turkish yields, on the other hand, declined through the course of the year as their respective central banks took action to control inflation and stabilize exchange rates. In contrast, yields on Russian government debt rose sharply following strong downward pressure on the rouble and geo-political tensions.

Lower returns on government securities and accommodative monetary policy supported advanced economy equities through 2014. This was most notable in the US and Japan, where solid growth rates were recorded. In contrast, equities in emerging markets were relatively soft, reflecting a softening in growth and tighter financial conditions in key emerging markets.

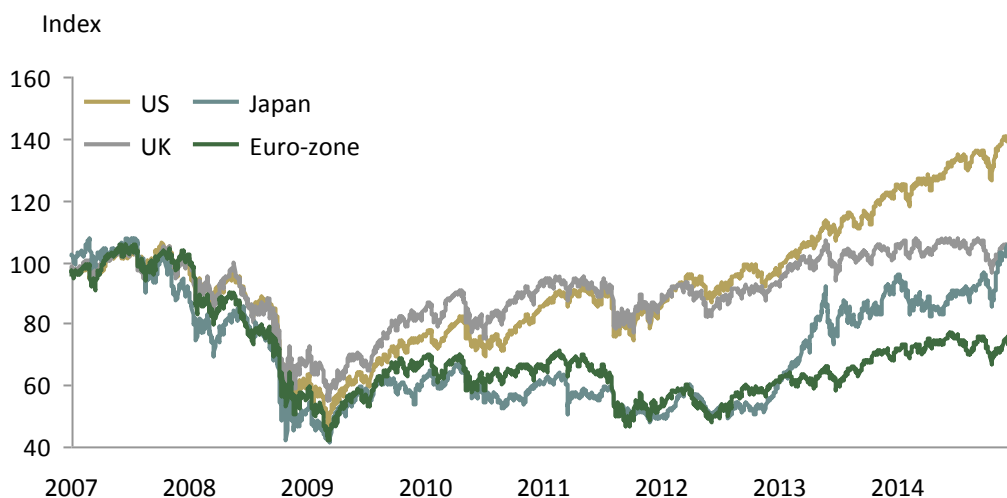


Figure 5. Advanced Economy Equity Indices. Source: Bloomberg

Domestic Economic and Monetary Developments

Summary

Despite economic growth softening in aggregate in 2014, economic conditions remained buoyant throughout the year with non-hydrocarbon economic activity expanding at a solid pace and relatively benign inflation. Drivers of UAE economic growth have shifted towards domestic factors and this has helped shield the UAE economy from the decline in oil prices. Supporting UAE economic activity, monetary conditions within the UAE remain accommodative, with low market rates and ample liquidity within the UAE banking system.

Domestic Demand and Output

Economic expansion within the UAE continued at a robust pace in 2014, with recent IMF estimates suggesting GDP growth of 3.6%. This was a slower pace than 2013, where GDP expanded 5.2%. Explaining much of the slowdown, however, was a plateauing of hydrocarbon sector output. This was evident in market-based estimates of UAE oil production, which indicated a 0.1% expansion in 2014.

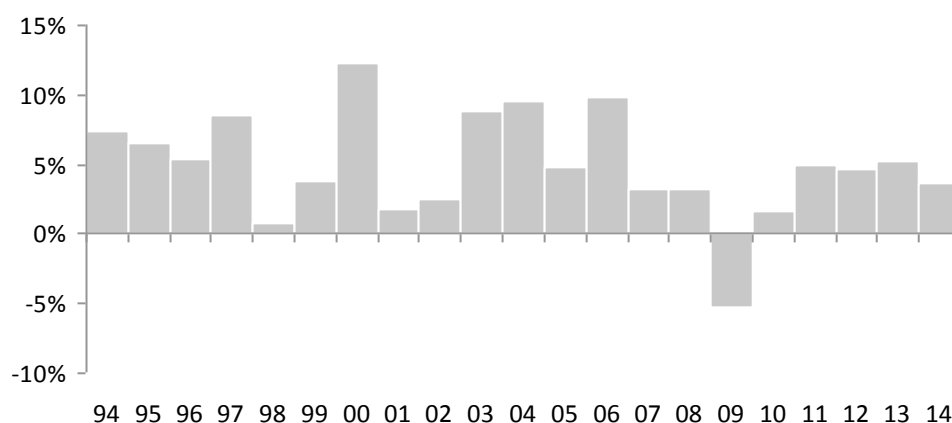


Figure 6. UAE GDP Growth (Sources: NBS, IMF estimate for 2014)

The plateauing of oil production follows several years of solid expansion in both production and capacity. Between 2010 and 2013, hydrocarbon activity accounted for more than 40 per cent of UAE GDP growth, playing a major role in the UAE's economic recovery. By 2013, the key drivers of growth had shifted towards sectors such as construction, manufacturing, retail and wholesale trade and tourism. Expansion of these sectors continued through 2014, signifying further economic diversification.

Diversification was also reflected in key partial indicators of the UAE economy. The most prominent of these, the UAE Purchasing Managers' Index (PMI) was indicative of very strong non-hydrocarbon economic growth in 2014. By sub-component of the PMI, non-hydrocarbon activity was driven by solid domestic demand as well as export demand, a reflection of the investment-led growth within the wider GCC region.

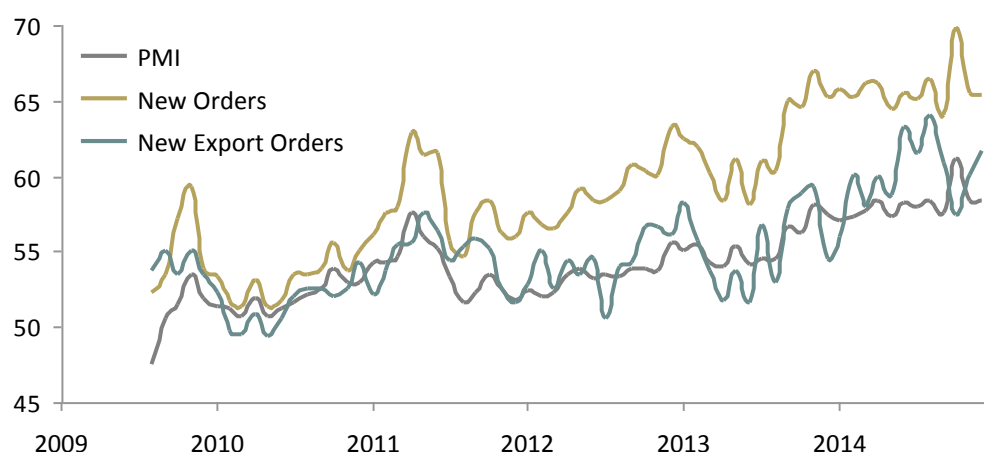


Figure 7. UAE PMI. (Source: Markit Economics)

Tourism and Hospitality

Tourism and hospitality data suggest that the sector continued to make a positive contribution to the UAE economy through 2014. This was reflected in airport arrivals, with both Dubai and Abu Dhabi airports experiencing increased passenger flows. Dubai airport arrivals were up 7.5% year-on-year in December 2014. In Abu Dhabi, an expansion of routes resulted in a significant increase in traffic, with airport arrivals up 22.5%.

On-going strength within the UAE's tourism sector was supported by room rates, which were up 1.8% and 9.2% in Dubai and Abu Dhabi, respectively. Similarly, occupancy rates remained high. While Dubai's occupancy rates in December 2014 were slightly lower than a year earlier (down to 79.4% in December 2014), they remained high by historical standards. This was despite an increase in hotel rooms through the year. In Abu Dhabi, on the other hand, occupancy rates increased to 77.4% (from 70.4% a year earlier) through the year to December.

International Trade and Balance of Payments

The balance of UAE merchandise trade softened in 2014, falling to AED 480.6 Bn, from AED 529.7 Bn previously. Explaining part of the decline was a 13.8% decrease in the value of hydrocarbon exports. This was partly offset by a sizeable increase in the value of non-hydrocarbon exports, resulting in a mild 0.9% contraction in the value of total exports. The weakening merchandise trade balance was also attributed to a 4.3% increase in the value of imports.

The services trade deficit, consisting of travel, transport, freight, insurance and government services, widened in 2014. The deficit increased from AED 181 Bn in 2013 to AED 186.5 Bn in 2014. The softening trade balance, in conjunction with a widening balance of transfers deficit, resulted in a softening of the current account surplus. In 2014, the current account surplus fell 23.5% to AED 200.6 bn.

As to the financial account, the deficit widened in 2014 to AED 194.6 Bn. Accounting for this widening was an increase in the net outflow of private capital to AED 74.9 Bn while

public sector capital outflows increased to AED 119.8 Bn. Consequently, the balance of payments fell in 2014, to AED 34 Bn.

| AED mn | 2013 | 2014 |
|----------------------------------|-------------|-------------|
| Current Account Balance | 262,137 | 200,619 |
| Trade Balance (FOB) | 529,678 | 480,556 |
| Total Hydrocarbon Exports | 475,236 | 409,732 |
| Total Non-Hydrocarbon Exports | 382,361 | 412,773 |
| Re Exports | 516,721 | 538,828 |
| Total Exports & Re Exports (FOB) | 1,374,318 | 1,361,333 |
| Total Imports (FOB) | -844,641 | -880,777 |
| Services (NET) | -181,004 | -186,546 |
| Investment Income (NET) | 650 | 1,020 |
| Transfers (NET) | -87,186 | -94,411 |
| Financial Account | -181,670 | -194,605 |
| Errors & Omissions | -7,364 | 27,968 |
| Overall Balance | 73,103 | 33,982 |

Table 1. Source: Central Bank of the UAE

Consumer Prices

Inflation momentum lifted in early 2014 and persisted through to the end of the year, according to the headline Consumer Price Index (CPI). In year-average terms, CPI increased 2.3% in 2014, while year-on-year growth in December reached 3.1%. Much of the acceleration in price inflation through the year was accounted for by the sharp increase in the rents component, which accounts for around one-third of the CPI basket. In year-average terms, the rents component of CPI increased 3.5%, having accelerated through the year.

While rents accounted for a sizeable portion of CPI growth, other domestically related factors also contributed significantly to inflation through the year. Non-tradable inflation averaged 3.2% higher in 2014. In contrast, the appreciating value of the AED relative to trading partner currencies and low global inflation saw tradable inflation grow only by 1%.

By late 2014, underlying inflationary pressure moderated as CPI inflation excluding food and rents exhibited a downward trend in core inflation. The softening of inflationary pressure partly reflected an appreciating trade-weighted AED, while price growth in a number of non-tradable components exhibited a slowing trend. With rental price growth in Abu Dhabi and Dubai falling, headline inflation is likely to soften over time. However, given an inherent lag between rent price data and the rents component of CPI, headline inflation is likely to overstate true inflationary pressure through 2015.

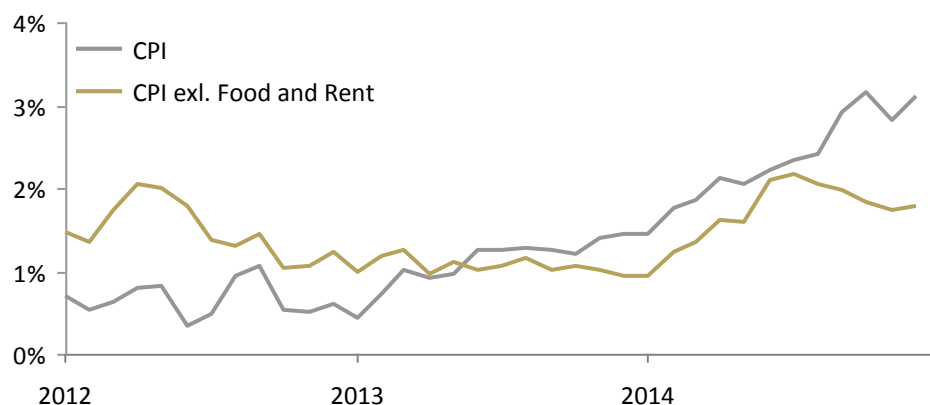


Figure 8. Consumer price index (Source: NBS)

Domestic Monetary Developments

Exchange Rate

The Central Bank foreign exchange operations added an additional AED 60.4 billion in 2014. This was also evident with respect to AED forward points, where a forward discount persisted through most of the year.

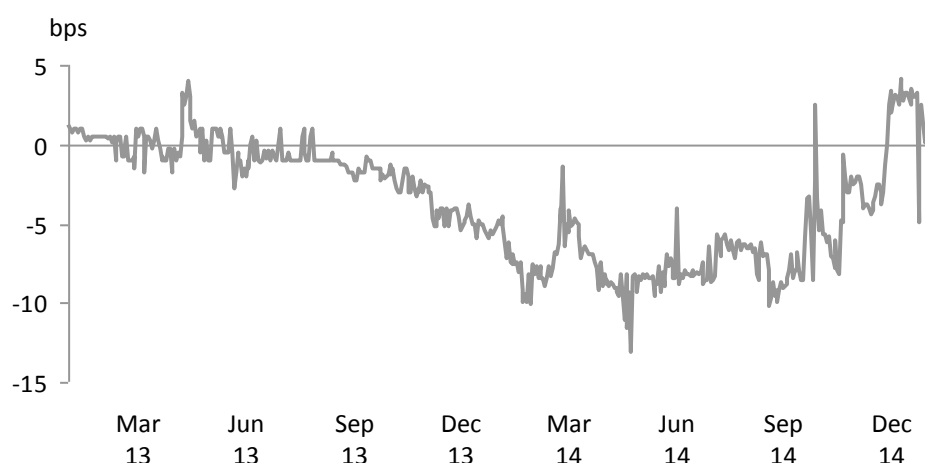


Figure 9. AED Three Month Forward Points (Source: Bloomberg)

In a broader sense, the trade-weighted AED nominal effective exchange rate (NEER) appreciated in 2014, finishing 6.5% higher. Given the peg, the appreciation of the USD saw an increase in the AED against major trading partner currencies. The increase in the NEER, coupled with higher domestic inflation relative to trading partners, resulted in an increase in the real effective exchange rate (REER), up 8.1% by year-end.

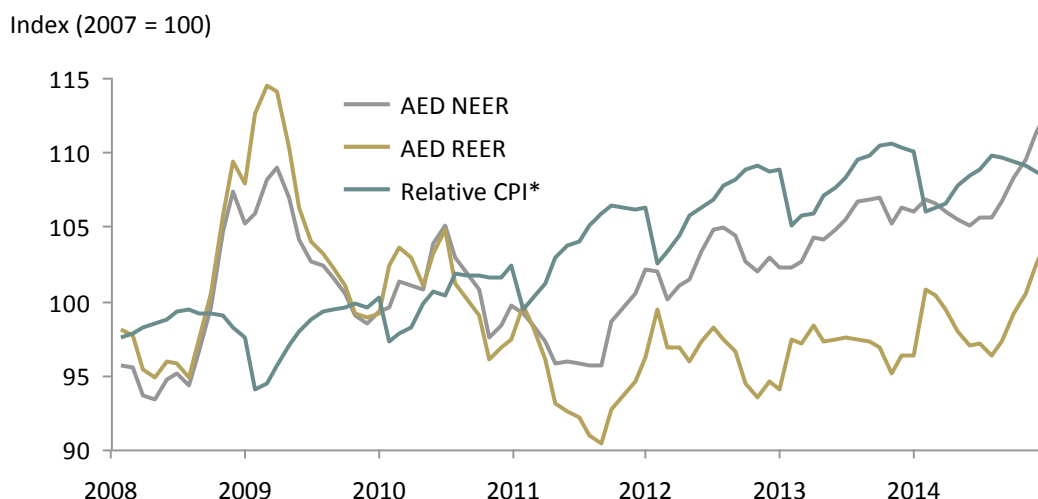


Figure 10. AED Nominal and Real effective exchange rates and relative CPI (*trading partner prices relative to domestic prices). Upward trend indicates AED appreciation. Source: BIS

Money and Interest Rates

Prevailing monetary conditions in the UAE were broadly accommodative through the course of 2014. Ample liquidity within the banking system and low interest rates for consumers and corporates were supportive of a solid rate of economic growth. Reflecting this, the UAE monetary base experienced an expansion, increasing 10.7% year-on-year in December 2014. However, expansion of the UAE monetary base slowed through the second half of the year, with softening growth in the issuance of Certificates of Deposit by the Central Bank.

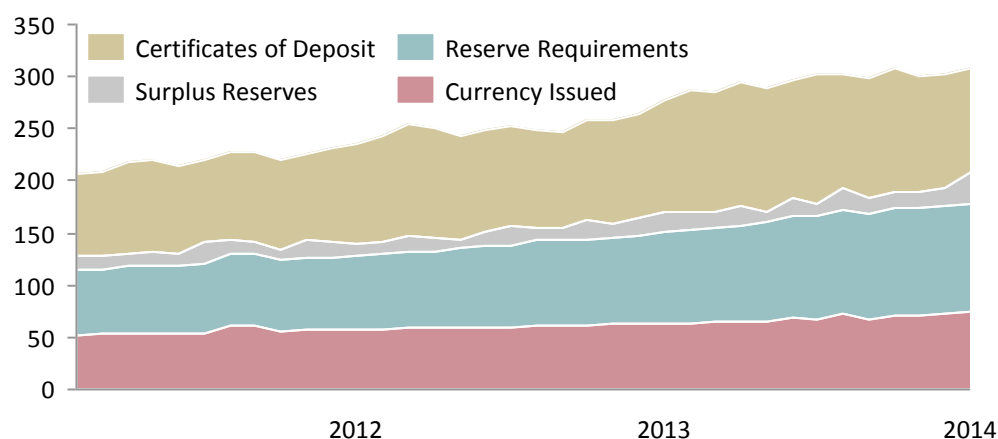


Figure 11. UAE Monetary Base

Much of the increase in the monetary base was reflected in an 18.6% increase in reserve requirements on account of an increase in bank deposits. Growth of currency in circulation and surplus reserves also contributed significantly. In contrast, the issuance of certificate of deposit fell 7.8% owing to an 8.6% monthly decline in December. Monetary aggregates also expanded at a robust pace through the year, with M3 expanding 9.2% year-on-year in December. A sizeable portion of the increase in M3 was driven by a 14.6% increase in monetary deposits, while quasi-monetary deposits and government deposits also contributed

significantly to M3 growth. Similar to the monetary base, monetary aggregates also showed a slowing trend through the second half of 2014. This decline was largely attributable to quasi monetary deposits, the largest component of M3. Similarly, yearly growth in monetary deposits had slowed in the latter half of the year.

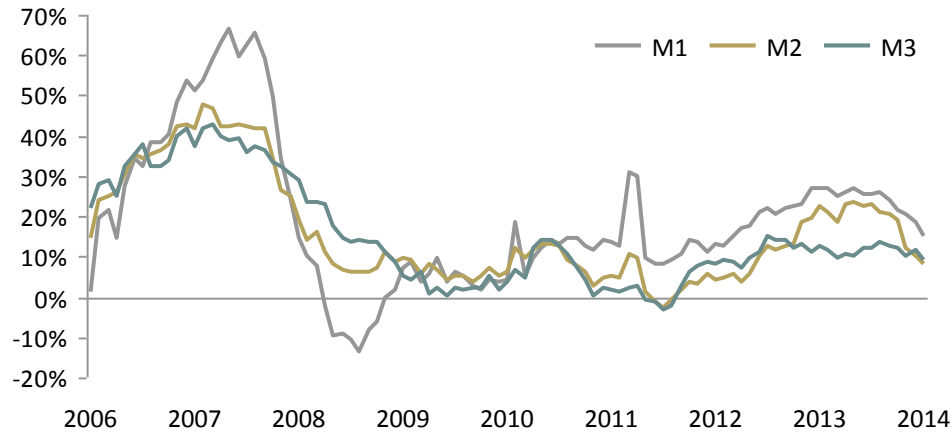


Figure 12. Growth of Monetary Aggregates (y-o-y)

Given abundant liquidity within the UAE banking system, wholesale funding costs were relatively low. Through the year, the three-month Emirates Interbank Offered Rate (EIBOR) averaged 74 basis points. Similarly, other market rates were reflective of low wholesale funding costs for the banking sector as a whole.

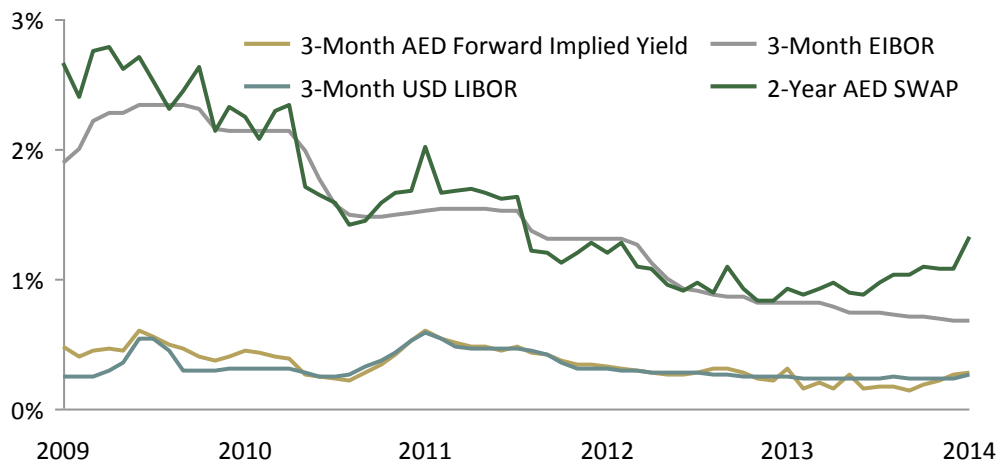


Figure 13. Banks' Wholesale Funding Costs

Towards late 2014, slowing money supply growth, tail risk related to oil prices and slowing global growth saw a marginal increase in market rates. However, this mainly impacted medium term funding. Nonetheless, indicative market rates for longer term funding remained at relatively low levels when compared to recent history. Short-term rates remained broadly unchanged through the year.

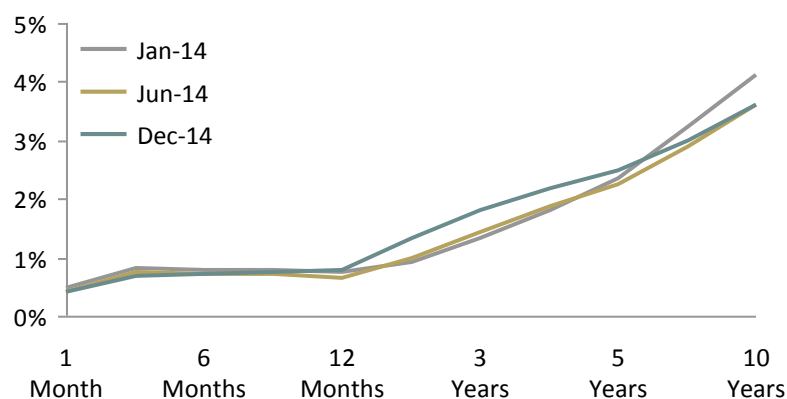


Figure 14. UAE Zero Coupon Money Market Curve¹. Source: Bloomberg, Central Bank

Relatively low wholesale funding costs were a reflection of market perceptions of risk in the UAE banking sector. This was evident in low credit default swap rates on both Abu Dhabi and Dubai government debt, which remained at historically low levels, although rates did increase in the second half of the year. More significantly, improving profitability and robust capital adequacy resulted in a reduction in CDS rates on UAE banks through the year.

| | Spread (bps) | Year-on-Year Change (bps) | 2014 H2 Change (bps) |
|----------------------------|-----------------|------------------------------|-------------------------|
| Dubai Government | 226.62 | +6.62 | +71.61 |
| Abu Dhabi Government | 63.54 | +8.54 | +14.04 |
| Average of Top 5 UAE Banks | 134.64 | -13.96 | -4.57 |

Table 2. UAE Government and Bank 5 year CDS¹. Source: Bloomberg, Central Bank

¹ The synthetic zero coupon money market curve is constructed using interest rates for EIBOR, Forward Rate Agreements and Interest Rate Swaps, converting all such rates into their zero coupon equivalent.

Assessment of Risk and Vulnerabilities

The Credit Cycle

Summary

Systemic risk remains subdued in the UAE. When compared to GDP, credit growth was in line with GDP growth while the credit to GDP ratio remained close to its long term trend.

The credit cycle refers to the expansion and contraction of credit over time. It is one of the key factors that influence the business cycle. Periods of rapid credit expansion are usually followed by an increase in non-performing loans when the cycle turns and the economy weakens. As a reaction to higher losses and falling capital positions, banks tend to become more selective of borrowers and more conservative in their lending criteria, this pro-cyclical behaviour exacerbates the extent of the business cycle. Given the importance of credit with respect to the business cycle, the Central Bank actively monitors developments in bank lending.

In order to determine if credit growth is within acceptable parameters, it is usually compared to the growth rate of the economy represented by the GDP growth rate.

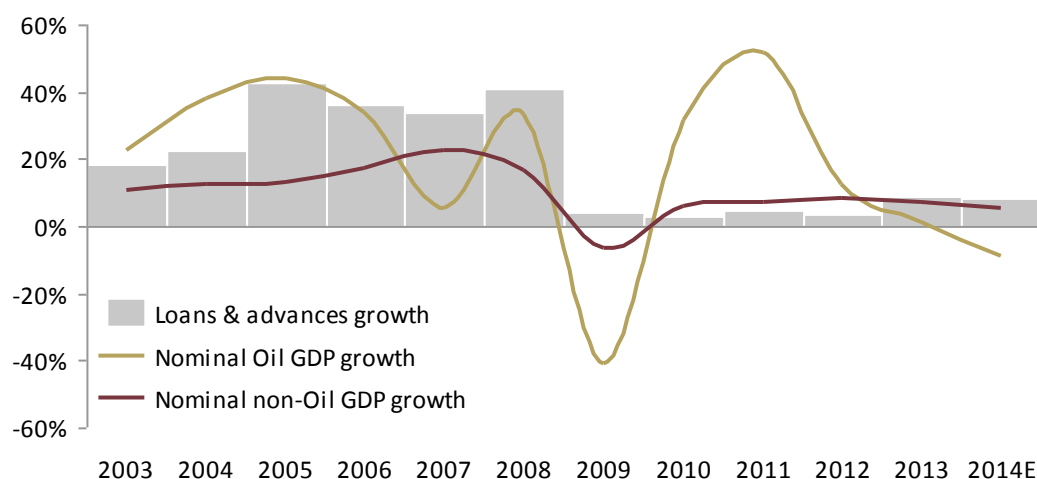


Figure 15. Credit cycle and growth of the economy. Sources: National Bureau of Statistics and FSU staff estimates.

In 2014, growth in banks' loans and advances maintained a robust pace (+8%), slightly slower than the 9.2% increase witnessed in 2013. Growth was driven by strong export oriented services in Dubai and continued infrastructure spending in Abu Dhabi. Demand from consumer finance was also a major contributor to 2014 growth.

Nominal oil GDP was estimated to have decreased by 9% despite production remaining at the same level as in 2013, due to the decline in oil prices from mid-2014. Nominal non-

oil GDP, on the other hand, remained vibrant and is estimated to have increased 5.4% in 2014.

Given that expansion in oil GDP is primarily cash funded and unrelated to domestic credit, non-oil GDP is more relevant as a benchmark in assessing the trend of credit growth.

Credit Expansion to Non-oil GDP Growth (Credit to GDP ratio)

An estimate of excess bank credit in the system is measured by comparing the credit growth rate with that of the GDP. The difference in growth rate is then applied to the loan book at the beginning of the year to estimate excess credit. Excess credit is usually a sign of build-up of vulnerabilities in the system as it is generally associated with an over valuation of assets.

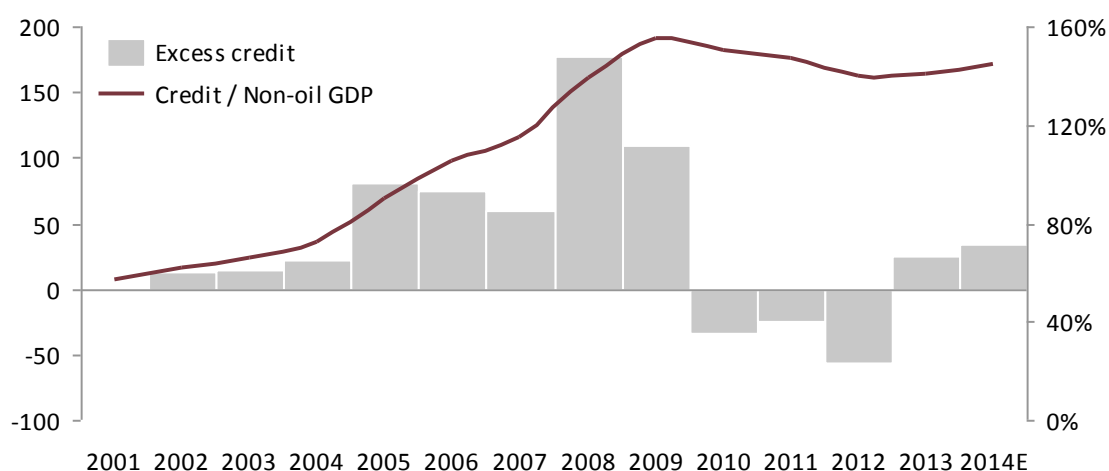


Figure 16. Excess bank credit growth in the UAE (in AED Bn) and bank credit to non-oil GDP.
Sources: National Bureau of Statistics, IMF and FSU staff estimates.

The build-up of vulnerabilities which commenced in 2005 and peaked in 2008, was followed by deleveraging during the three years that followed the Global Financial Crisis (GFC). The recovery that commenced in late 2012 maintained its momentum through 2014, with excess credit of around 2.7% in 2014. This was up from 0.5% in 2013² and is considered modest when compared to historical figures.

Credit to GDP Gap

The Basel Committee on Banking Supervision (BCBS) has proposed the use of the credit-to-GDP gap as the reference point for initiating the process of building up the Basel III countercyclical capital buffers. The underlying assumption is that, a positive gap, which indicates an increase of the ratio over its historical long term trend, signals the build-up of system-wide risk.

The BCBS definition of credit supply includes credit provided through shadow banking and foreign lenders, to the domestic economy; and excludes credit provided to governments.

² An estimate was used in the 2013 FSR.

The shadow banking system in the UAE is not material and thus has not been included in the credit supply measure.

Credit provided by non-UAE based foreign banks in the form of bonds and syndicated loans are included as part of credit supply. This form of credit played a significant role in the excessive lending that took place pre-2008.

The Central Bank considers this indicator when assessing the build-up of vulnerabilities in the financial system that could increase the risk of a crisis - paving the way for using macro prudential tools - in order to influence the direction of the credit cycle in a time of expansion or contraction of the economy and to address these vulnerabilities.

To remove the effect of short term fluctuations, the long term trend of the credit to GDP ratio is measured using a one-sided Hodrick-Prescott (HP) filter. When the current credit to GDP ratio is compared to its long-term trend, a positive gap is an indication of potential excess credit building up in the system.

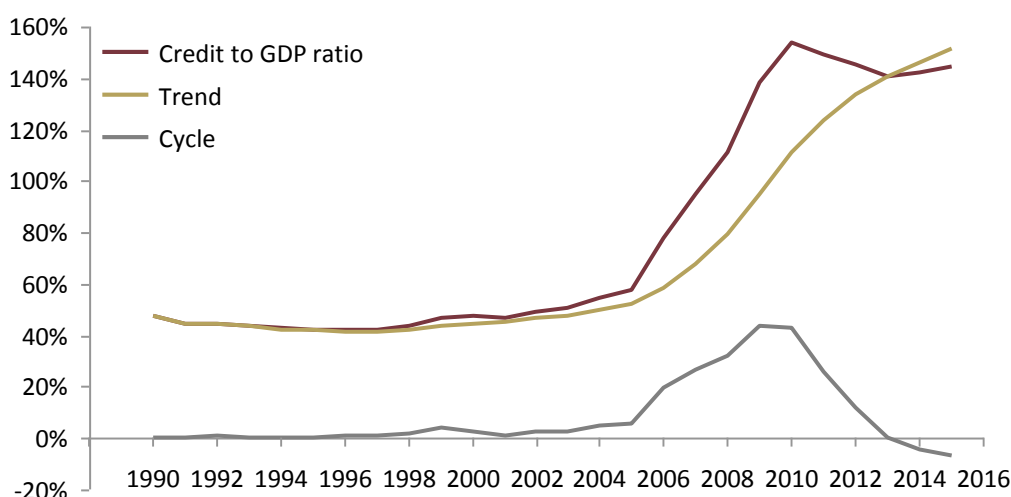


Figure 17. Credit-to-GDP ratio, its trend and credit to GDP gap estimated using one-sided HP (1989 – 2014)

In 2005, the ratio began to deviate significantly from its long term trend, and continued to do so until 2009, when a period of deleveraging arose. In 2012, the ratio crossed its long term trend, and has remained below this trend in the subsequent years. At the end of 2014, the credit-to-GDP ratio gap remained slightly negative, continuing its downward trend.

The Central Bank's assessment of this key indicator is that credit growth is in line with GDP growth.

Regime Change

As indicated in the 2013 Financial Stability Review (FSR), there was some evidence that the UAE financial system experienced a regime change³ in 2007 due to the effects of financial deepening. Accordingly the Credit to GDP ratio gap was recalculated from the year the regime change occurred.

³ Due to financial deepening during the period prior to 2007, the level of debt in the UAE has reached that of more developed economies. This was identified using an econometric test of regime change.

Re-calculating the credit to GDP ratio gap taking into account the regime change (from 2007 onwards), the ratio was substantially below its long term trend thereby highlighting the magnitude of the deleveraging that occurred following the 2009 crisis.

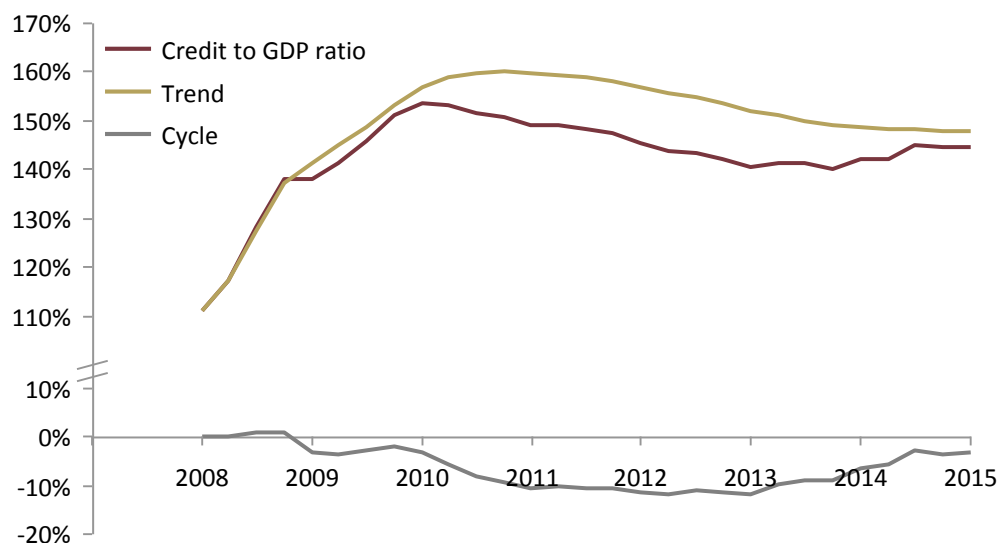


Figure 18. Credit-to-GDP ratio, its trend and credit to GDP gap estimated using one-sided HP (2007 Q4 – 2014 Q4)

As with the case whereby a regime change was not accounted for, the credit-to-GDP gap did not warrant any financial stability concerns towards the end of 2014. This indicator continues to be monitored closely by the Central Bank.

Financial Soundness Indicators

Summary

A review of financial soundness indicators in the UAE revealed that the banking sector remains in good shape. The system was well capitalised with an average capital adequacy ratio of 18.2% (T1 16.2%). Return on Assets (ROA) and Return on Equity (ROE) reached 1.7% and 13.6% respectively as at the end of 2014. Non-performing loans have declined significantly to 7% and remain fully provisioned. System liquidity remains at comfortable levels with the ratio of liquid assets to total assets at 15.6% as at the end of 2014. The funding profile of UAE banks remains prudent and well diversified with the loan to deposit ratio at less than 100% and limited reliance on foreign and capital market funding.

Financial Soundness Indicators (FSIs) are a series of financial ratios and statistical measures that are used to assess the health of a financial system. The importance of being able to track developments in the financial system and identify the build-up of vulnerabilities became clear following the Asian Financial Crisis of 1997. The Group of 20 in their meeting in October 1998 affirmed the importance of recognizing potential problems at an early stage and developing responses promptly to avoid costly systemic crises.

The IMF assumed a leading role in defining and compiling two sets of indicators; “core” and “encouraged” to facilitate its surveillance activities and to promote financial stability by providing relevant information to the investment community.

FSIs are used at an individual institutional level for micro supervision and on an aggregated basis by the Financial Stability Unit to capture trends in the UAE financial system. They constitute an important component in the Central Bank’s financial sector surveillance framework. Used in combination with other indicators, they are useful in assessing financial stability and detecting the build-up of systemic risks.

Capital Adequacy

UAE local banks remain highly capitalised with a total capital adequacy ratio (CAR) of 18.2% and a Tier 1 ratio of 16.2% as at 31 December 2014. The CAR had slowly declined from a peak of 21% in 2011. However, this remains high by regional and international standards. The Tier 1 ratio is also down from its peak of 17.2% reached in the first Quarter of 2013. This decline can be attributed to the large number of banks that have fully or partially repaid Ministry of Finance Tier 2 capital instruments issued in 2009 as well as the strong credit growth seen in 2013 and 2014. This has put downward pressure on the banks’ capital adequacy ratios. However, current ratios allow the banks to meet and exceed Basel III capital requirements with ease.

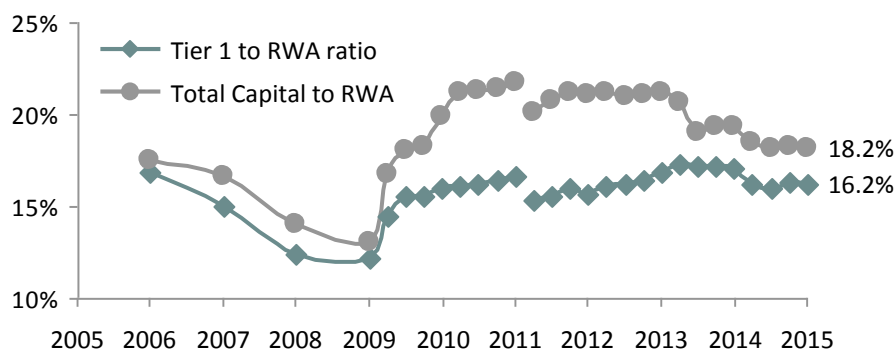


Figure 19. Tier 1 and total capital adequacy ratios (calculated according to Basel I before 2011 and Basel II from 2011 onwards).

Asset Quality

Asset quality is measured using three indicators: non-performing loans (NPLs), the provision coverage ratio and rescheduled loans.

Non-Performing Loans (NPLs)

This ratio is defined as loans that are in arrears for more than 90 days to total loans, and is calculated on a gross basis. As at December 2014, the UAE banking system had an NPL ratio of 7.0% representing total classified loans of AED 96 Bn. which was a marked decline from the 8.4% NPL ratio as at December 2013.

Given the sustained growth in non-oil GDP, the growth in the loan book, and the successful debt restructuring of most entities that experienced difficulties after the GFC, NPL levels are likely to ease in 2015.

It is worthwhile to mention that banks in the UAE are reluctant to write off NPLs despite being fully provisioned, which can result in the stock of NPLs being slow to adjust to economic changes. This can be attributed to the lengthy recovery process endured by many banks.

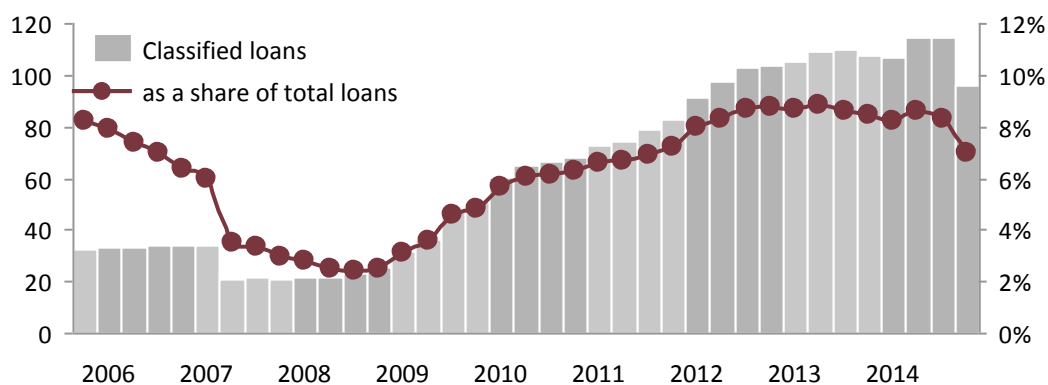


Figure 20. Classified loans in AED Bn and as share of total loans

Provision Coverage Ratio

UAE Banks held total provisions of AED 98 Bn as at the end of December 2014, broadly unchanged from 2013. This was despite NPLs having declined from AED 103 Bn in 2013 to AED 96 Bn as at December 2014. As such, the NPL coverage ratio has improved significantly. It stood at 102% as at the end of December 2014 compared to 92% a year earlier.

The continuous improvement in the NPL coverage ratio is the result of prudent provisioning policies and a thorough Central Bank supervision process.

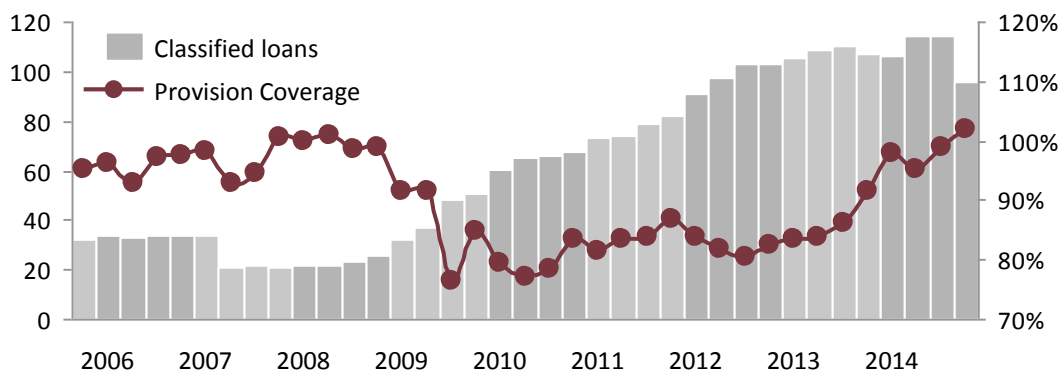


Figure 21. Classified loans in AED Bn and provision coverage

Loan Rescheduling

A loan whose maturity has been extended while its' terms (including principal or interest) have remained largely unchanged is said to be rescheduled. This process is undertaken in order to accommodate borrowers' temporary cash flow shortfalls.

From a Central Bank perspective, rescheduled loans are not classified as nonperforming, and provided that the borrower has not become delinquent before or after the rescheduling has taken place, a provision is not required.

Rescheduled loans, both corporate and retail, continued their downward trend since 2011, falling by 18% and 40% respectively in 2014.

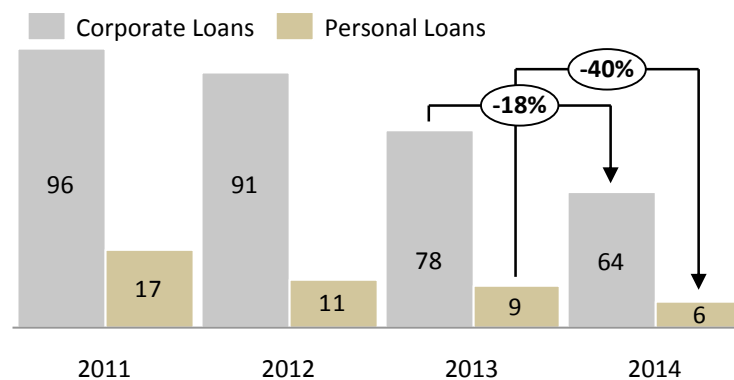


Figure 22. Rescheduled corporate and personal loans in AED Bn

The Central Bank considers rescheduled loans with a bullet repayment to be more prone to problems than other rescheduled loans whose principal is gradually repaid over the term of the loan. This “bullet repayment” category has also slightly reduced.

Similarly, loans rescheduled more than once are also perceived to have a higher risk of default, this category was AED 23 Bn as at the end of 2014 compared to AED 27.6 Bn in December 2013.

The Central Bank monitors these loans carefully to avoid late recognition or any deterioration.

Income

Aggregate net profit of the UAE banking sector was AED 39.4 Bn in 2014. Profits have grown at 16% CAGR since 2009, allowing UAE banks to generate internal capital to support their growth and to take adequate provisions to enhance the quality of their balance sheets.

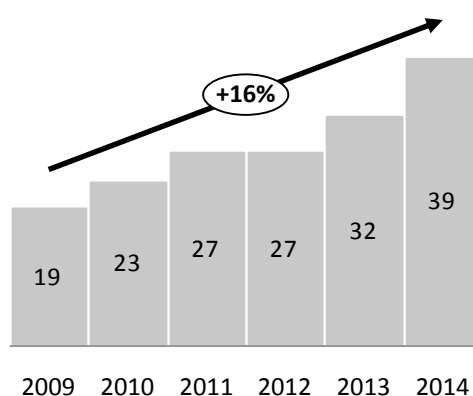


Figure 23. Net banks' profits

The steady increase in banks' profits since 2009 is largely driven by the growth of banks' Net Interest Income (NII) and high Net Interest Income Ratio (NIIR⁴).

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| NII (AED Bn) | 41.7 | 44.1 | 48.9 | 49.1 | 53.4 | 59.0 |
| NIIR | 56.6% | 60.8% | 64.8% | 66.9% | 72.4% | 75.7% |
| Gross interest income/ Gross loans | 6.9% | 6.7% | 6.6% | 6.2% | 5.8% | 5.6% |

Table 3. Profitability of banks

The NIIR of the banking sector increased from 56.6% in 2009 to over 75% in 2014 while gross interest income to gross loans has declined. This implies that banks' funding costs have decreased over the period. The decrease in funding costs can be explained by the faster increase in demand and savings deposits relative to time deposits, the latter being generally more expensive.

⁴ Net Interest Income Ratio defined as Net Interest Income divided by Gross Interest Income

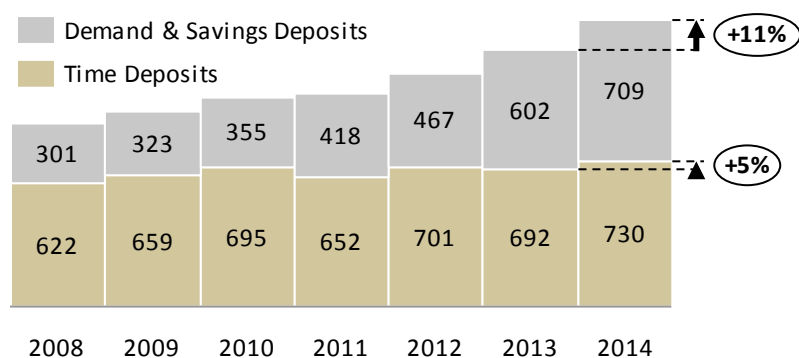


Figure 24. Deposit structure in AED Bn

This change in the deposit structure and the high liquidity in the market have created little incentive for banks to compete for deposits through offering higher interest rates.

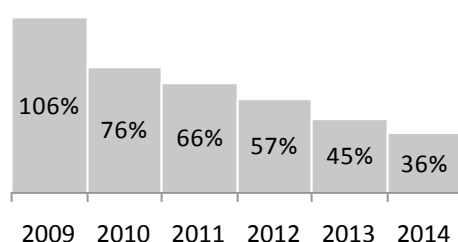


Figure 25. Net provision charges to total profit

Improvement in NPLs and profitability levels had allowed banks to increase their level of provision coverage by taking less provision charges as a percentage of total profits.

Non-interest income increased in 2014 due to higher fee and commission income which offset the decline in income from trading activities.

Profitability

Net Return on Assets (ROA) and net Return on Equity (ROE) have gradually increased since 2012, reaching 1.7% and 13.6% respectively as at the end of 2014. The increase can be attributed to the robust economic recovery in the UAE which resulted in higher profits, lower NPLs, and the improvement in asset utilisation and capital allocation.

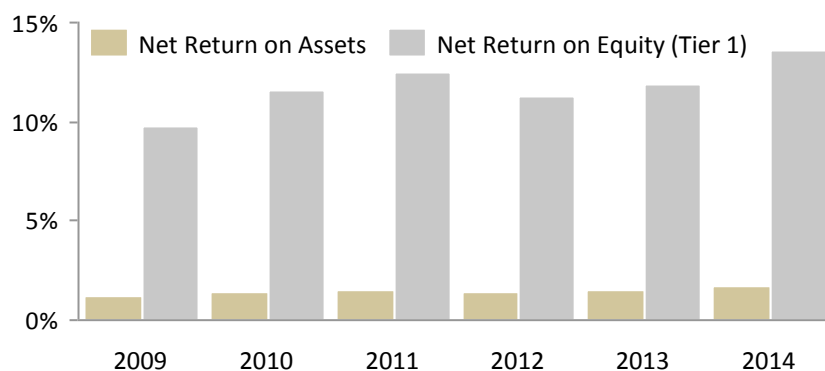


Figure 26. Profitability of the banks

The ratio of non-interest expenses to gross income is an indicator of banks' operational efficiency. Non-interest expenses, essentially staff, premises and IT costs, were under 40% of total gross income (interest and fee income) in 2014, indicating a satisfactory balance between cost control and revenue growth.

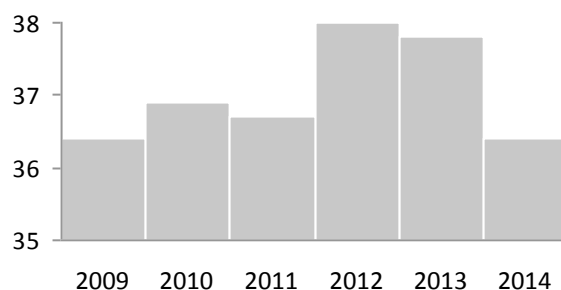


Figure 27. Non-interest expense to gross income

Liquidity

The Central Bank monitors banking system liquidity by measuring the following ratios/indicators:

- Ratio of liquid assets to total assets
- Ratio of liquid assets to demand liabilities
- Net liquidity at the Central Bank
- Net total liquid assets

Ratio of Liquid Assets to Total Assets

Liquid assets are strictly defined to include only cash and reserves held at the Central Bank, Central Bank CDs, 0% risk-weighted government bonds (local and foreign) and 0% risk-weighted UAE public sector entities. Demand liabilities are based on the accounting definition but exclude overnight interbank liabilities.

The ratio of liquid assets to total assets (less capital, reserve and provisions) has shown substantial improvement since 2008, reaching 15.6% as at the end of 2014.

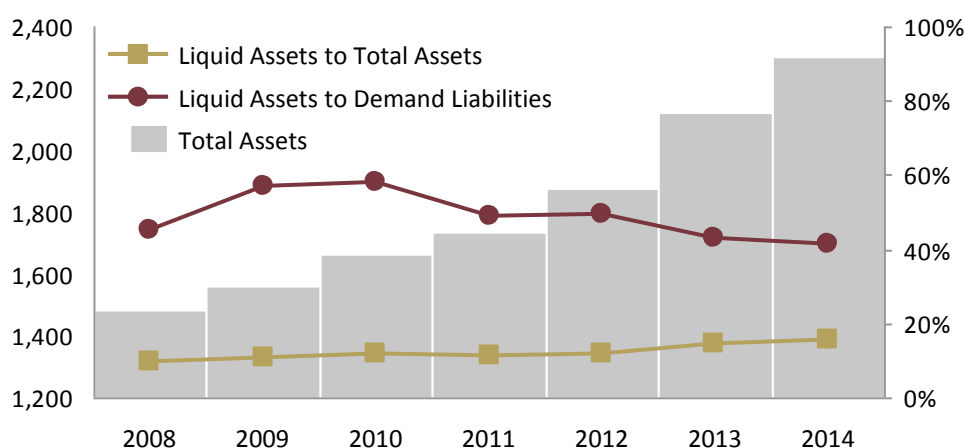


Figure 28. Liquidity at the banks. Assets less capital, reserves and provisions in AED Bn.

In 2014, the ratio of liquid assets to demand liabilities continued its downward trend from a peak of 58% in 2010. This indicates more reliance by banks on demand deposits to fund asset growth as a consequence of the increased shift in consumer preferences in recent years from term deposits to demand deposits given the low interest rate environment.

Net Liquidity at the Central Bank

Banks' surplus liquidity is typically invested in assets which provide immediate liquidity, such as cash or Central Bank CDs. As the Central Bank does not actively intervene to influence market liquidity, the CD issuance program is not driven by monetary policy considerations; it is designed to allow banks to place excess liquidity with the Central Bank and achieve a risk-free return.

The Central Bank monitors two indicators to assess the liquidity of the banking sector: net total liquid assets placed by banks with the Central Bank and total collateralised funding provided by the Central Bank.

Net Total Liquid Assets

The net total liquid assets placed by banks with the Central Bank defined as current account balances, reserves requirements and CDs (net of repoed CDs or any use of Central Bank liquidity facility) revealed a rising trend in line with ample liquidity in the market. At the end of December 2014, banks' net liquidity with the Central Bank stood at AED 233 Bn which represents 10.1% of the banks' total assets.

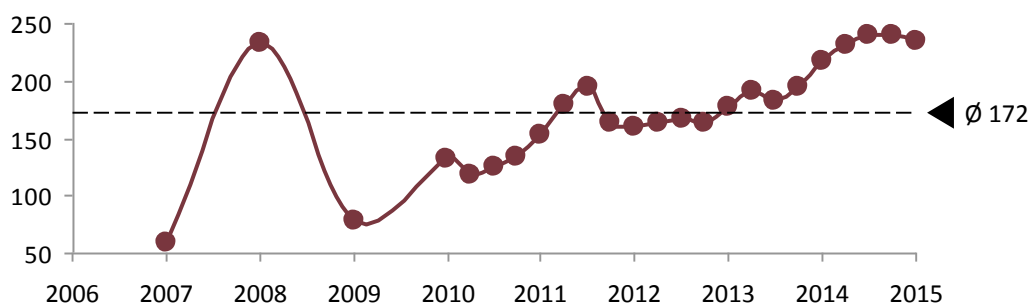


Figure 29. Net liquidity of the banks (in AED Bn)

Funding

A prudent funding profile of the banking sector indicates that banks are less vulnerable to episodes of liquidity stress. To monitor the system-wide funding profile, the following ratios are tracked periodically.

Loan to Deposit Ratio

This is a common ratio used to assess banks' liquidity. The lower the ratio, the better the bank's liquidity as it indicates that the bank is relying on stable funds to finance its loans. For this reason, this ratio is a useful indicator of potential funding vulnerabilities.

In assessing the ratio, two peculiarities of emerging economies need to be considered. One is that domestic bond markets are not well developed, meaning that financial intermediation is mostly done by commercial banks. The other is the high average capital adequacy ratio (CAR) in the UAE. Some of this capital logically ends up funding part of banks' loan books.

As deposits have increased at a faster rate than loans, the ratio has gradually declined and in 2014 was below the 100% threshold.

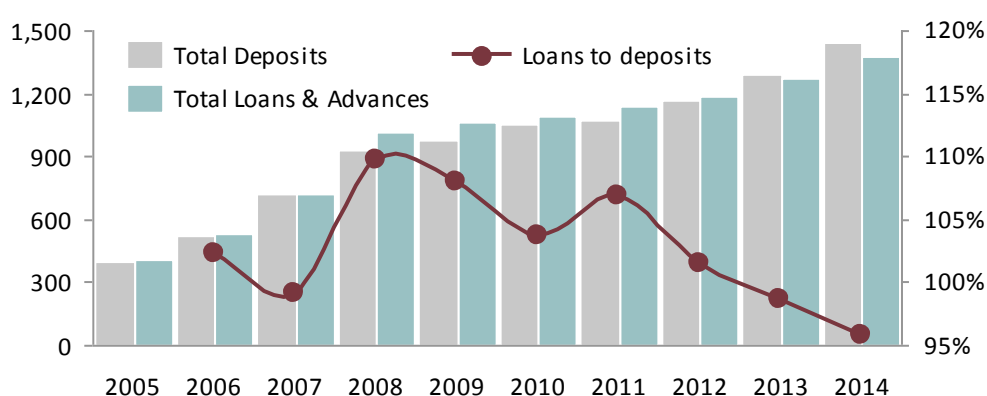


Figure 30. Deposits and loans and advances (in AED Bn, LHS) and loans and advances to deposit ratio (RHS)

Lending to Stable Resources Ratio (LSRR)

This ratio was introduced by the Central Bank in 1986. It aims to promote a stable funding profile for banks that leads to a more resilient banking sector, very much in line with the spirit of the Basel III NSFR ratio introduced much later by the BCBS.

The LSRR ratio is calculated as:

- Loans and advances net of provisions, financial guarantees issued less guarantees received, and interbank placements with a residual maturity of terms of more than 3 months.
- Stable resources include capital and reserves⁵, interbank deposits with a remaining maturity of more than 6 months, 100% of customers' deposits with a remaining maturity of more than six months, 85% of all other deposits.

⁵After deducting goodwill and other intangible assets, fixed assets, unquoted investments and investments in subsidiaries and affiliates.

This ratio was maintained well below the 100% threshold in 2014. A ratio below 100% indicates that the banking system is funding its loans using stable funding sources.

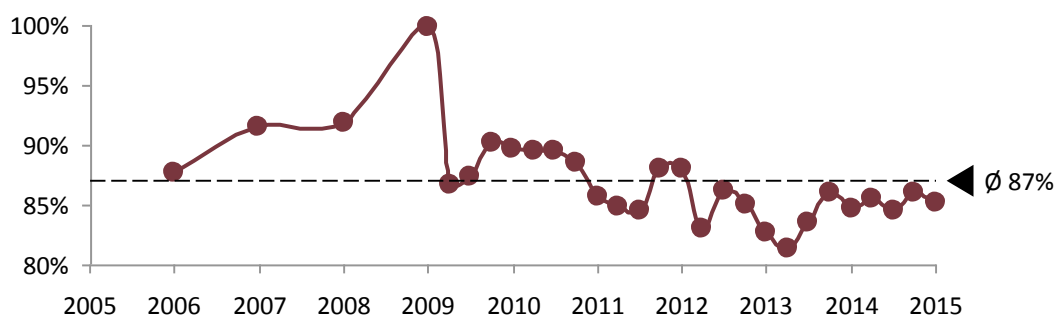


Figure 31. Lending to stable resources ratio

Collateralised Funding by the Central Bank

Since early 2012, the usage of collateralised funding by the Central Bank has been very marginal due to the comfortable liquidity position enjoyed by banks.

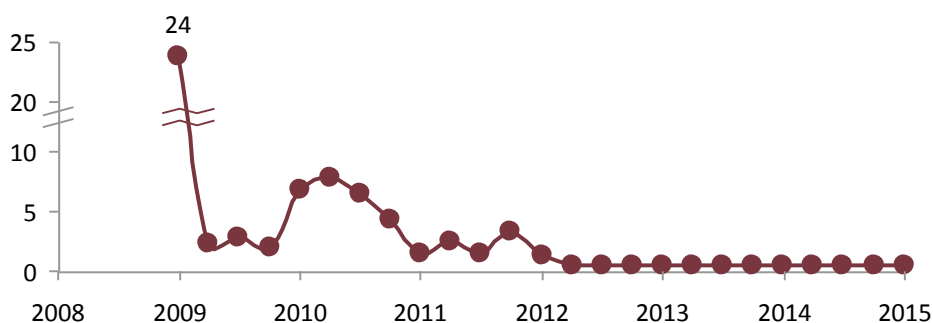


Figure 32. Collateralised funding end of quarter position (in AED Bn)

Foreign Interbank Funding

National banks had no dependency on offshore funding as at December 2014, as their other funding sources were sufficient to finance their activities. Since June 2010, UAE banks have been net lenders in the foreign interbank market which suggest far less vulnerability to an external shock such as the liquidity crunch experienced in 2008.

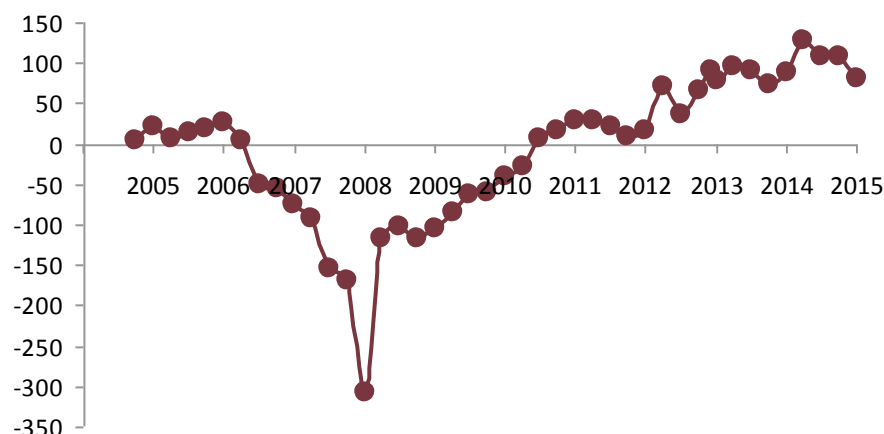


Figure 33. Net interbank lending by local banks (in AED Bn)

Capital Market Funding

In the absence of a liquid Dirham bond market and long term domestic institutional investors, foreign capital markets are the predominant channel for national banks to raise medium to long term funding. The trend, which started in 2013, accelerated in 2014 as historically low interest rates created a favourable environment for raising long-term funding. As a percentage of total deposits, capital market funding has remained stable at around 10% over the reported period.

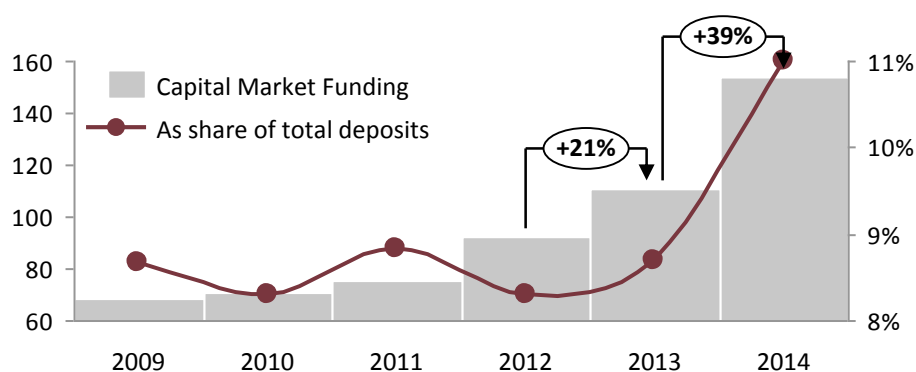


Figure 34. Capital market funding (local banks) in AED Bn and as percentage of total deposits.

Non-resident Deposits

Non-resident deposits have proven to be a stable source of funding over time, increasing in the same proportion as resident deposits, notwithstanding short term fluctuations. Accordingly, their share of total deposits remained relatively stable over the observed period.

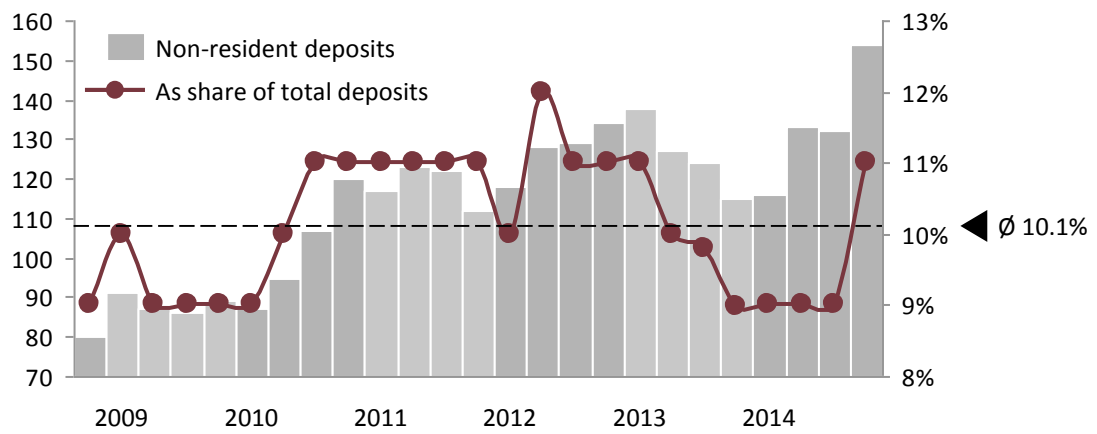


Figure 35. Non-resident deposits (AED Bn) and their share in total deposits (all banks)

Financial Stability Trend Index

Summary

The Central Bank of UAE recently developed a Financial Stability Trend Index (FSTI) which applies quantitative methods to measure risks to financial stability. FSTI combines nine indicators that represent the banking sector, the UAE stock market and domestic economic conditions to arrive at the financial stability stance of the UAE. Towards the end of 2014, the index moved slightly into negative territory indicating a limited build-up of vulnerabilities. At such levels, however, FSTI does not raise any financial stability concerns.

Overview

The Financial Stability Trend Index (FSTI) is based on the work of the IMF and other Central Banks. It applies quantitative methods to monitor risks to financial stability. The index is an aggregate indicator for the UAE financial sector and is an important part of an Early Warning System (EWS).

Given that there does not exist an unequivocal unit of measurement for financial stability, assessment of financial stability is based on the combination of a broad set of indicators.

The indicator is an average of selected variables covering key aspects of financial stability. It intends to show whether the current environment is supportive of financial stability or not. It does not intend to predict the occurrence of a crisis, but rather helps to detect the build-up of vulnerabilities in the financial sector at an early stage. The indicator combines individual variables, which, taken individually might not provide a complete picture. However, taken together might indicate a potential threat to financial stability.

It must be stressed that the FSTI does not factor in any external crisis to the UAE financial system such as a crisis in another country or a global crisis.

As part of building up an indicator for the UAE, indices developed by other Central Banks and the IMF were reviewed. These usually combine 5 to 15 variables mainly related to credit, foreign exchange, equity and interbank markets.

For the UAE, variables related to foreign exchange were not selected given the peg of the Dirham and that trade was predominantly denominated in USD or linked to it. On the other hand, variables directly related to the state of the economy such as credit, interbank lending, equities markets, and macro-economic variables were included.

In total, 9 variables were used, calculated on a quarterly basis starting June 2006. The indicators were grouped under three sub-indices: Banking sector, UAE economy and UAE stock market, which were then combined to create the FSTI.

The Composition of the FSTI

The FSTI is composed of three sub-indices.

The Banking Sector Index

The Banking Sector Index (BSI) is made up of four equally weighted indicators covering capital adequacy and liquidity:

| Category | Indicators | |
|------------------|------------------------------------------------------------|-----------|
| Capital Adequacy | Capital adequacy ratio | I_{s_1} |
| Liquidity | Ratio of lending/borrowing from banks abroad-to-total loan | I_{s_2} |
| | Liquid assets ratio | I_{s_3} |
| | Total loans-to-total deposits ratio | I_{s_4} |

Table 4. Components of BSI.

These variables were selected based on the following rationale:

- The capital adequacy ratio represents the cushion a bank has at its disposal against potential risks. It measures banks' ability to absorb unexpected loss.
- A negative net foreign interbank position shows dependency on foreign sources, which is a less stable source of funding.
- The ratio of liquid assets to liabilities measures banks' ability to withstand tight liquidity conditions.
- The loan to deposit ratio shows banks' dependency on wholesale funding.

UAE Economy Index

UAE Economy Index (UAEEI) reflects conditions in the real economic sectors and is made of the below equally weighted macroeconomic indicators.

| Category | Indicator | |
|-------------|--------------------|-----------|
| Real Sector | Real estate prices | I_{v_1} |
| | GDP growth | I_{v_2} |
| | Oil price growth | I_{v_3} |

Table 5. Components of UAEEI.

These variables were selected based on the following rationale:

- Persistent deviations of real estate prices from long term trends negatively affect financial stability.
- Year-on-year real GDP growth reflects the change of the output produced in a given period and shows the state of the economy.
- Average quarterly year-on-year oil price growth is considered to be an important variable for the UAE given oil exports' share of GDP.

UAE Stock Markets Index (UAESMI)

UAESMI considers the conditions in the domestic stock market and is composed of the following two indicators.

| Category | Indicator | |
|---------------|-----------------------------|-----------|
| Stock Markets | Price – earnings (PE) ratio | I_{r_1} |
| | Market volatility | I_{r_2} |

Table 6. Components of UAESMI

These variables were selected based on the following rationale:

- PE Ratio is a general indicator of market sentiment. A high PE ratio can potentially signal overpricing.
- Observed market volatility is considered a measure of risk in the stock market.

Representation of the FSTI and its Evolution

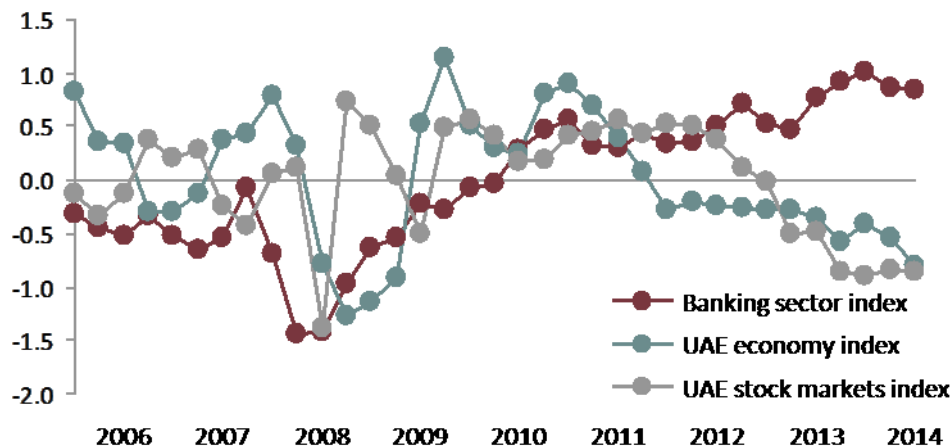


Figure 1. The UAE FSTI sub-indices.

The three sub-indices are calculated as a simple average of the indicators making up the index after statistical normalization as explained in Annex (3.B).

Because assessment of financial stability is based on the combination of a broad set of indicators, the aggregation of these indices is considered a better gauge of the financial environment.

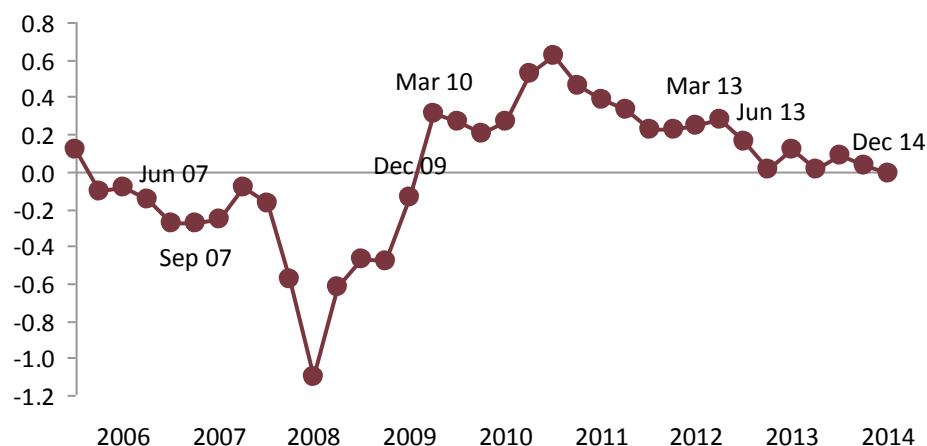


Figure 2. The UAE FSTI.

Analysis of the FSTI identifies the following:

June 2006 to June 2007:

The index fluctuated in negative territory which corresponded to a slight deterioration of financial stability during the period. Six out nine variables were negative throughout the period.

The main variables driving this deterioration were related to banking and the real sector.

September 2007 to December 2009:

The index declined into deep negative territory and bottomed in December 2008, when the GFC impacted the UAE. Five out of nine variables deteriorated significantly during this period.

There was excessive lending and deterioration in banks' liquidity, combined with high volatility and strong declines in real estate, real GDP and oil prices.

March 2010 to March 2013:

The chart shows that financial stability in the UAE moved into positive territory during this period as most individual variables improved, following the recovery of the UAE economy.

June 2013 to December 2014:

Data show a marginal deterioration in financial stability as the FSTI moved slightly into negative territory. Over this period, of the nine indicators, two remained stable while the remaining seven experienced some form of deterioration.

The main drivers of change were the variables linked to the stock market and oil prices.

Foreign exposures of the UAE based banks

Summary

The UAE financial system is becoming increasingly integrated into global financial markets. Total foreign exposures outside the UAE (own branches plus exposures to foreign entities) was AED 568 Bn or 27% of the total assets of UAE based banks as at the end of 2014. Foreign exposure of UAE banks represents limited financial stability concerns as they are well diversified and primarily to GCC, major financial hubs and core trading partners.

Total Foreign Exposure

The UAE financial system has become increasingly integrated into global financial markets due to the rising engagement of international banks in the UAE as well as the gradual expansion of UAE based banks abroad.

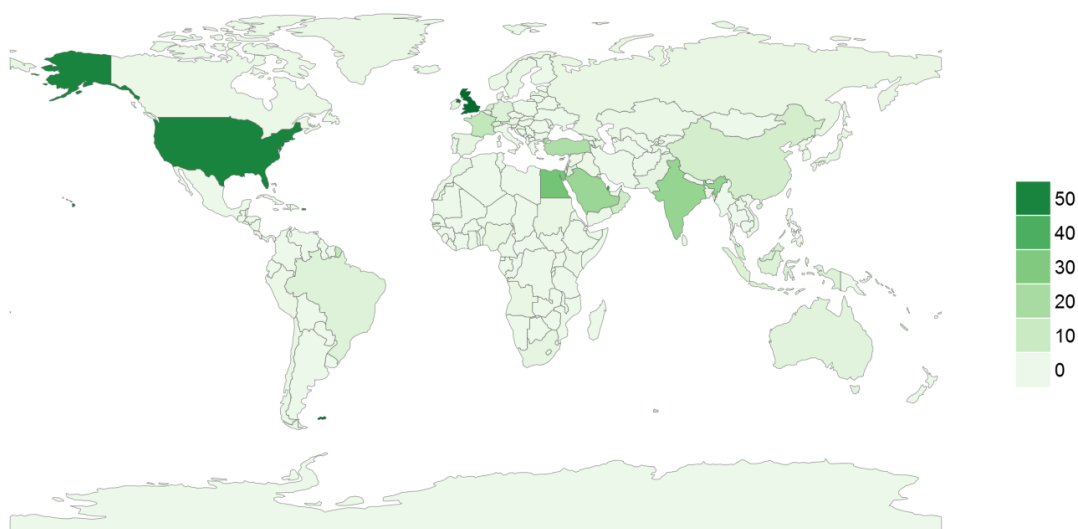


Figure 36. Total foreign exposure of the UAE based banks to foreign countries in AED Bn.

Total foreign exposures, defined as total credit, interbank and investment assets outside of the UAE, is one of the indicators the Central Bank monitors in order to assess the exposure of local banks to external (non-UAE) risk factors.

Total foreign exposure of UAE banks was primarily concentrated in the GCC countries (Qatar, Saudi Arabia), major financial hubs (UK, USA, DIFC) and a few core trading partners (India, Turkey).

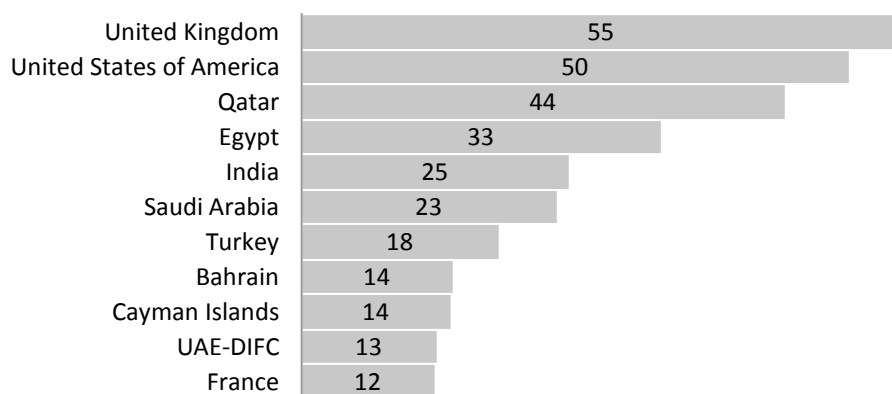


Figure 37. List of total foreign exposures per country bigger than AED 10 Bn.

While total foreign exposure provides a good overall picture, it is not a metric that specifies the risks banks are taking in each foreign jurisdiction. Such exposures can differ in many aspects including credit risk, asset liquidity and duration.

Exposure to Foreign Banks

Exposure to banks was traditionally considered to be very low risk; however, the GFC partially altered this perception. While credit events in the banking industry are rare, they could have a large impact on the functioning of the financial system due to potential contagion effects.

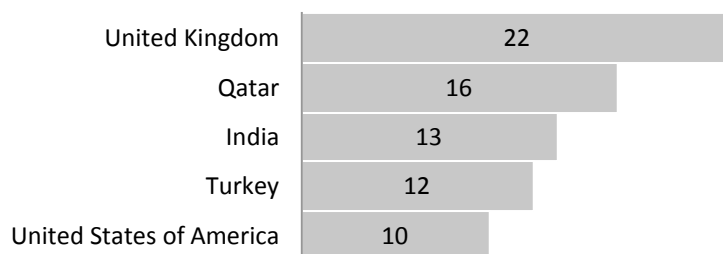


Figure 38. Top five countries with exposure to banks in AED Bn

As at December 2014, exposure of UAE banks to foreign banks (excluding UAE branches of foreign banks) was AED 147 Bn or nearly one third of total foreign exposures. Only exposure to UK and Qatar based banks exceeded 10% of total banks' exposure as at 31 December 2014, which presents relatively high level of diversification.

Exposure to Non-residents

UAE banks⁶ total exposure to foreign entities (excluding banks) was AED 165 Bn at the end of 2014. The top 10 country exposures amounted to more than 57% of the total.

⁶ Excluding lending and investment through branches and subsidiaries.

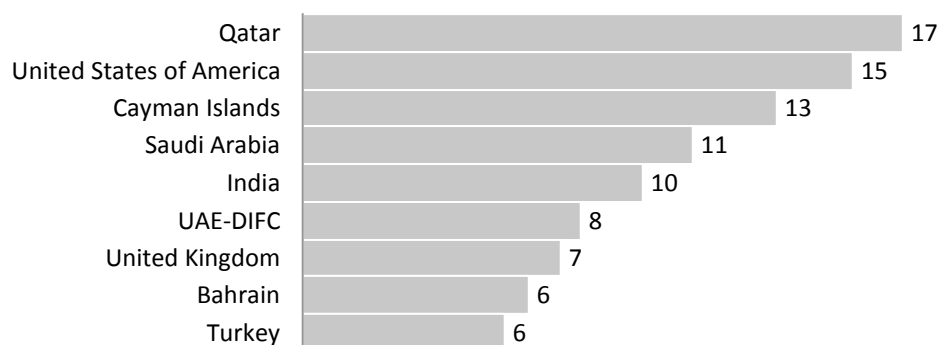


Figure 39. Exposure to non-resident entities above AED 5 Bn

As in other categories, Qatar and Saudi Arabia were the leading GCC exposures while the US and the UK were the largest developed market exposures. The exposure to the Cayman Islands is exaggerated as ultimate risk, in many cases; can be traced back to the UAE as many local entities issue debt using special purpose vehicles based in the Cayman Islands.

The levels of lending to non-residents remained at around 13% of total loans; suggesting that banks remain relatively conservative compared to international counterparts in taking credit risk outside of the jurisdictions where they are present. Furthermore approximately 36% of foreign credit risk exposure was to governments.

Investment

Less than 30% of the exposure of UAE banks to foreign banks and other non-resident entities, discussed above, was in the form of financial securities. Total investment in foreign securities (excluding investments done through overseas branches and subsidiaries) as at January 31, 2015 was AED 91 Bn with 93% of the amount invested in debt securities.

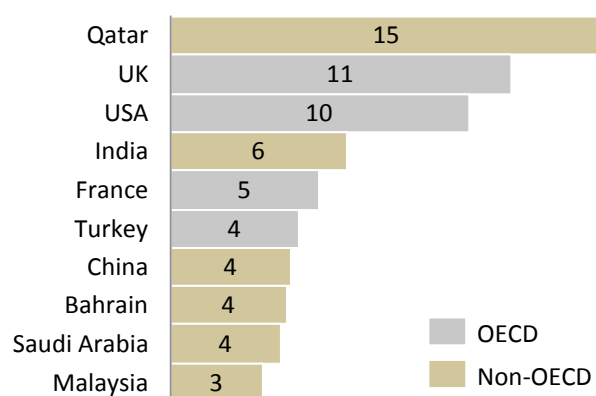


Figure 40. Top ten countries for investment (AED Bn)

Nearly half (46%) of the securities held by the UAE based banks were issued by entities based in Organisation for Economic Cooperation and Development (OECD) countries. Exposures to entities based in non-OECD countries were predominantly in GCC countries. Business models of UAE banks are naturally biased towards the region.

Lending of Foreign Branches and Subsidiaries

UAE based banks had 44 branches/subsidiaries abroad at the end of 2014. Four banks had operations in Egypt, Qatar and United Kingdom, three banks were present in Lebanon and Kuwait, two in the United States, Singapore, Hong Kong, India, Sudan, Bahrain and Libya. In the remaining countries there was a branch of one UAE bank only. Total assets of all 44 branches were AED 256 Bn.

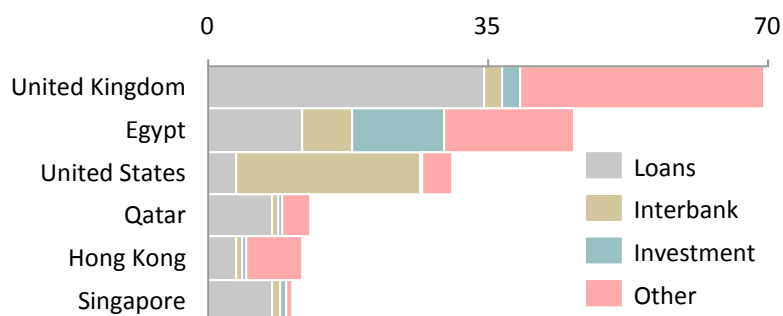


Figure 41. Assets of foreign branches in AED Bn

The largest operations of UAE banks abroad were in the United Kingdom, Egypt and the US. Together they constitute more than half of the total assets and lending outside the UAE. Bank's balance sheets in different countries indicate their different nature of operations: banks seem to operate US branches largely as a way to tap into interbank markets, while Qatar and Singapore branches more actively participate in local credit markets in these countries.

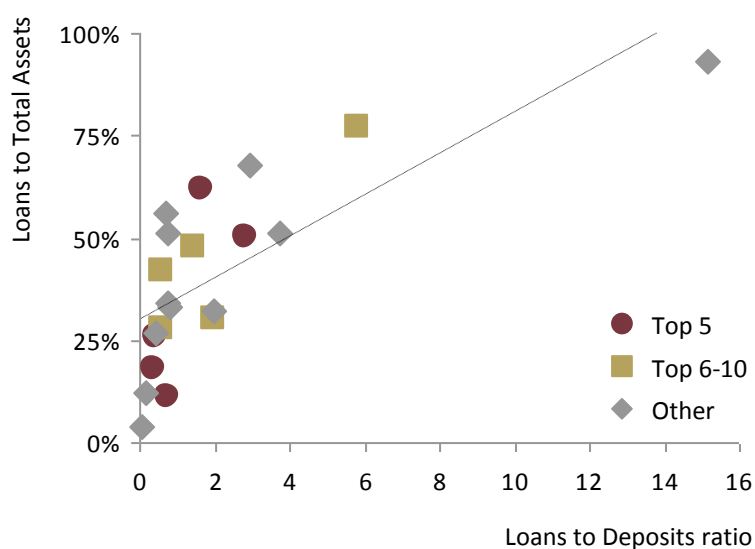


Figure 42. Funding of branches abroad (grouped by total assets). Ratios showed as a multiple.

Branches that are more active in lending in the countries of operation tend to have higher loan to deposits ratios and as such appear to rely more on capital, interbank and support of their home offices in funding their assets. The practice is common among the banks of capital rich countries.

Country Exposure and Risk

The GFC highlighted the degree of interconnectedness between borrowers and creditors across different countries. Complex networks created the potential for chain reactions across multiple jurisdictions triggered by a shock in one country, usually an advanced economy.

Foreign exposure of UAE based banks has grown in recent years. However, given the size of assets abroad, no UAE banks can be considered a global bank. Most foreign assets of UAE banks are concentrated in the GCC, the wider region and a few global financial hubs. UAE banks' assets abroad (own branches + exposures to foreign entities) at the end of 2014 were AED 268 Bn or 27% of total assets.

Given the relative size of exposures to Qatar and its similar risk profile to the UAE, issues in Qatar can potentially impact some UAE banks. US and UK exposures, while substantial, are different in nature and could channel the shock only if UAE banks were to become net borrowers in the international market.

Real Estate Markets

Summary

After a sharp rise in property prices in both Abu Dhabi and Dubai in 2013 and the first half of 2014, prices stabilised in the second half of the year, alleviating concerns of property market overheating.

Residential Real Estate

In 2014, average residential sales prices in Dubai, increased 16.5% to approximately AED 15.8 Th per sq. m. The annual growth rate peaked in April 2014, when year-on-year growth reached almost 38%, compared to an annual growth rate of 23.8% for 2013. In the second half of the year prices stabilised with relatively modest growth.

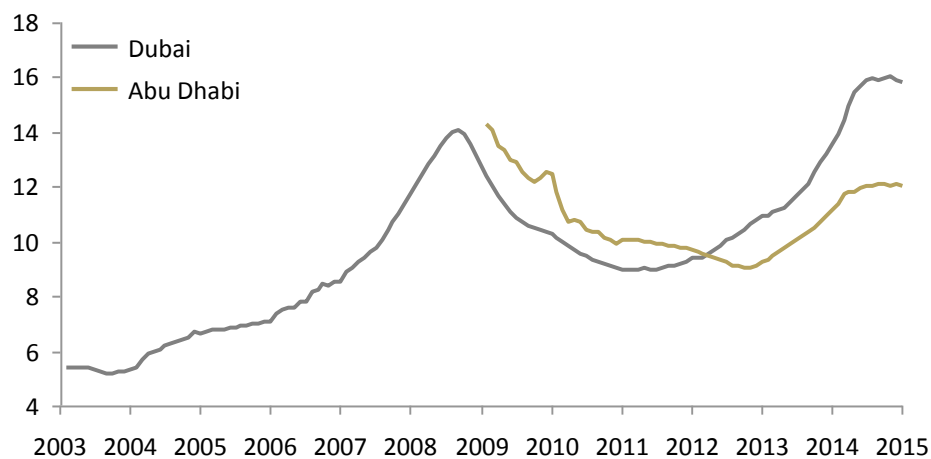


Figure 43. Average monthly prices of residential properties (AED Th. /Sq. m.). Source: REIDIN.com

House prices in Abu Dhabi rose in the first half of 2014 but remained flat through the second half of the year. This led to a cumulative increase of almost 8% in house prices, compared with a 20.7% increase in 2013.

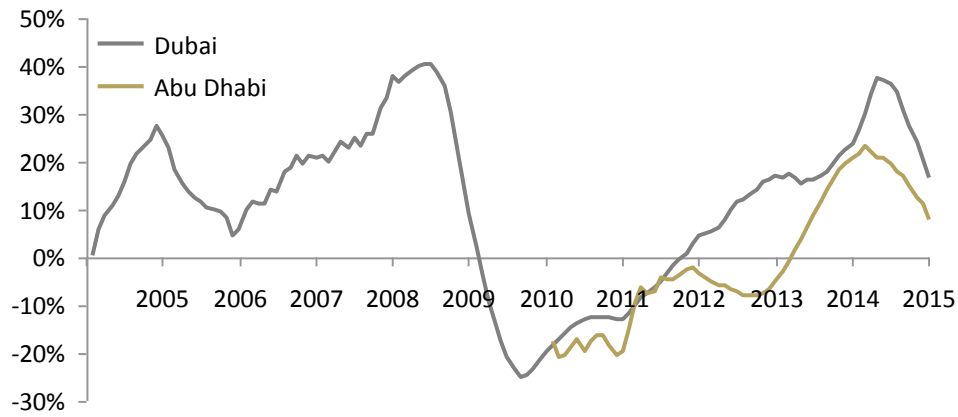


Figure 44. Year on year price changes of residential property prices. Source: REIDIN.com

Analysis of historical data suggests that rent prices were less volatile than sales price and at the same time reacted faster to changing market conditions. Dubai data for 2014 seems to confirm the pattern: residential rent price increased by 13.4% (18.3% in 2013) with the quarter-on-quarter growth rate peaking in March, a month earlier than sales price growth peak. Abu Dhabi rent price growth accelerated to 6.5% in 2014 compared to 3.5% in 2013.

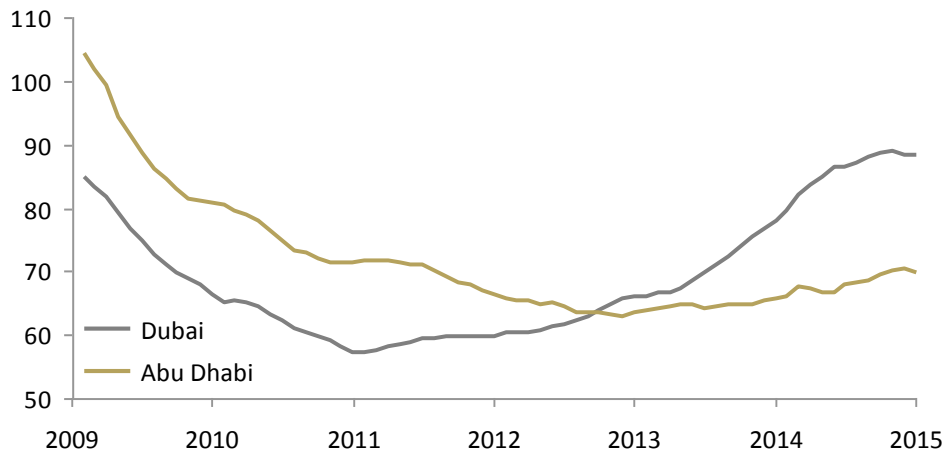


Figure 45. Monthly residential rental prices (AED/Sq. m.). Source: REIDIN.com

As at December 2014, rental yields were 6.9% in Dubai and 7.2% in Abu Dhabi.

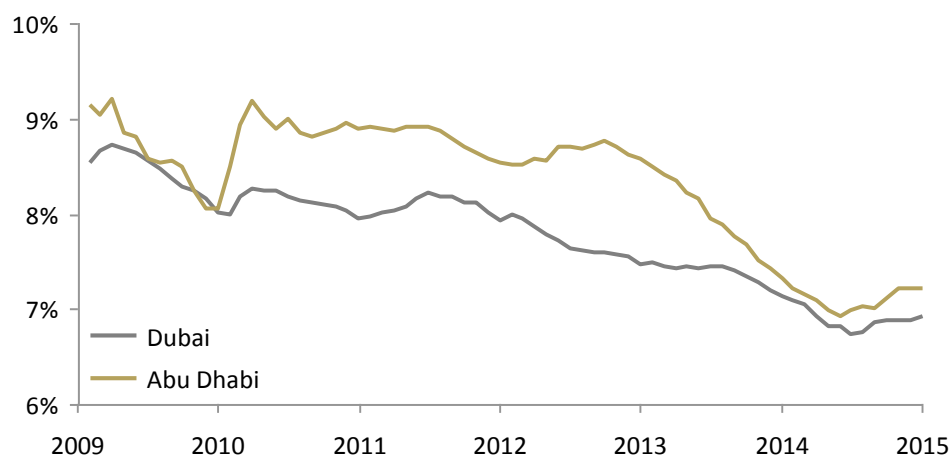


Figure 46. Residential rental yields. Source: REIDIN.com

In 2014, transaction volumes also decreased from levels observed in 2013.

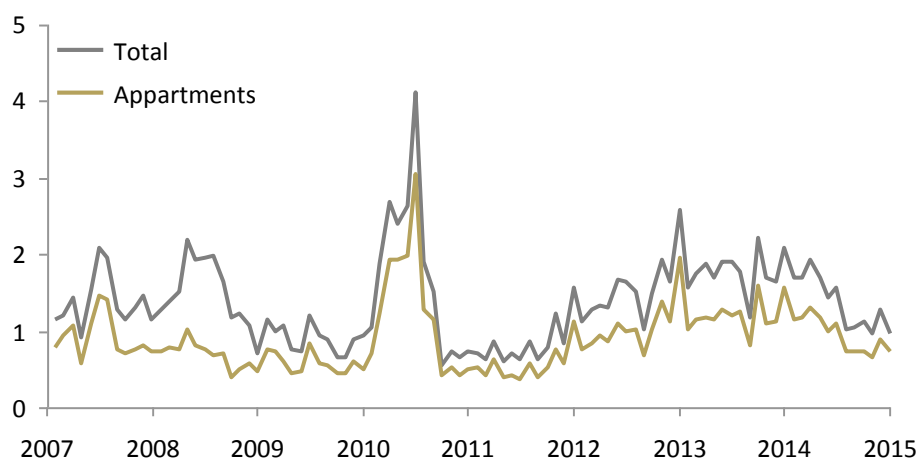


Figure 47. Number of residential property transactions per month in Dubai (Th). Source: REIDIN.com

Despite the increasing supply of new units in Dubai, up by more than 44% compared to 2013, vacancy rates reached their lowest level since 2010. Occupancy rates remain high at the end of 2014. This might limit the decline in rental yields.

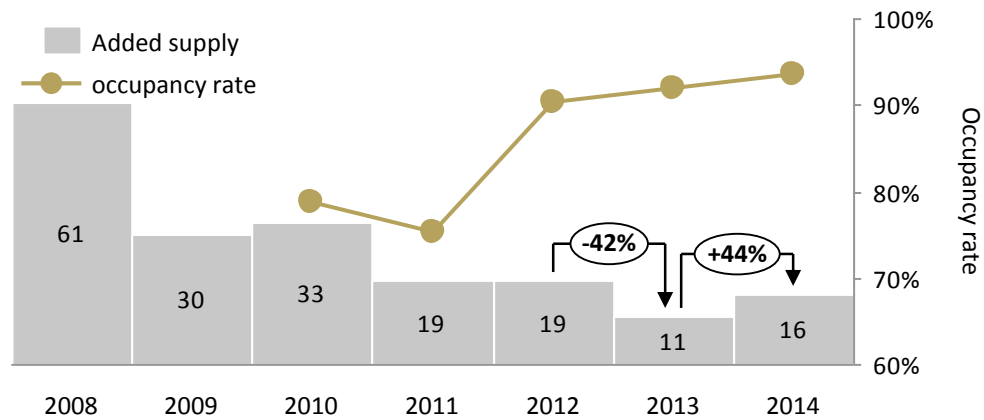


Figure 48. Dubai residential property occupancy rates (%) and new added supply (Th of units).
(Source: REIDIN.com).

Non-residential Real Estate Markets

Commercial property and property development are generally considered to pose greater risk to financial institution's balance sheets. Recent developments in UAE non-residential markets show little signs for concern.

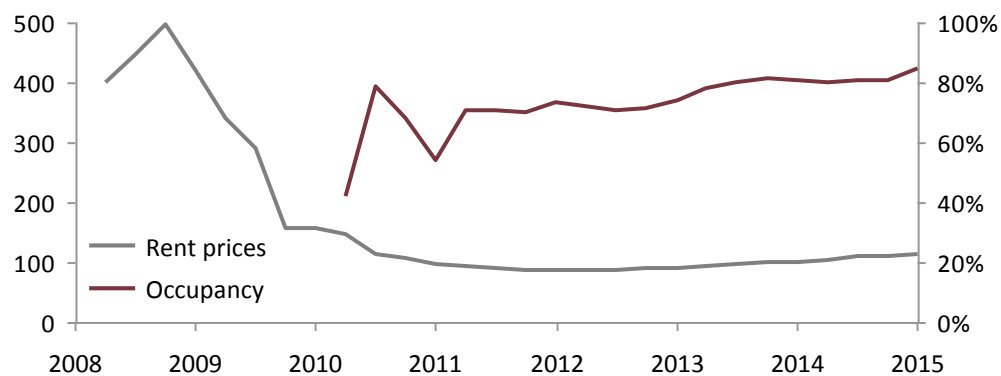


Figure 49. Dubai average monthly office space rent prices in AED per sq. m. and office occupancy rate (Source: REIDIN.com).

Dubai average office rental prices have increased by nearly 13% in 2014. At the same time vacancy rates fell to a record low of 15%. This was a positive sign for the market that had remained relatively subdued from 2009.

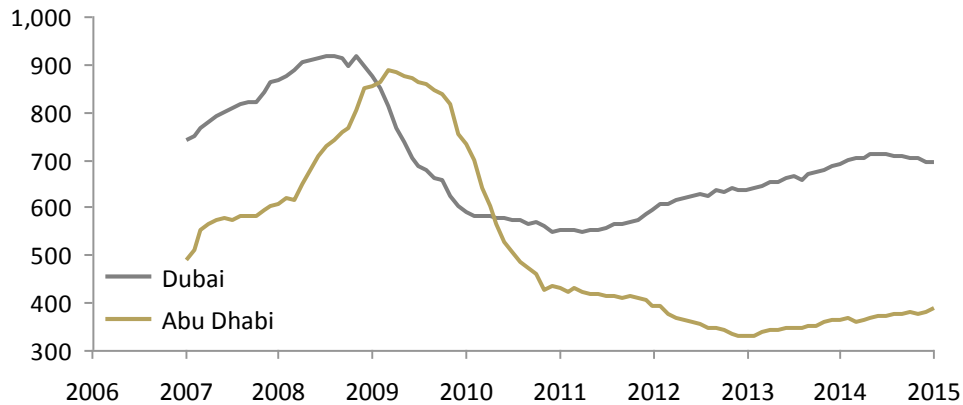


Figure 50. Cumulative 12 month average revenue per hotel room in AED (Source: Smith Travel Research, Bloomberg)

The Dubai hotel market remained relatively stable in 2014 with 12 month average daily hotel revenue per room reaching AED 696, broadly unchanged from 2013 levels. Abu Dhabi hotel revenue per room grew by 6% to AED 388. Hotel revenues were gradually growing over the last two years in both emirates in spite of increasing supply.

Property Market Risk Assessment

Small fluctuations in the real estate market have little impact on the financial stability of the country. The aim of this part of the analysis is to evaluate how the risk of a significant decrease in real estate prices could impact economic activity and thus, directly or indirectly, harm the functioning of the financial system.

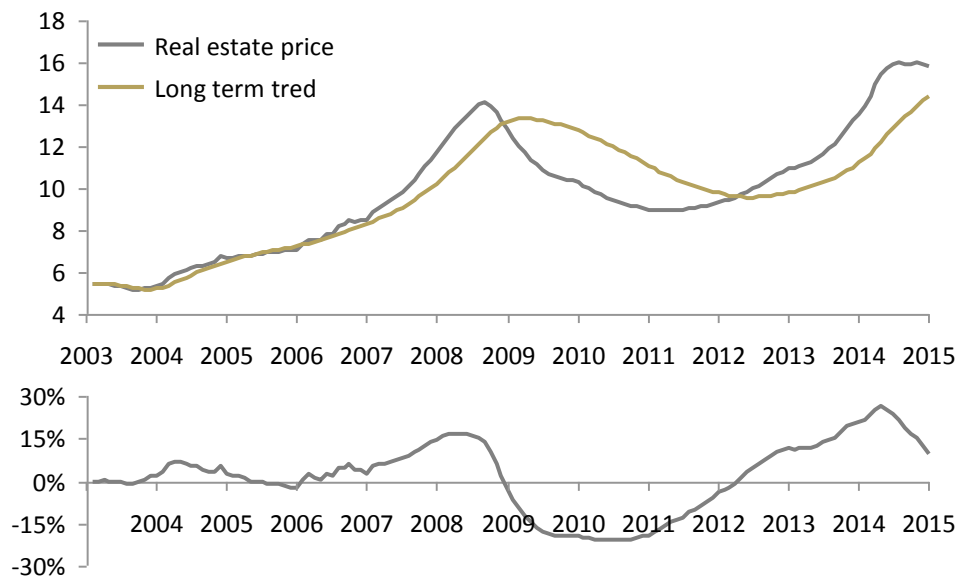


Figure 51. Top: Dubai average residential real estate sale price (AED Th / sq. m) and long term price trend. Bottom: deviation from long term trend.

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 into cyclical and long term trend components.

The gap between real estate prices and its equilibrium level (as proxied by the HP filter) narrowed through the second half of 2014. This was attributable to the stabilization of real estate prices from mid-2014 such that prices became a more accurate reflection of underlying market fundamentals.

Overall, this risk indicator together with high residential occupancy rates indicates price stabilization at a new long-term equilibrium. This would imply a lower probability of a significant financial stability shock emanating from the real estate sector.

Bank Real Estate Lending

While previous periods of rapid real estate prices increase were marked by strong credit growth, the most recent episode was not. Over 2014, real estate lending by UAE banks fell by almost 1%.

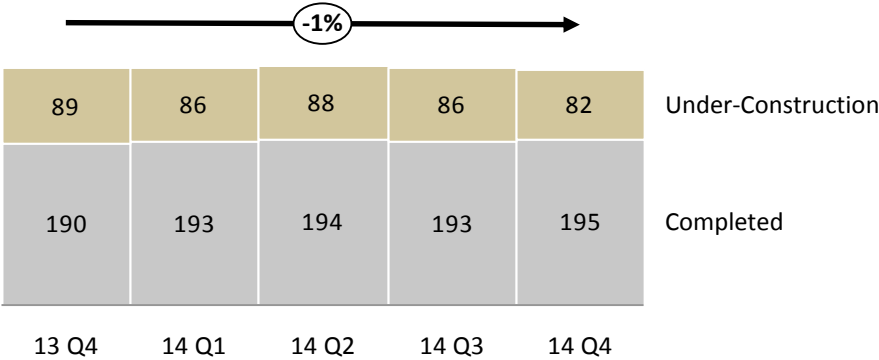


Figure 52. Bank real estate lending in AED Bn

Lending related to completed properties increased 3% to AED 195 Bn in 2014. On the other hand, lending to properties under construction has decreased by 8%. The decline was evident in both retail and wholesale portfolios, while hotels under construction were an exception.

This suggests that banks’ participation in financing real estate demand was limited during the year.

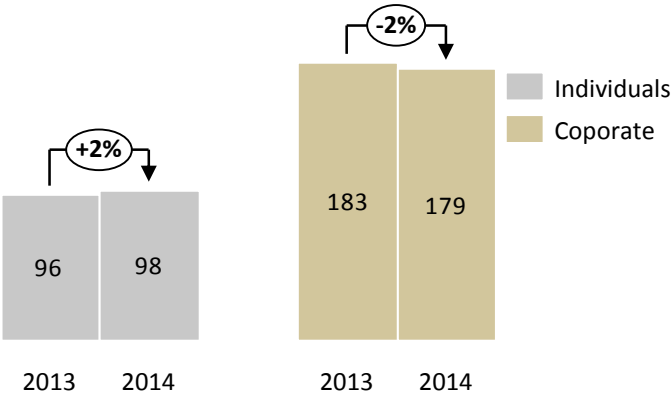


Figure 53. Real estate related lending by borrower type (AED Bn)

The share of individual borrowers increased over the year from 34% to 36% of total real estate lending in 2014. While overall corporate borrowing for real estate decreased, the major decrease came from developers while hotel related businesses increased their borrowing by more than 20%.

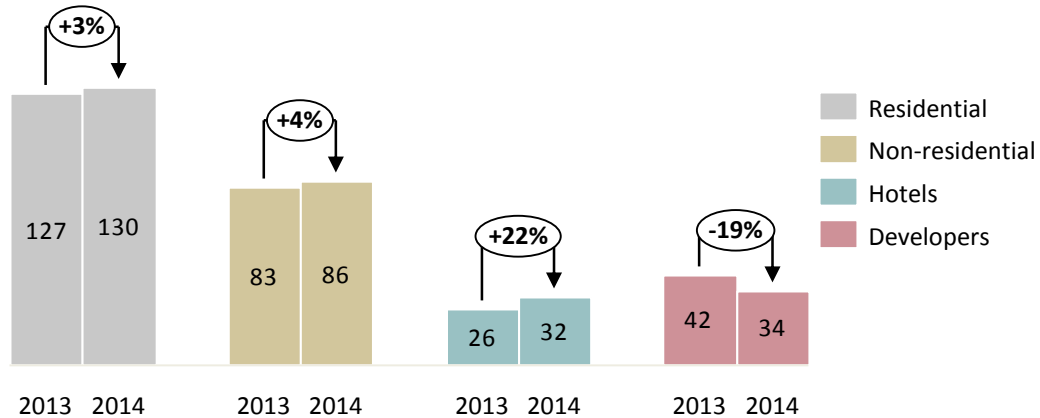


Figure 54. Real estate related borrowing by type of property (AED Bn).

UAE banks' financing of residential property increased by AED 3 Bn (3%) in 2014, while financing of commercial properties (offices, retail, hotels, etc.) grew by AED 3 Bn (2%).

Most recent changes in banks' real estate lending reveal limited impact of the current market recovery with bank's exposure decreasing. Furthermore, bank lending is shifting towards completed properties and as such, becoming less exposed to fluctuations in the residential market and more influenced by general economic conditions.

Shadow Banking

Summary

Shadow banking in the UAE represents less than 3% of total financial system assets and its participants are subject to Central Bank regulations which are similar to that applied to banks in the UAE. As such, this part of the financial system does not represent financial stability concerns.

Definition

The Financial Stability Board defines shadow banking as “credit intermediation involving entities and activities outside the regular banking system”. This definition has two important aspects. First, it limits shadow banking activities to credit intermediation and effectively separates shadow banking from other types of financial intermediation (foreign currency exchange, equity). Second, it places shadow banking outside the regular banking system or, in other words, outside bank-specific regulation.

While credit intermediation outside the banking system can offer more flexibility, cost efficiency and other advantages, it can also be a source of systemic risk. Involvement of shadow banking institutions in bank-like functions (maturity transformation and leverage) creates opportunities for regulatory arbitrage when there is a significant difference in the regulatory environment. Furthermore, interconnectedness between traditional and shadow banking creates potential for spill overs such as what happened during the GFC.

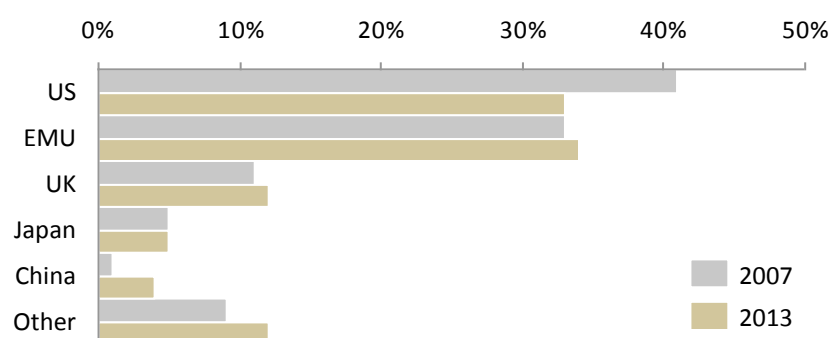


Figure 55. Share of assets of non-bank financial intermediaries (Source: FSB)

The Global Shadow Banking Monitoring Report 2014⁷ estimated the size of the shadow banking sector assets in 25 major economies (which collectively represent 80% of global GDP and 90% of global financial system assets) to be USD 75.2 Tn, 25% of total financial system assets in 2013. By comparison, total bank assets constituted 46% of total financial system assets.⁸ These proportions have remained relatively stable since 2007.

⁷ Financial Stability Board, *Global Shadow Banking Monitoring Report 2014*. 2014.

⁸ Remaining assets were held by Insurance companies, pension funds, public financial institutions and central banks.

According to the report, more than 80% of total shadow banking assets is concentrated in the United States and the European Union with another 11% in major Far East financial centres. Countries with the biggest shadow banking sectors were the Netherlands, United Kingdom and Switzerland where assets held by non-banking financial institutions stood at 760%, 348% and 261% of GDP, respectively. Differing regulations are the main reason behind different levels of shadow banking activities in different countries.

Shadow Banking and Financial Stability in the UAE

Shadow banking can be a source of systematic risk in two ways; the domestic shadow banking sector and external shadow banking entities.

External Exposure

While the majority of the big shadow banking institutions in Europe, US and East Asia do not have activities that directly relate to the UAE economy, some of them are active participants in the international capital and money markets and therefore indirectly, via repos for instance, serve as counterparties to financial institutions in the UAE. Total exposure of the UAE based banks to foreign non-banking financial institutions (NBFI) was AED 5 Bn as of December 31, 2014.

Internal Exposure

Credit intermediation in the UAE is mostly dominated by the banking sector. The total assets of credit intermediaries (non-bank financial institutions licensed by the Central Bank) outside the banking sector represent less than 3% of total bank assets, and their share has been decreasing for the past three years.

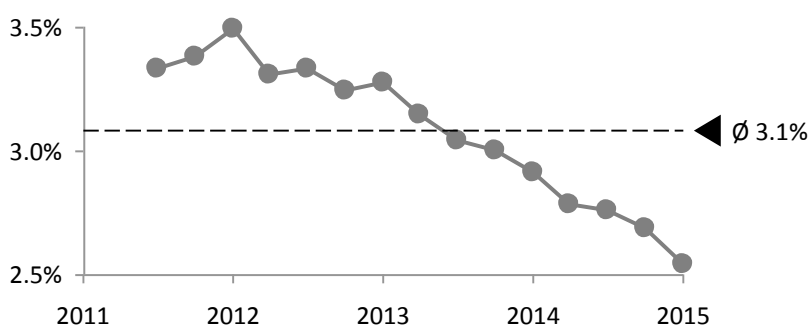


Figure 56. Shadow banking assets to bank assets in the UAE

The relative small and decreasing size of the shadow banking institutions in the UAE indicates low systemic relevance of the sector to financial stability at this stage. Only shadow banking entities that fall under the remit of the Central Bank were considered in this report, other entities such as brokers and money market funds were not covered.

Finance Companies

There are 27 finance companies in the UAE with total assets slightly above AED 45 Bn or approximately 2% of the banking sector total assets. In spite of the high number of market participants, 45% of assets are concentrated within three finance companies.

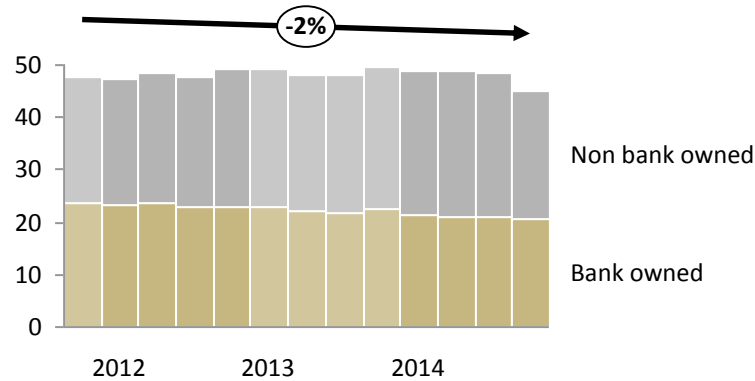


Figure 57. Total assets of finance companies in AED Bn

While finance companies mostly follow similar business models they can be split it into two separate groups. Bank owned and non-bank owned, with the market leader in each group constituting approximately half of its assets.

Business Model

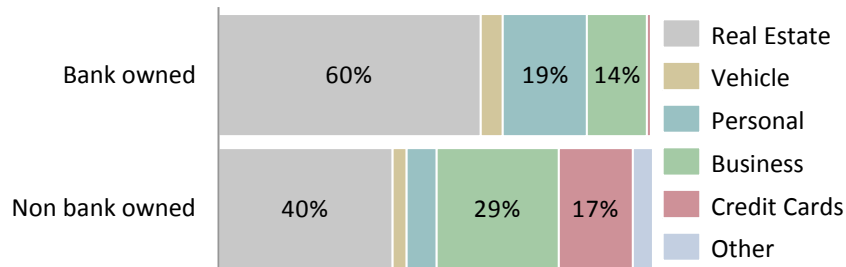


Figure 58. Finance company loan portfolio

Although the general business model of finance companies is the same, there are certain differences between bank owned and non-bank owned finance companies. Bank owned companies, with few exceptions, have relatively concentrated lending portfolios and target one or two similar markets (e.g. real estate financing). Non-bank owned companies tend to have more diversified portfolios.

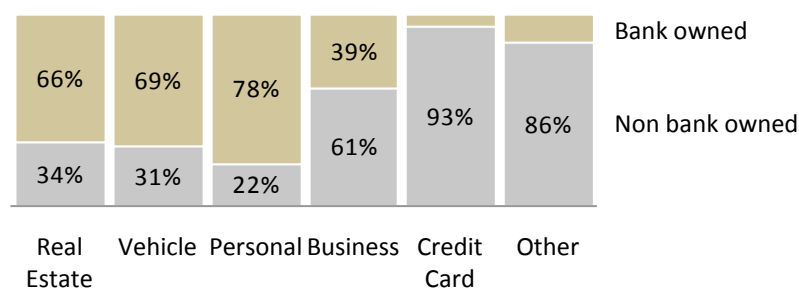


Figure 59. Finance company market split

Bank owned finance companies seem to target the mortgage market as well as personal lending. Non-bank owned finance companies, on the other hand, concentrate on small and medium size enterprises (SMEs) financing and credit cards while competing in all other areas as well. The following section suggests that non-bank owned finance companies are willing to take more credit risk, probably by lending to borrowers overlooked by banks.

Balance Sheet and Solvency Risk

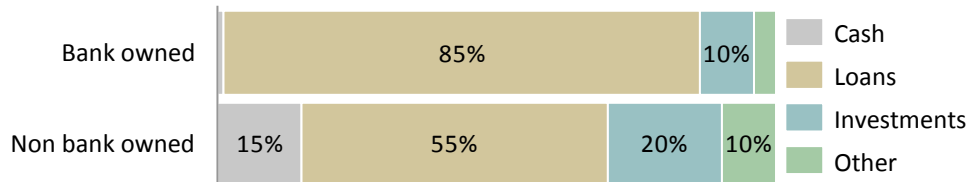


Figure 60. Assets of finance companies

Non-bank owned finance companies tend to keep a relatively higher percentage of their assets in cash and liquid investments. This could be explained by higher reliance on own resources as part of their liquidity management. Bank-owned finance companies on the other hand rely more heavily on their shareholders' support for liquidity needs.

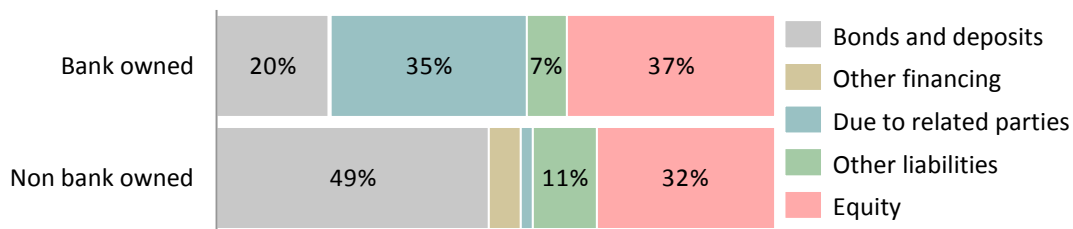


Figure 61. Equity and liabilities of finance companies

The liability side of the balance sheet shows that bank owned finance companies rely heavily on funding from related parties while non-bank owned companies have more diversified sources of funding. All finance companies are well capitalised, with a weighted average debt to equity ratio of 1.9.

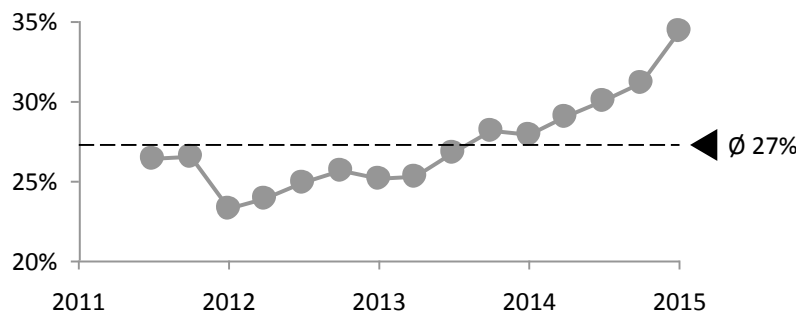


Figure 62. Leverage ratio of finance companies over time

There is also a significant difference in non-performing loan provisioning between bank owned and non-bank owned finance companies. While both types of finance companies

have similar levels of non-performing loans (NPL), the level of provisioning is different. Non-bank related finance companies on average provision for approximately 73% of their NPL, while bank related companies provision for 38%. This can be attributed to different lending behaviour with bank owned companies concentrating on mortgages that tends to have higher recovery rates.

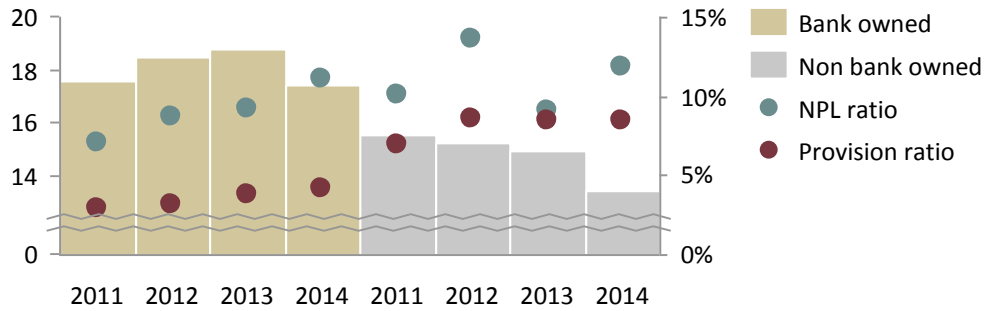


Figure 63. Asset quality of finance companies: loans (in AED Bn) vs. non-performing loans (NPLs) and provisions

Finance companies could have the potential to generate systemic risk because of their ability to engage in maturity transformation. However, at current size the impact on the financial system would be negligible. Furthermore, existing regulations follow the spirit of current banking regulations and therefore leave little space for excessive risk taking.

Investment Companies

There are 21 registered investment companies in the UAE. As there is no requirement for investment companies to report assets under management, the size of their total assets under management is not known. However the dynamic of assets under management is assumed to be similar to the investment companies' own assets, due to investments in managed portfolios (see SCA's Board of Directors Decision No 37 of 2012 (Article 4), that requires contributions of at least 3% in the capital of each Local Fund it establishes).

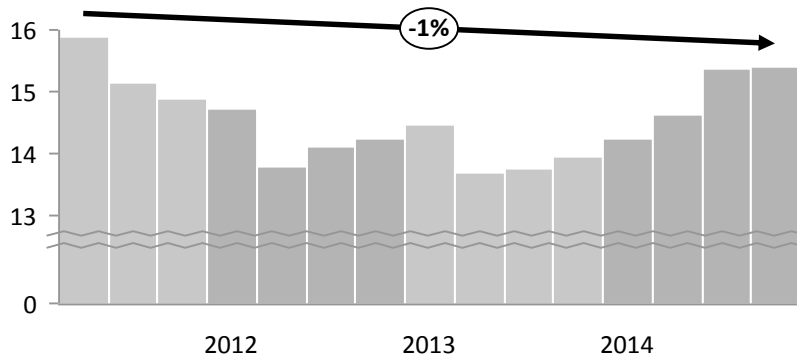


Figure 64. Total assets of investment companies in AED Bn. Arrow indicates compound annual growth rate

Over the past four years the size of investment companies' assets fluctuated around AED 14-15 Bn. The lowest point was reached in the second quarter of 2013.

In terms of the business model, investment companies can be split by business model into two types of companies, those that operate a savings scheme and companies that concentrate on asset management, investment advice and similar services.

There is only one investment company that runs a savings scheme in the UAE. It operates as an outlet for retail investors interested in short term saving instruments. **From this point onwards, the analysis only covers remaining 20 investment companies registered in the UAE that offer investment advisory and asset management services.**

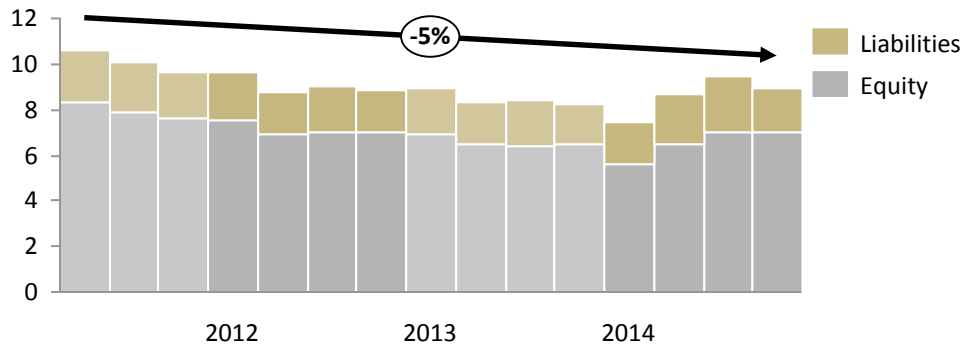


Figure 65. Balance sheet of the investment companies in AED Bn

Total assets of investment companies declined at an average rate of 12% a year for three years in a row starting second quarter of 2011 until bottoming out in the first quarter of 2014. During that period equity decreased by AED 2.7 Bn (-33%) due to losses absorbed by shareholders' equity. While declining equity has increased leverage of the investment companies, they remain strongly capitalised with a leverage ratio slightly below 78%.

Since the first quarter of 2014, assets of investment companies have increased by 20%

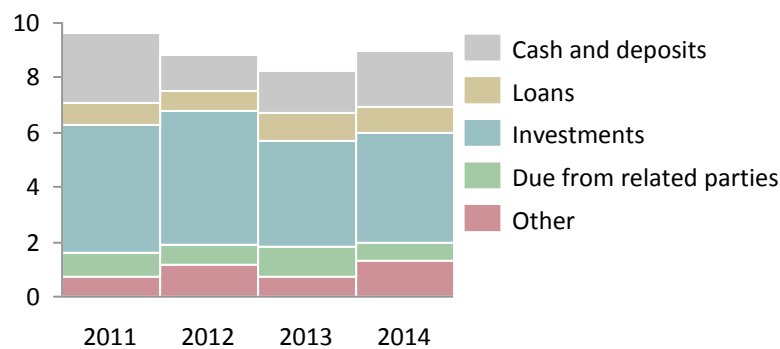


Figure 66. Asset structure of investment companies in AED Bn

Investment companies have an obligation to participate in the investment portfolios they manage. At the same time, they can invest own funds for the benefit of the company. For the past two years the share of investments to total assets fluctuated around 30%. Investment companies also reported extensive cash positions constituting more than 20% of total assets which is sufficient to cover all existing liabilities.

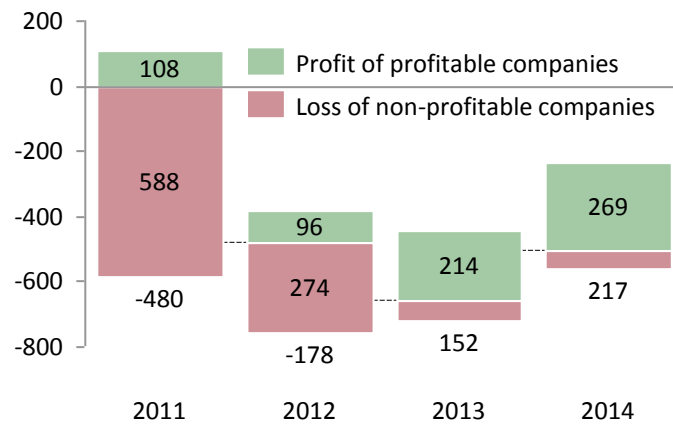


Figure 67. Aggregate profit and loss of investment companies (2011 – 2014) in AED Bn

Low profitability was a primary threat to investment companies in 2011-2012, especially for some smaller companies that were losing 10% to 30% of equity a year. The lack of profitability, however, did not cause direct financial stability concerns as investors' assets are separated from assets of the companies. Over the last two years, profitability of the sector has improved significantly, however some companies have continued to report losses.

Overall, investment companies have little potential for distorting financial stability because of their small size and existing regulatory safeguards.

Primary concerns for the regulator remain the efficient enforcement of strict separation between companies' assets and those of their clients and the implementation of robust operational standards.

Recent Developments

Regulatory Development

Summary

The Central Bank has embarked on a process of updating its regulatory framework in line with Basel III standards and international best practice. Key areas of reform include capital, liquidity, risk management and corporate governance standards at banks, as well as regulations applicable to non-bank financial institutions. The process of reform and development will be transparent and will include regular consultation with the relevant stakeholders.

Introduction

Regulatory development continue to be a key strategic focus for the Central Bank and this will continue to be the case for the foreseeable future.

The main objective is to establish and maintain a regulatory framework for financial institutions in the UAE that is appropriately designed to:

- foster sound and robust financial institutions;
- provide protection to consumers; and
- enable the financial sector to develop in a stable and prudent manner.

Arising from this review, new regulations are being introduced and existing regulations enhanced. The objective is to ensure that the regulatory system is robust and cohesive across the various financial sectors regulated by the Central Bank.

International Regulatory Standards

In recent years, international regulations for the financial sector have been significantly overhauled to take account of the lessons learned from the Global Financial Crisis. The Central Bank intends to progressively revise the current UAE regulatory framework in line with the new international standards and implement the new requirements in accordance with globally set transition timeframes. The Central Bank will be working closely with financial institutions in the UAE over the coming years to ensure that they are prepared for these changes to the regulatory system.

In particular, the regulatory reforms introduced by the BCBS under the Basel III framework will significantly influence the development of the capital and liquidity regulations for banks operating in the UAE. Enhancing consumer protection will also remain a priority for the Central Bank in the development of the regulatory framework.

Work Plans

In 2014, the Central Bank carried out a full self-analysis of the regulatory and supervisory oversight framework in place for banks. Arising from this, a formal work plan has been established to address any gaps identified compared against the upgraded international best practice.

The key work streams are as follows:

Liquidity

Following consultation with the industry, the Central Bank is currently in the process of finalizing new liquidity regulations. The regulations require banks to have proper liquidity risk management frameworks in place to minimize the likelihood of liquidity stress occurring and also to minimize the impact on the bank should such a stress occur.

The regulations take account of the direction of the reforms on liquidity regulation and timescales set out by the Basel Committee on Banking Supervision under the Basel III liquidity framework.

The Central Bank will closely engage with banks to ensure a smooth implementation of the new liquidity regulations from 2015 onwards. For banks required/approved to implement the Liquidity Coverage Ratio, Basel III implementation dates and transition provisions will apply.

Capital

In order to maintain and enhance the strength and resilience of the UAE banking sector, the Central Bank is revising the regulatory capital requirements for banks operating in the UAE.

The new capital regime will be aligned with the Basel III capital framework and will include requirements for enhanced capital in terms of quality and quantity, the introduction of capital buffers and the application of a new leverage ratio. The definition of capital will also change with a higher emphasis on paid-up capital, retained earnings and disclosed reserves.

In accordance with Basel III, the timeframe for full implementation of the new capital regime is late 2018. The Central Bank is in the process of preparing a detailed work plan and in 2015 will begin the engagement process with banks towards implementing the new capital rules.

Corporate Governance, Risk Management and Audit

Risk management together with internal control, compliance and audit comprise key control functions in a financial institution. These control functions are an essential foundation for effective corporate governance. The Central Bank is in the process of reviewing and upgrading its regulations on corporate governance, risk management, internal control and financial reporting/external audit. The objective is to ensure that financial institutions' approach to governance and the control and management of risk is in line with leading international practice. It is intended that the roll out of these new regulations will commence in 2015 and continue into 2016.

Non-Bank Financial Institutions

The regulatory framework for non-bank financial institutions (NBFIs) is currently under review. The Central Bank wishes to ensure that the NBFI sector in the UAE remains financially robust and continues to develop in a prudent manner.

An extensive internal study of the sector is currently being undertaken. The key focus of this work is to bring about enhanced organization, regulation and supervisory oversight of NBFIs in the UAE, which will support the future development of NBFIs within the context of the overall financial sector.

Arising from this review, the Central Bank expects to bring forward draft regulations for consultation with the industry later in 2015.

Regulatory Consistency

As part of the regulatory enhancement programme, the Central Bank is seeking to build consistency and transparency in the development, implementation and enforcement of the regulations for licensed financial institutions. As new regulations come on stream, existing circulars, and notices that no longer apply will be withdrawn.

Macro-economic Stress Testing

Summary

Macro-economic stress testing has been introduced to assess the capacity of UAE banks to withstand a severe yet plausible deterioration in macro-economic conditions. The approach is in two parts, a bottom up approach, where economic scenarios are given to banks along with general assumptions and they are asked to apply them on their own portfolios and report the results back to the Central Bank. Secondly, a top down approach is used, where the Central Bank performs a uniform stress test based on data collected from banks. The outcome of the two is compared to reach a conclusion as to the banks' risk exposure and adequacy of their capital positions.

Introduction

Stress testing is an important risk management tool that has been used by banks around the world since the early 1990s. It involves assessing the impact of plausible, but severe, stress scenarios on financial institutions. The scenarios go beyond what is usually experienced in normal operating conditions and aims to identify vulnerabilities, weaknesses and risks that could impact the banking system.

Initially, banks' stress testing was limited to particular risks, applied to small number of portfolios and lacked the overall integration within the banks' risk management frameworks. Regulators, on the other hand, did not establish a quantifiable link between macro-economic scenarios and the financial system, and in some instances took limited corrective action when vulnerabilities were identified. Many had ineffective communications strategies when it came to publicly sharing the results.

The importance of stress testing in banks, from the point of view of the regulators, increased significantly after the GFC. The severely adverse, and previously unconsidered, fallout from the crisis was a wakeup call for many in the industry and also for regulators around the world. It highlighted that stress testing was not as robust as many thought, the scenarios were mild with a limited scope, and as a result failed to identify and address the weaknesses of individual institutions and the financial system as a whole.

In addition to being used to identify vulnerabilities, many leading regulators around the world introduced system wide stress tests as a measure to restore confidence in the banking system following the GFC. These stress tests have become a periodic recurrence, in some cases enshrined by law, with the methodology, results and subsequent regulatory actions being made public.

Previously in the UAE, simple forms of stress testing have been used by the Central Bank which have been more of a sensitivity analysis and "what if" scenarios. The tests lacked the link to the economic environment in which banks' operate and the consideration of banks'

specific business models and portfolio structures. As such, macro-economic stress testing was adopted in 2014.

The Central Bank of the UAE believes in the importance of stress testing both as a risk management tool at banks and as a key component of macro-prudential surveillance work aimed at identifying financial system vulnerabilities.

Therefore, the Central Bank has adopted a two-step approach, “top down” and “bottom up”, when conducting macro-economic stress testing.

Top Down Complemented by a Bottom Up Approach

The “top down” macro-economic stress is part of the Central Bank’s macro-prudential surveillance tool kit and aims to identify vulnerabilities and the build-up of risk at individual banks and at the financial system level.

It is referred to as “top down” because it is performed fully by the Central Bank using data sourced from banks. In this stress test, the Central Bank develops economic scenarios that are severe but plausible, collects data from banks, makes uniform and consistent assumptions to allow for a meaningful test, and undertakes econometric modelling, in order to assess the impact of economic downturn on the solvency of the banks subject to the stress test.

Despite the many advantages of the “top-down” stress testing approach including consistency in modelling, and the uniformity of assumptions, such an approach does not fully capture many of the individual banks’ portfolio specific characteristics. These can vary significantly given that banks within the UAE are different in terms of their business model, portfolio composition, underwriting standards and the quality of their assets.

The “bottom-up” stress testing approach on the other hand, recognizes that banks are in the best position to assess the impact of stress scenarios on their own portfolios. It was for this reason that local banks in the UAE were asked in February 2015 to perform their own “bottom-up” stress testing using the macro-economic scenarios provided by the Central Bank, which are in line with the scenarios used in the top down stress test.

The results of the “bottom-up” stress test submitted by the banks will be compared against the results submitted by peer banks and against the results of the “top-down” stress test conducted by the Central Bank. Any significant deviation will be pointed out and discussed with the bank to determine whether it is the result of different methodology/model used or if it relates to portfolio specific differences.

Such a combined approach allows a deeper understanding of risks and vulnerabilities in the portfolios of UAE local banks and how they can be best mitigated to maintain financial stability.

It is the intention of the Central Bank to promote financial stability via increased transparency and sharing of information with the public. At this stage, a detailed discussion of the “top down” macro-economic stress testing framework used by the Central Bank and a high level overview of the results is provided.

Overview of the top down approach

The IMF next generation balance sheet stress testing tool was used to conduct the top down macro-economic stress test; the tool allows for running different economic scenarios through “satellite models” and then translating the shocks into impact on key risk parameters at banks, thereby enabling an assessment of their solvency in light of such adverse scenarios.

A liquidity satellite model can also be added to the stress test to capture losses that might result from forced liquidation of assets during a liquidity crunch.

The use of macro-economic stress testing in the UAE does not come without its challenges, including limited availability of economic data, short data series and the lack of historical default data at many local banks. As such, econometric techniques, proxies and estimates have been used to address these challenges to the extent possible. Nevertheless, the results continue to be largely influenced by these limitations.

As with every stress test, some key assumptions had to be made, for example, covering banks’ specific actions, balance sheet growth, and collateral quality, in order to be consistent and perform a meaningful stress test.

Scope

The stress test was only applied to UAE local banks. This is because the legal form of foreign banks in the UAE is “branches” and as such they will be part of the stress testing of their home regulators and head offices. In the remainder of this section the use of the term “banks” refers exclusively to UAE locally incorporated banks.

Risk Coverage

Given that the predominant risk for UAE local banks is credit risk, the stress test for 2014 only covered credit risk in both the loan and bond/Sukuk portfolios. It is envisaged that future stress testing exercises will cover other risks such as market and liquidity risk.

Portfolios Covered

Much of the data used to perform the stress test is sourced from official periodic reports referred to as “Bank Reporting Forms (BRFs)” submitted by banks to the Central Bank. As such, the granularity of the stressed loan portfolios follows the details in such reports.

The banks’ loans and advances were broken down into the below 11 loan categories as follows:

- Federal Government
- Non-commercial Public sector (Federal)
- Emirates Governments
- Non-commercial Public Sector (Emirate)
- GREs (Government ownership > 50%)
- Corporate with Government ownership < 50%
- Other Corporates

- High Net Worth Individuals
- SMEs
- Personal lending
- Non-banking financial institutions

Credit risk in the Bonds and Sukuk portfolios were included in the stress test, these portfolios were segregated based on credit rating.

The test was conducted on a consolidated basis and includes the banks' credit portfolios that are consolidated in their regulatory capital base. This includes all foreign branches and some of the banks' financial subsidiaries.

Credit portfolios that are within subsidiaries, where the investment is deducted from the capital base, are not part of the stress test as they have no impact on the regulatory capital position.

Loan portfolios outside the country are consolidated in UAE local operations where the same impact of the economic scenarios applies to them. It is clear that economic scenarios might not have the same impact on these portfolios as they might on the UAE portfolios, but this was necessary for simplicity and to achieve wider coverage.

In the future, additional scenarios will be developed for a number of key economies where UAE banks have significant exposures.

Data

The stress test starting point is the banks' portfolios, capital position, and profitability reported to the Central Bank as at the 31st of December 2014.

The starting default rate is calculated using Non Performing Loan data (stock and annual flow) collected from banks on an ad hoc basis. The evolution of the default rate over time was modelled using 10 year default data which was made available by some banks.

The profitability was modelled using actual return on asset data as reported to the Central Bank going back since 2004.

The economic scenarios were built using publically available data, Central Bank estimates as well as historical observations. A detailed explanation of the economic scenarios and the data sources is provided in the relevant section.

Satellite Models

In order to establish a link between economic variables and banks' financial positions, two satellite models were built, the output from these models was then used to transform the economic scenarios into financial risks at the banks.

Default Rate Satellite Model

To determine the impact of a deteriorating economic environment on banks' financial risk and solvency position, a model was developed using actual historical default data from the

few banks that were able to provide a sufficient time series that covers a period of economic down turn (the 2008 GFC).

A multivariate regression was performed using the historical default rates as the dependent variable and the historical time series of selected economic variables as independent variables. The economic variables used have been chosen using a general to specific approach, applying both statistical techniques and economic theory.

The established relationship was then applied to link the economic scenarios to default rates at banks.

Profitability Satellite Model

The impact of the economic scenario on the banks' operating profit, before impairment charges, was modelled using a univariate regression, using an independent variable time series representing the economic stance and a dependent variable time series that represents the banks' profitability. The data series represent historical performance including a period of downturn in economic conditions

Economic Scenarios

Given the open nature of the UAE economy, two economic scenarios were developed that cover both global and domestic economies. **The scenarios do not represent forecasts by, or views of, the Central Bank and are only applicable for the purpose of the stress testing exercise.**

The period covered is three years from 2015 until 2017. The 2014 end of year data is the starting point, it includes actual data were available, as well as estimates based on the latest actual data. The scenarios start from 2015 where the base scenario represents a generally accepted forecast for the UAE and the global economy, and the stress scenario represents a severe but plausible downturn, in many aspects more adverse than the one experienced during the 2008 GFC.

Baseline scenario

The baseline scenario is in line with the International Monetary Fund (IMF) and other widely accepted forecasts for the UAE and global economy but adjusted for recent developments in the oil market; it is a neutral scenario, which is neither pessimistic nor optimistic. Multiple sources were used to derive it such as analysts' consensus, Central Bank projections, and the IMF World Economic Outlook among others. A general description of the scenario is given below.

Global Economy

The global economy resumes its sluggish growth, steadily increasing demand for oil. As a result, oil prices recover slightly on average and fluctuate around \$55 a barrel in 2015 and recovers to \$75 by 2017.

The relatively low price would result in UAE oil production remaining constant over the next 3 years and therefore no increase in real oil GDP.

Real Estate Market

The real estate market in Dubai experiences a minor correction as a result of new supply of units entering the market in 2015 and 2016 and stabilizes thereafter. In Abu Dhabi, the real estate market continues to grow albeit at a slower rate supported by a limited supply of new residential developments.

Tourism and Logistics

Tourism and logistics sectors remain robust and continue to support economic growth. The preparations that are underway to hold Expo 2020 and new projects to be developed under Abu Dhabi vision 2030 will result in continued government spending on infrastructure projects. However, no increase in government spending is expected over the duration of the scenario given the significant decline in oil prices.

GDP and Inflation

UAE Non-oil GDP is expected to grow at 4.2% and total real GDP growth rate is likely to be around 2.7% a year. Inflation accelerates slightly on an annual basis in 2016 and 2017 but remains below 3.1% supported by low international food prices and a slowdown in rental increases.

Stress Scenario

The stress scenario is pessimistic, based on the adverse economic conditions that prevailed between 2008 and 2011, and it takes into account a significant fall in oil prices.

The scenario envisages a severe recession taking hold of the economy in 2015 and 2016 before a slight recovery takes place in 2017. The scenario bears some resemblance to the one experienced in 2009, it is however more severe in that negative growth is maintained for two consecutive years. A general description of the scenario is given below.

Global Economy

The global economy slows down significantly, US shale oil production remains at the current production level, other countries in the region are significantly increasing their production, resulting in a prolonged and significant decline in oil prices to between \$40 and \$45 a barrel throughout the duration of the stress.

The US economic growth weakens but continues to outperform other global economies. The European and the Japanese economies enter a period of prolonged recession and/or no growth. Emerging Markets, led by the BRICS (Brazil, Russia, India, China and South Africa) continue to suffer from reversal of foreign currency flows as a result of a stronger US Dollar; this leads a significant slowdown in GDP growth for these countries. GCC economies are negatively affected by the fall in oil prices and the slowdown in the global economy.

Real Estate Market

Due to the slowdown in many economies where international and regional real estate investors originate and the oversupply of new units, the real-estate markets in Dubai and Abu Dhabi experience a major correction in 2015. Prices fall by around 35% in 2015 and by a further 5% in 2016 and 2017.

Tourism and Logistics

The slowdown in the global economy impacts negatively on the logistics and tourism sectors in 2015 and 2016. Government spending slows in the wake of the fall in government revenues and key infrastructure projects are stretched out over longer periods of time.

GDP and inflation

The effect on the UAE Non-oil GDP growth is significant; the economy shrinks by 7% in 2015 and by a further 1.5% in 2016 with no GDP growth in 2017. Deflation is experienced in 2015 and inflation remains close to zero as a result of the low rent prices taking hold after the correction in real estate market as well the decrease in consumer spending and low international food prices.

The historical data of key economic indicators along with the impact of the scenarios on these indicators have been used to build up the satellite models referred to earlier.

| Economic Variables | 2015 | | 2016 | | 2017 | |
|------------------------------------------------------|-------------|---------------|-------------|---------------|-------------|---------------|
| Scenario Type | Base | Stress | Base | Stress | Base | Stress |
| Hotel room occupancy | 75% | 70% | 72% | 70% | 76% | 74% |
| Hotel apartment occupancy | 75% | 66% | 71% | 68% | 76% | 74% |
| Average occupancy | 75% | 68% | 71% | 69% | 76% | 74% |
| Real estate Dubai (average residential price) AED/m2 | 15,478 | 10,104 | 14,452 | 9,500 | 14,621 | 9,000 |
| Real estate AD (average residential price) AED/m2 | 12,067 | 7,765 | 12,297 | 7,300 | 12,561 | 6,916 |
| Dubai Hotel Revenue in AED Million | 20,429 | 16,448 | 20,665 | 15,626 | 20,865 | 14,844 |
| Real GDP (% change) | 2.7 | (4.2) | 2.7 | (0.9) | 2.7 | - |
| Real GDP Oil (% change) | - | - | - | - | - | - |
| Real GDP Non-oil (% change) | 4.2 | (7.0) | 4.2 | (1.5) | 4.2 | - |
| Current GDP in AED Billion | 274 | 1,140 | 324 | 1,160 | 374 | 1,192 |
| Current oil GDP in AED Billion | 274 | 216 | 324 | 216 | 374 | 243 |
| Current non oil GDP in AED Billion | - | 924 | - | 944 | - | 949 |
| Inflation, average consumer prices (% change) | 2.0 | (1.0) | 2.5 | - | 3.1 | 0.5 |
| Oil prices per barrel | 55.0 | 40 | 65.0 | 40 | 75.0 | 45 |
| Thousand barrels per day | 3,720 | 3,720 | 3,720 | 3,720 | 3,720 | 3,720 |

Table 7. Economic variables under the two scenarios

NOTE: The table above is not a forecast and is only relevant to the stress test. It does not represent Central Bank views on the economy.

Assumptions

In order to conduct a system wide stress test, a number of assumptions had to be made. These include balance sheet assumptions as well as modelling and impact assumptions.

Balance Sheet Growth

Under the base scenario, banks' balance sheets are assumed to grow at 8% annually in 2015 and 2016 and at 7% in 2017, while under the stress scenario the growth is assumed at 2% in 2015 and 2016 and at 3% in 2017.

Under the adverse stress scenario, it is likely that banks will take measures to stop lending or deleverage in the adverse scenario to meet capital requirements; nevertheless one of the objectives of the macro-economic stress test is to ensure that banks have sufficient capital to continue lending to the economy during a recession. Hence, a modest annual growth in the balance sheet is assumed under this scenario.

Profitability

Banks' profitability over the stress test horizon was modelled using historical data and then projected based on the scenarios described.

Dividend Pay-out Ratio

Banks are assumed to pay 40% of their annual profits in cash dividends. This is in order to meet the expectations of shareholders and maintain the ability to attract new capital if needed.

No New Capital

Except for internally generated capital from net profits after payment of dividends, it is assumed that banks do not issue any new capital during the period covered by the scenarios. On the other hand, it is assumed that no capital instruments mature during the same period.

Risk Weight

Assets, both new as a result of balance sheet growth, and fully provisioned impaired assets are assumed to attract a 100% risk weight under Basel II standardised approach for simplicity.

Default Rate

The same average default rate for each portfolio, derived from non-performing loans data provided by banks, was used as a starting "point in time" default rate for all banks.

Individual banks' default rates were not used because of the short data series available and the wide dispersion between default rates collected from banks.

The default rate evolves in the scenarios based on the model referred to in the "Default rate satellite model" section. The model applies to all asset classes and implicitly assumes that the default rate evolves in the same pattern across all portfolios.

Loss Given Default (LGD)

Loss given default rate was assumed at 45% in the baseline scenario for all banks across all portfolios. This is due to insufficient loss data on a portfolio level.

This LGD level is higher than what would be expected on a residential mortgage but lower than the loss on a personal loan or credit card exposure. The LGD moves to 60% in the stress scenario to reflect its severity and the decrease in the value of collateral.

Bonds/Sukuk Portfolios

All debt securities held by banks were classified based on their credit rating, either an external rating if available or by using the banks' internal rating mapped to external ratings. Those securities that are not rated were assigned a BB- rating by default. A three year average maturity was also assumed on all securities.

In the baseline scenario, the bond/Sukuk portfolios experience no downgrade and the banks' suffer no losses as a result. In the severe stress, each security in the portfolio is downgraded, with the resulting credit loss reflected in a corresponding haircut to each of the ratings.

The resulting losses are then absorbed in the net profit/loss of the banks in the first year of stress (i.e. 2015). No subsequent recovery or further losses is assumed for the remaining duration of stress.

As explained in the scope section, the stress test is primarily focused on credit risk and no direct stress is applied on the market risk parameters of the portfolios.

Conducting the Stress Test

The below diagram depicts the different steps followed in conducting the stress test.

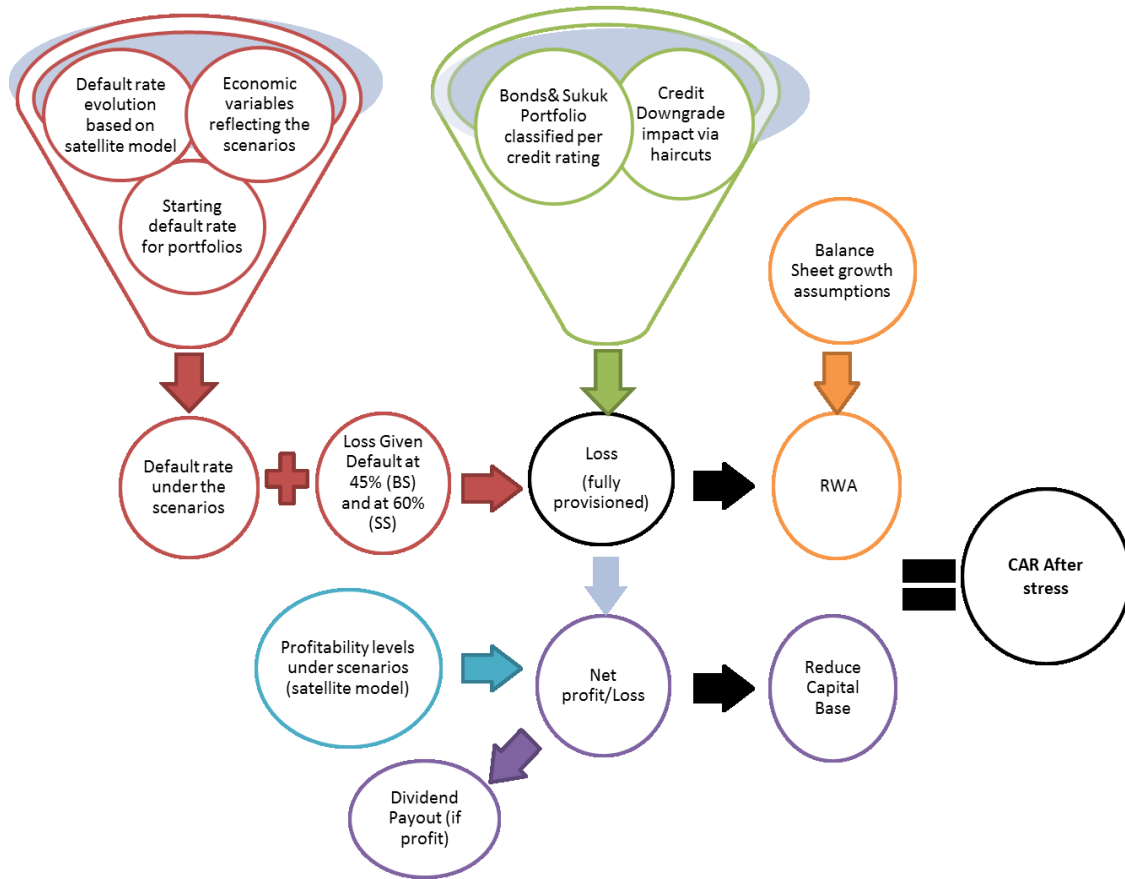


Figure 68. Stress test flow diagram

The starting default rate for different credit portfolios increases during the macro-economic scenario based on the relationship established via the satellite model. The loss given default rate is then applied to the new defaulted loans to determine the expected loss amount and therefore, the required specific provision needed.

Bonds and Sukuk are subject to haircuts applicable to different credit rating categories. The losses that stem out of these portfolios, as a result of applying the haircuts, are taken directly to net profit/loss regardless of the accounting treatment of the instrument.

The operating profit before losses and impairment charge is as per the outcome of the satellite model described earlier. After adjusting for losses and provisions needed to cover impairment charges, 40% of the remaining profit (if any) is assumed to be paid out to investors as cash dividends. The rest of the profit (if any) goes to retained earnings and is used to absorb future losses as part of the capital base.

Risk weighted assets are adjusted to reflect the fully provisioned increase in impaired assets (reduce RWA) as well as the assumed growth in the balance sheet (increase RWA).

The capital base benefits from the increase in retained earnings. Conversely, retained earnings, which are a component of the capital base, are reduced whenever losses/impairment charges exceed the current year's operating profit.

After the retained earnings are exhausted, losses/provisions charges will reduce the paid in capital of the bank, other capital instruments in Tier 1 and Tier 2 might fall out of the capital base according to the applicable limits.

The capital adequacy ratio (CAR) being the capital base divided by the RWA will change to reflect the impact of the macro-economic scenarios on the solvency of the banks.

Limitation and Reliability Concerns

Undoubtedly, a robust macro-economic stress test requires extensive bank data available historically over long periods of time and the data being granular enough to allow assessment at the portfolio level. In addition, historical time series of economic variables that cover various stages of the economic cycle at an appropriate frequency is also necessary. Unfortunately, the level of data available was short of the optimal required and what is available in more developed jurisdictions that conduct periodic macro-economic stress tests.

Although the top down stress test was performed in 2014, the test is heavily impacted by the limitations mentioned. It is expected that going forward more data will be available, and collected at the appropriate frequency and granularity to allow more robust stress testing in the future.

High Level Results

On average, local banks were well capitalised with a capital adequacy ratio close to 15%, even under the very severe stress scenario. This is due to the initial high level of good quality capital UAE local banks hold.

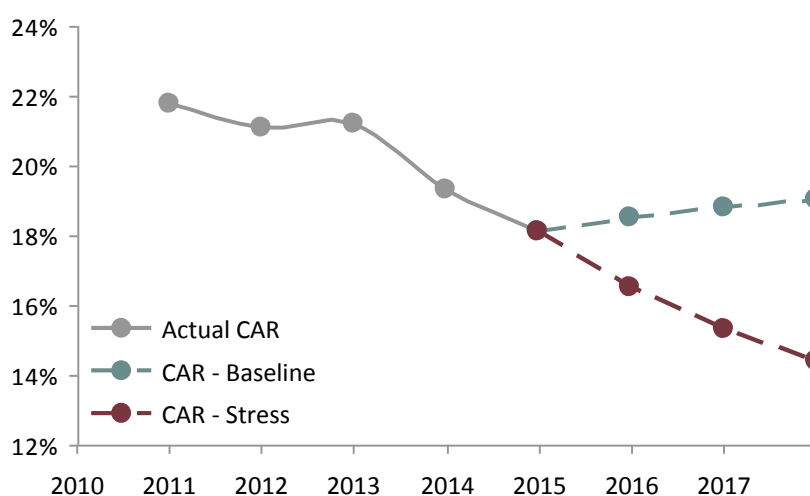


Figure 69. Capital Adequacy Ratio under stress scenarios

Islamic Finance in the UAE

Summary

The UAE has historically played a pioneering role in Islamic finance and, continues to lead in the development of this important segment of the financial system. Islamic banks grew at 10.8% on average per annum over the past 5 years and had total assets of AED 404 billion as at the end of Dec 2014; they constituted 17.5% of banking system assets and lending was 19.2% of banking system lending.

The Islamic Financial Services Industry in the UAE

In recent decades, developments in Islamic finance have left major footprints on the broader financial world and more so in the region. The first financial company in modern history based on Shari'ah principles was the Mit Ghamr savings project in Egypt. Mit Ghamr was a co-operative organisation in which the depositors had a right to take out small loans for productive purposes. Since then, Islamic finance has expanded at a remarkable pace with double digit growth of the Islamic financial services industry. The importance and potential of Islamic banking prompted the International Monetary Fund (IMF) to facilitate the establishment of Islamic Financial Services Board (IFSB), an international standard setting organization to develop a prudential regulatory and supervisory framework specific to institutions offering Islamic financial services.

The UAE has historically played a pioneering role in the development of Islamic finance. In 1975 Dubai Islamic Bank (DIB) became the world's first Islamic commercial bank in the world. The DIB's main business at that time was financing based on Murabahah contracts, whereby the bank would buy imports on behalf of a merchant and resell them to the merchant for a mark-up. The second Islamic financial institution, Abu Dhabi Islamic Bank, was established in 1998.

Sharjah Islamic Bank, formerly known as National Bank of Sharjah, was the first bank in the world to convert from a conventional bank to a full-fledged Islamic bank in 2002. Other institutions offering Islamic banking services started from 2005 onwards.

The Islamic financial services industry in the UAE is relatively young compared to their counterparts in other jurisdictions. However, their products and services have come a long way within a relatively short period of time.

At present, the Islamic financial services industry (excluding Takaful and Islamic capital market) consists of 44 institutions of various types. In terms of the business segment, the Institutions Offering Islamic Financial Services (IIFS) are in the form of full-fledged Islamic banks, Islamic windows within conventional banks, finance companies and investment companies. There were eight Islamic banks in the UAE as at the end of 2014. Subject to the Central Bank's approval, conventional institutions are permitted to operate Islamic windows. The Islamic financial services industry also has 12 Islamic finance companies and

one Islamic investment company. The breakdown summary of IIFS in the UAE as at 31 December 2014 is provided below.

| Type of Institution | |
|----------------------------|-----------|
| Islamic Banks | 8 |
| Islamic Windows | 23 |
| <i>Local Banks</i> | <i>13</i> |
| <i>Foreign Banks</i> | <i>10</i> |
| Islamic Finance Company | 12 |
| Islamic Investment Company | 1 |
| Total | 44 |

Table 8. Breakdown of IIFS in the UAE as at 31 December 2014

The UAE continues to facilitate the development of Islamic finance in the country. One such initiative is on the development of Shari`ah compliant instruments, which can be used for short-term liquidity management for Islamic banks and other Islamic financial institutions. The Central Bank created a Shari`ah compliant certificate of deposit (CDs), in November 2010, which has been very successful since inception. As at 31 Dec 2014, outstanding Shari`ah compliant CDs stood at AED 19.8 Bn.

Effective from 1 April 2015, the Central Bank extended the spectrum of eligible collateral for the collateralized Murabahah Facility to include Shari`ah-compliant securities other than the Islamic CDs issued by the Central Bank. This service was enhanced to ensure that Islamic banks also have access to similar overnight funding that is available to conventional banks through the Central Bank's Interim Marginal Lending Facility.

At the international level, the Central Bank of the UAE is a member of both the IFSB and the International Islamic Liquidity Management Corporation (IILM). Such participation will facilitate to enhance (a) cross-sectorial and cross-border policy cooperation, (b) convergence on the prudential framework, and (c) macro-prudential surveillance at the international level in the area of Islamic finance.

Governing Law and Application of Shari`ah for the IIFS in the UAE

One of the necessary conditions in the development of Islamic finance is the relationship between the laws of the country and Shari`ah. The Shari`ah is derived from Islamic principles and is capable of adaptation, development and further interpretation. The Shari`ah does not prescribe general principles of law, but rather, purports to deal with and cover specific cases or transactions and sets out rules that govern them. Among the most important teachings of Islam for establishing justice and eliminating exploitation in business transactions, is the prohibition of all sources of unjustified enrichment and the prohibition of dealing in transactions that contain excessive risk or speculation. Accordingly, Islamic scholars have deduced from the following Shari`ah rules and principles that distinguish Islamic finance from conventional counterpart:

- The prohibition of interest
- The sharing of profits and losses
- The prohibition against uncertainty and excessive speculation

The UAE is governed by a civil law system. All relevant underlying commercial and banking laws are, to a large extent, codified. There is no separate legislation within the UAE which codifies Shari`ah law for commercial transactions or a Shari`ah court that hears disputes arising out of Shari`ah financing transactions. Many aspects of Shari`ah rulings have been incorporated into the civil law and it can be said that large portions of UAE commercial law are underpinned by Shari`ah elements and are therefore compatible with Shari`ah principles. The courts are also permitted to refer to the Shari`ah in the absence of clear legislation and established customary business practices. This is reflected in the approach taken by the Federal Law No. 5 of 1985 concerning Civil Transactions, which, together with the Federal Law No. 18 of 1993 concerning the Commercial Transaction Law, sets out the main provisions for civil and commercial transactions in the UAE.

There are also legal frameworks specific for the operation of the IIFS. The UAE Federal Law No. 6 of 1985 specifies a broad Shari`ah governance framework at both the national and institutional level. In addition, the Central Bank Board of Director's Resolution No. 165/6/2004 sets out specific conducts of Islamic finance companies.

| Union Law No (10) of 1980 and its amendments regarding the Central Bank, the monetary system and organization of the banking profession | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| | National level* | Institutional level |
| Federal Law No (6) of 1985 concerning Islamic banks, financial institutions and investment companies | Article 5, Federal Law No (6) of 1985 states that a higher Shari`ah Authority will be formed by the cabinet ... shall be attached at the Ministry of Justice and Islamic Affairs | Article 8.2.2 (b): founding member needs to be familiar with Islamic finance |
| And | | Article 8.2.4: establishment of Shari`ah Supervisory Authority |
| Central Bank's Board of Director Resolution No 165/6/2004: Regulation for Finance Companies which Conduct their Business as per Shari`ah Principles | <ul style="list-style-type: none"> • Members shall include Shari`ah, legal and banking personnel • Undertake higher supervision over Islamic institution • Ensure legitimacy of the transactions according to the Shari`ah principles | Article 8.2.6: board needs to have at least 60% members who are familiar with Islamic finance |

**not yet implemented*

Table 9. UAE Shari`ah Governance Framework

Performance of the Islamic Banking Industry

Growth Trend – Assets, Financing (Loans), Deposits

The Islamic banking sector continues to support various economic activities that contribute to the nation's economic growth. Islamic bank assets have grown at a compound annual growth rate (CAGR) of 10.8% (conventional banks: 8.4%) between 2009 and 2014 to reach

AED 404 billion as at end of Dec 2014. Assets of the Islamic banks constituted 17.5% of the banking system asset and lending was 19.2% of banking system lending.

Deposits mobilized by full-fledged Islamic banks rose at a CAGR of 9.2% (conventional banks: 7.4%) between 2009 and 2014 to reach AED285 billion (USD77.6 billion), accounting for 20% of total banking system deposits.

In terms of market share within the Islamic financial services industry, full-fledged Islamic banks represented more than three quarter share of Islamic banking financing and deposit according to a study conducted by the Central Bank on the balance sheet position as at the end of 2012. This was followed by Islamic windows of conventional banks and Islamic finance companies.

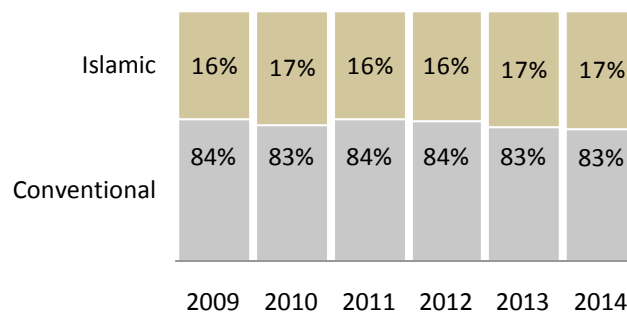


Figure 70. Share of Islamic banks in the UAE banking market (by Total Assets net of provision)

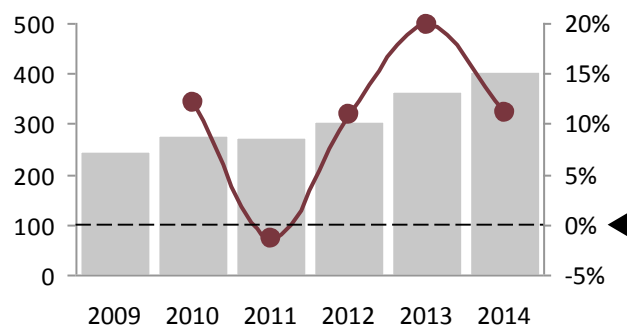


Figure 71. Total Assets of UAE Full-fledged Islamic banks (in AED Bn) and their growth rate

Capitalisation

Overall, the Islamic banking sector is well capitalized but lately, due to reasons explained later, the capital adequacy ratio (CAR) of full-fledged Islamic banks has experienced a decline to 15.8% at the end of Dec 2014 (end of Dec 2013: 17.6%) and the Tier-1 capital ratio has declined to 15.0% (end of Dec 2013: 16.7%). This is due to the continuous absorption of write-offs and non-performing financing (loan) accumulated in the balance sheets after the financial crisis year 2008-09. However, regulatory capital held by Islamic banks still exceeded the minimum regulatory requirements.

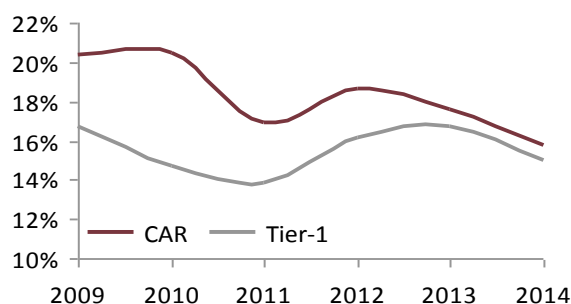


Figure 72. Islamic banks' capital adequacy: Capital Adequacy ratio and Tier 1 capital ratio

Financing (Loan) to Deposit Ratio

The ratio of financing (loan) to deposits increased from 90.6% at the end of 2009 to 92.9% as at end of Dec 2014.

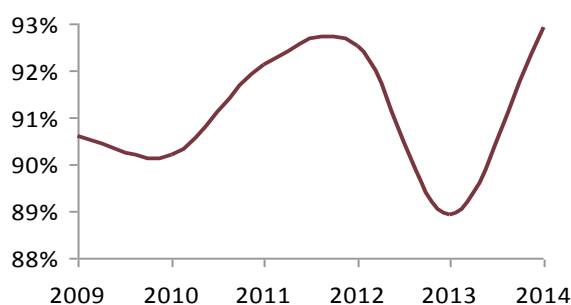


Figure 73. Islamic Banks' financing to deposit ratio

Profitability

Profitability weakened after a major correction in the property market in 2008, but registered strong growth from 2010 onwards. The return on assets for Islamic banks increased to 1.6% as at end December 2014, up from 0.7% in December 2009. Similarly, the return on equity increased from 5.2% as at end December 2009 to 13.5% as at end December 2014. This robust growth in financing and investment activity in real estate in 2014 has helped Islamic banks generate record growth and profitability.

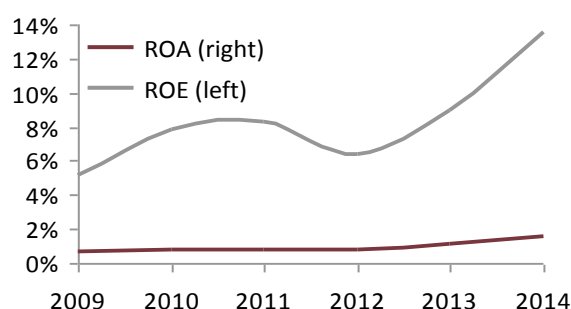


Figure 74. Returns on Equity (top) and asses (bottom) of Islamic banks

In line with the UAE economy, which is expected to register moderate performance in the year 2015, asset quality and earnings of Islamic banks are predicted to improve further albeit at a slower pace. Recovery has begun in some segments as improvements have been noticed in the asset quality and liquidity positions of Islamic banks.

Prospects of Islamic Finance

It is indicated from various observations that IIFS in the GCC region, including the UAE, provided significant sources of capital and contributed tremendously to the development of Islamic finance. The UAE, in particular, is well positioned to serve as an international Islamic financial hub linking Europe, Asia and Africa due largely to its political stability, developed infrastructure and supportive government. An example is Dubai's vision to become an Islamic economic hub, through collaboration with other relevant stakeholders, which will provide opportunities for growth in the Islamic financial services industry domestically and globally.

The IIFS in the UAE continue to play a major role in the financing of national infrastructure, the residential property sector and the wider corporate sector. This trend will continue as the UAE maintains its economic growth. At the global level, the UAE has been instrumental in supporting the growth and development of cross-border linkages through numerous platforms and policies which will strengthen economic inter-linkages across jurisdictions.

Islamic finance faces strategic challenges mainly relating to legal and financial infrastructure, Shari`ah governance, prudential regulation and consumer awareness. The Central Bank continues to work with the industry to address these challenges and promote the development of Islamic finance in the UAE and globally.

UAE Stock Markets⁹

Summary

Despite heightened volatility and decline in volumes, the UAE stock market grew 6% in 2014. The decrease in oil prices has negatively affected market sentiment although listed companies achieved strong profits in 2014. The strong profits have encouraged foreign and institutional investors to remain net buyers of UAE stocks for the fourth year in a row.

UAE stock markets grew by 6% in 2014 in line with some larger global indices: like the US Dow Jones index which advanced 8% and German DAX which advanced 3% during the same period. However, the UAE stock markets experienced heightened volatility on the back of a 50% oil price decline, especially during the last quarter of 2014.

With increased volatility and lower prices, investors have also retreated as market flow indicators have shown declines in trading volume.

On the other hand, the latest company results still point to strong growth as UAE listed companies generated AED 63 Bn in profits in 2014 beating the AED 49 Bn in 2013. This could explain why institutional and foreign investors have been net buyers of UAE shares during 2014.

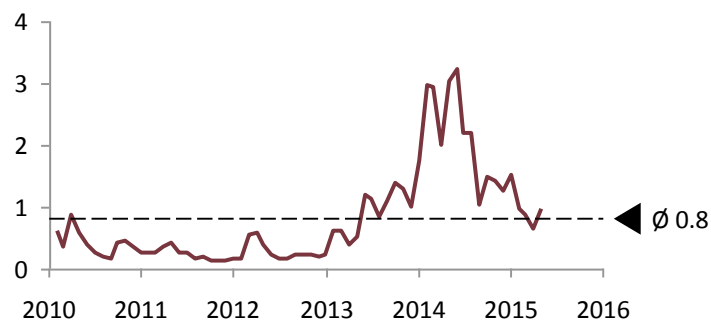


Figure 75. Daily Average Value Traded (AED Bn)

Daily average value traded stabilized at just under AED 1 Bn traded per day, after peaking above AED 3 Bn per day in April and May 2014 from a low of AED 120 million in November 2011.

⁹ This section was contributed by the Securities and Commodities Authority

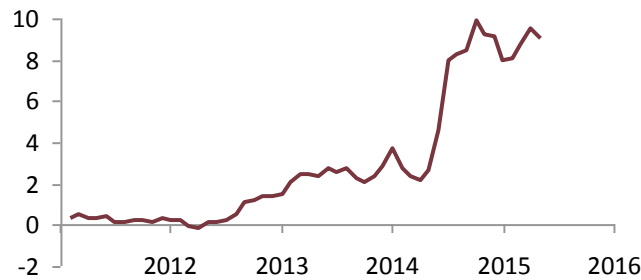


Figure 76. Net value of purchases of UAE stocks by non-UAE citizens over last 12 month (AED Bn)

Foreign investors have been net buyers of UAE listed equities for four years in a row from 2011 to 2014.

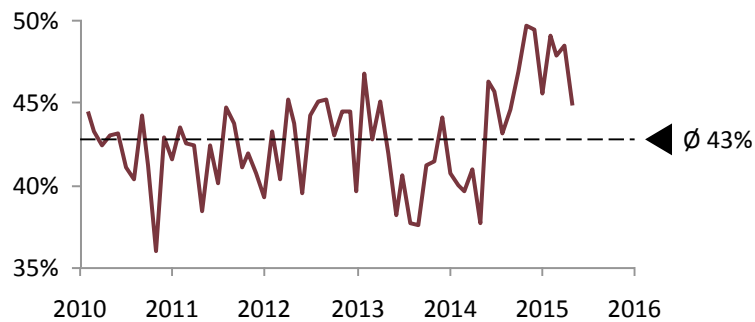


Figure 77. Proportion of daily average value traded by non-UAE citizens

The percentage of foreign investors in the UAE stock markets, which has been broadly unchanged at about 42% for several years, markedly increased in mid-2014 to a high of 50% in October 2014.

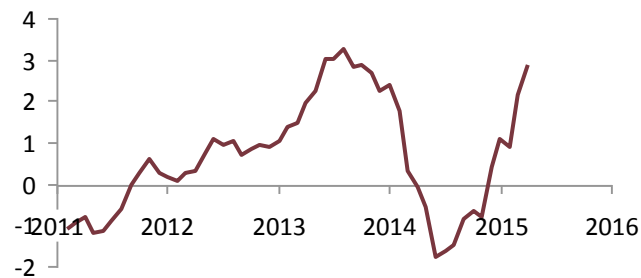


Figure 78. Net value of purchases of UAE stocks by institutional investors over last 12 month (AED Bn).

Institutional investors have been net buyers of UAE listed equities between 2011 and 2014. For a short period starting in the second half of 2013 this trend reversed. However, by the middle of 2014, new institutional inflows resumed resulting in net inflows for both 2013 and 2014.

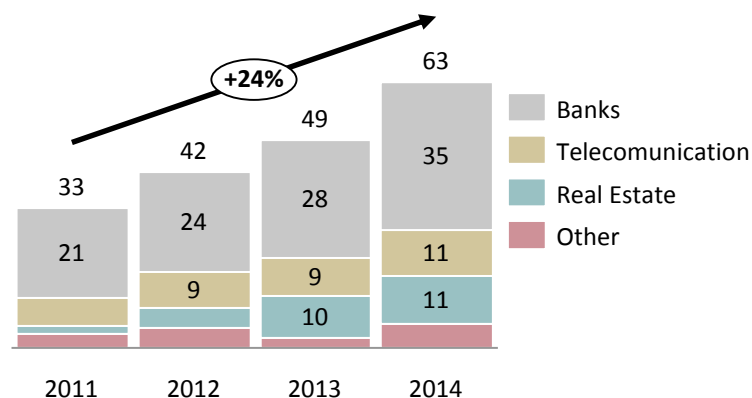


Figure 79. Net income of local UAE listed companies by sector (AED Bn)

The banking sector has been the dominant net income producer among UAE sectors for the past four years. The real estate sector shows a notable improvement over the same period. Only the Energy sector posted losses in 2014, for the second year in a row.

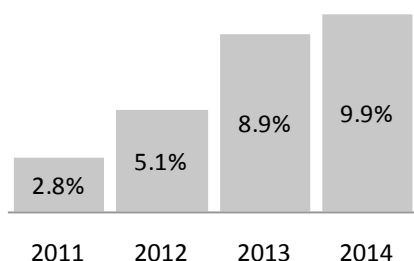


Figure 80. Return on Equity of UAE local listed companies (excluding banks)

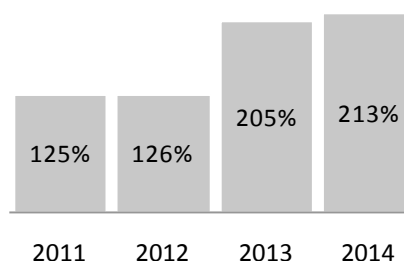


Figure 81. Liabilities divided Equity of UAE local listed companies (excluding banks)

In 2014, UAE listed companies had combined net profits of AED 63 Bn, up from AED 49 Bn in 2013. The aggregate Return on Equity ratio for UAE listed companies was 10%, higher than 9% in 2013. Firms within the Telecom sector had the highest profitability at 21%, while Consumer Staples had the lowest ROE at -28%.

The leverage indicator also points to an improvement as it declined again in 2014 for the third year in a row. The decline is however petering out as significant deleveraging was driven largely by the financial services sector, which had legacy issues from the 2008-09 financial crisis. The leverage, previously a drag on that sector, had been largely overcome by 2013

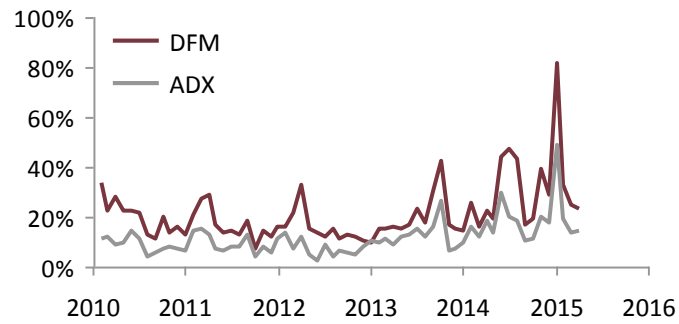


Figure 82. Dubai (DFM) and Abu Dhabi (ADX) stock exchanges volatility (annualized)

Monthly volatility within the DFM stock market increased to a series' high of 81% in December 2014, from a low of 14% in December 2013 as oil prices and geopolitical risk affected the markets.

The DFM stock market tends to exhibit higher degree of volatility than the ADX. On average, monthly volatilities on the ADX have followed the same path of DFM, but on a significantly smaller scale. The December 2014 peak in volatility was 49% for the ADX.

The Insurance Sector¹⁰

Summary

The Insurance Authority has issued comprehensive financial regulation in 2014 with the aim to protect the rights of policy holders and shareholders. It covers key areas such as solvency, technical provisions, investment policy, and accounting procedures of insurance companies. The regulation is in line with international best practice and puts the UAE at the forefront of regulatory infrastructure for the insurance sector in the region.

At the end of 2014, the Board of Directors of the Insurance Authority, issued Decision No. (25) Of 2014 Pertinent to Financial Regulations for Traditional Insurance Companies and Decision No. (26) of 2014 Pertinent to Financial Regulations for Takaful Insurance Companies, which regulate the financial, technical, investment, and accounting operations of Traditional and Takaful insurers operating in the UAE.

These Financial Regulations that regulate the financial, investment, technical and accounting operations of UAE insurance companies are seen as a significant move in developing the regulatory principles and technical rules for the development of UAE insurance market performance and to protect the rights of policyholders and shareholders. They represent an advanced and key step toward regulating the operations of Traditional and Takaful insurance companies operating in the UAE and boosting their performance as per the best competitive standards worldwide.

The issuance of such Financial Regulations puts the UAE at the forefront of the Middle East with regard to adopting the latest solvency requirements similar to the European model.

These regulations are in line with the best practices applicable in the insurance industry worldwide, whether in terms of solvency, technical provisions, investment policy, or financial and accounting procedures of insurance companies. In addition, the best international legislative practices were followed in drafting the Financial Regulations for Traditional and Takaful insurance companies in a manner that facilitates their application and supervision.

These regulations aim at protecting the rights of policyholders and shareholders of insurance companies, as well as protecting insurance companies from potential risks they may encounter through proactively ensuring the solvency of insurance companies and the integrity of their financial procedures. They are also intended to enhance the technical principles and rules needed to promote the establishment of modern and advanced regulatory principles for the UAE insurance market as per the best international practices in order to boost the contribution of the insurance sector to GDP.

¹⁰ This section was contributed by the UAE Insurance Authority

By issuing the Regulations, the Insurance Authority (IA) seeks to complete the legislative framework needed to activate oversight and control over the insurance sector; achieve many goals including stability and sustainability for the insurance market by ensuring the solvency of insurance companies and their ability to meet all liabilities, and create harmony among investment policies of the insurance companies and general economic policies of the UAE.

These Financial Regulations enable the presentation of financial statements of the national and foreign insurance companies operating in the UAE in a more advanced form compared to the current form, which helps identifying the financial position of companies.

Financial Regulations were issued based on the UAE insurance market situation and after discussing their provisions with the insurance companies, actuaries, and specialized international consultation firms. Their comments and suggestions were studied in detail before being adopted, as and when appropriate, to serve the interests of the national economy and local market and in compliance with the best practices adopted in the regulation of the insurance industry. These Regulations include provisions related to the period allowed to companies to adjust their positions according to each section of the Regulations. Such period ranges between one and three years.

Takaful Insurance Business

In view of the special nature of the Takaful insurance business, separate Regulations were developed for Takaful insurance companies operating in the UAE that are compatible with the Takaful insurance Regulations applicable in the UAE and in line with the Islamic Shari'ah. The Regulations identified the policies that should be adopted in such companies in terms of the Wakala model or Wakala & Mudaraba Model, in addition to provisions pertaining to the distribution of surplus on participants in Takaful insurance business and the importance of separating the assets of participants' accounts and shareholders' accounts in the company.

Such Regulations come in line with the Insurance Authority's continuous efforts and endeavour to regulate the UAE insurance sector and enhance the performance of the local insurance market and all entities working therein based on robust legal, technical and financial principles and upgrade the competitiveness of the insurance sector at the regional and international levels as per the best practices prevailing worldwide.

New Investment Rules to Protect the Rights of Policyholders and Companies against Risks

Regulations on The Basis of Investing the Rights of the Policyholders aim at protecting the rights of policyholders and shareholders of insurance companies alike, in addition to protecting the companies themselves against future potential risks by the regulation and control of the investment activities of the insurance companies.

Such principles are intended to establish controls for investment activities of the insurance companies to ensure liquidity, profitability, safety, and diversity without engaging in investments incompatible with the nature of the company's activities and business, which may undermine its financial position. They also aim to direct the insurance companies to

focus and give priority to developing and promoting their main operational activity, namely insurance related business.

The regulations adopted the frameworks applicable internationally, in particular ICP No. (15) issued by the International Association of Insurance Supervisors (IAIS) concerning the investment of policyholders' rights, in terms of management of insurance companies' investment and selection of suitable investment instruments by emphasizing diversity of investments, minimizing focus on reducing risks while considering the limited scope of local investments, and setting determinants on high-risk or inappropriate investments such as unlisted shares, real estate investments and foreign investments.

The Regulations include provisions that boost the role of Boards of Directors of the companies in supervising the investment performance and promoting the role of specialists such as the actuary, and consequently, emphasizing the principles of corporate governance, activating risk management, and adopting stress tests when developing, implementing and evaluating the investment policy of the company.

These Regulations enforce the insurance companies to assess risks and evaluate their solvency in key risk areas, including risks related to underwriting, investment, credit, liquidity and operational risks, under the risk management framework system.

General Requirements for Investment

The Regulations include the general requirements for the investment of policyholders' rights through compliance by the insurance companies with certain rules in their investment operations, including the diversity and distribution of assets in a manner that enables the company to efficiently respond to the changing economic conditions including the developments taking place in the financial markets and real estate markets. The companies should assess the extraordinary impact of the market conditions on their assets. They should diversify their assets in a manner that mitigates such impacts.

The Regulations stipulate that investing in products or instruments issued by the same issuer affiliated with the same group as the insurance company should not expose the company to high-risk concentration; and thereby, the prescribed limits for related assets and related parties should be observed. The company must create an investment committee that ensures adequate separation of functions between implementation, registration, delegation, settlement and related auditing activities.

Assets must be in an adequate amount, in a current currency and for an appropriate term to ensure cash flows generated from such assets are enough to meet the expected cash outflows for the company's liabilities when they are accrued.

General Rules for Investment Policy

The Regulations set the general rules for the investment policy. Most significantly, each insurance company shall develop a special policy for investment and risk management that complies with the risk tolerance level determined by the Board of Directors of the company to ensure sound investment of the company's funds. The investment and risk management policy shall be approved and reviewed on an annual basis by the Board. Such policy shall

cover the general investment strategy and appropriate risk management regulations, including the mechanism to control such regulations. The risk management regulations shall cover the risks pertaining to investment operations that might impact the fulfilment of insurance and capital adequacy obligations. The key risks include market, credit, and liquidity risks. Appropriate procedures shall be taken to control and ensure compliance with limits of assets and limits of corresponding parties. The assessment of the credit solvency of related parties which the company is exposed to their significant transactions shall be adequately reviewed.

Companies must set a policy and a framework for stress tests of all its investments to be conducted once a year as per the company's policies. Foreign insurance company branches shall prove to the IA in all cases that the frameworks and policy of investment stress tests related to operations implemented within the UAE are in place at the company's head office level in a manner that shows operations within the UAE.

The company shall also adopt a separate investment strategy for insurance of persons and funds accumulation operations on the one hand and property and liability insurance operations on the other hand, especially in the cases where the company practices both types of insurance.

Limits of Investments

The Financial Regulations determine the limits of distribution and allocation of invested assets permitted for insurance companies, as it is determined in the schedule:

| Type of Invested Asset | Maximum Limit for aggregate exposure in a particular asset class | Sub-limit for exposure to a single counter-party |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------|
| Real Estate | 30% | None |
| Equity instruments in listed and not listed companies within UAE. | 30% | 10% |
| Equity instruments issued by companies listed and not listed outside UAE. | 20% | 10% |
| Government securities/instruments issued by the UAE and/or by one of the Emirates in the UAE | 100% | 25% |
| Government securities/instruments issued by (A) rated countries. | 80% | 25% |
| Cash and deposits with Banks in the UAE (e.g. current account, demand deposits, term deposits, notice deposits, certificates of deposit, etc.) | 5% minimum | 50% |
| Loans secured by life policies (excluding unit-linked funds' related policies) issued by the Company. | 30% | None |
| Financial derivatives or complex financial instruments used for hedging purposes only. | 1% | None |
| Secured loans, deposits with non-banks, debentures, bonds & other debt instruments, which are rated strong or very strong by reputed and independent | 30% | 20% |

rating agency.

| | | |
|-----------------------|-----|------|
| Other Invested Assets | 10% | None |
|-----------------------|-----|------|

Table 10. Distribution and Allocation of Invested Assets of insurance companies

Alignment of Positions and Reports Required by the Insurance Authority

For the purpose of facilitating alignment of positions according to the new requirements, the issued Regulations require companies whose limits of distribution and allocation of real estate assets are higher than the limits of distribution and allocation of the specific assets to adjust their positions in accordance with the limits of asset distribution and allocation with a period of no more than (three) years commencing from the next day the Regulations are published in the official Gazette. Companies whose limits of distribution and allocation of non-real estate assets are higher than the limits of asset distribution and allocation are required to adjust their positions in accordance with the limits of asset distribution and allocation within a period of no more than (two) years commencing from the next day the Regulations are published in the official Gazette.

Regulations on Solvency Margin and Minimum Guarantee Fund

The Solvency Margin bears paramount importance in the insurance industry as it serves as an additional parameter for control and oversight and a tool to verify the company's ability to meet its obligations in the manner that ensures maintaining the soundness of the insurance companies' financial positions and detecting any flaw that may occur in such positions. Furthermore, the Solvency Margin serves as an ancillary indicator that directs the risk tolerance policy of the company, in addition to the prudent corporate management's endeavour to enhance the Solvency Margin as a key goal pursued to ensure the continuity of the company, since the higher the Solvency Margin of a company is, the safer, more secure and more reputable the company will be, which increases its opportunities to get a larger market share.

This section of the Regulations was developed based on the key principles of Solvency Margin (Solvency II), which measure the key risks that may compromise the ability of companies to meet their obligations, due to the international requirements imposed by the IAIS, where the UAE is an active member, in addition to the multiple and diversified risks that the insurance companies are exposed to.

One of the most important objectives of issuing these Regulations is to provide an early warning system to detect flaws in the companies' financial conditions, which would increase the potentials for addressing such financial flaws in the early stages, which in turn would help fortify the control and monitoring regulations over the insurance companies. Additionally, these Regulations aim at enhancing the ability of insurance companies to accommodate potential financial shocks and crises, and thereby creating a reliable insurance market and help the financial stability in this market.

The Regulations on Solvency Margin include provisions related to the Solvency Margin, Minimum Capital Requirements, Minimum Guarantee Fund, Solvency Capital

Requirements, and assessment of Solvency in key risk areas through IA can identify the ability of companies to provide the funds needed to meet their obligations as per the Solvency model, which is based on predefined factors.

The requirements of Minimum subscribed and paid-up capital determine it at 100 million AED for insurance companies and 250 million AED for reinsurance companies. The Minimum Guarantee Fund is set at no less than one third of the Solvency Capital Requirement. The Minimum Guarantee Fund is calculated on the basis of the minimum amount required to be maintained to cover any class of insurance underwritten by the company, which includes a minimum limit and a percentage of the net earned premiums or an equivalent percentage, whichever is higher as determined by the IA.

Principles of Solvency Margin Forms

The Solvency Margin Forms approved by the IA is based on many principles, the most important of which is 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 calibrated to make sure that the company observes all measurable potential risks, provided that this includes that current business and new business that the company is expected to practice within the next twelve (12) months. Solvency must correspond to the value vulnerable to risks in basic own funds of the company at a confidence rate of (99.5%) over one year.

The Solvency Capital Requirements must cover underwriting, market, liquidity (investment risks), credit and operational risks.

All companies shall comply at all times with the Solvency Margin to ensure maintaining own funds that meet the higher amount of the Minimum Capital Requirement, Solvency Capital Requirement and Minimum Guarantee Fund.

The Company shall immediately report to IA in the event of non-compliance with maintaining the Minimum Capital Requirement, Solvency Capital Requirement and Minimum Guarantee Fund.

A Qualified Actuary is Accredited for Every Insurance Company Operating in the UAE

The Financial Regulations related to the basis of calculating technical provisions are issued in line with the international trends in the insurance industry that the companies must maintain adequate and appropriate technical provisions that reflect the nature of operations of the insurance companies, and to avoid variance in the estimates of technical provisions made by the companies and the corresponding underwriting obligations, whether in terms of their value or time of occurrence. These include the technical provisions that must be created by the insurance companies operating within the UAE and that should be maintained within the UAE, in addition to determining the methods to calculate the technical provisions so that they are consistent with the international best practices used in the calculation of technical provisions.

These Regulations aim at regulating the technical principles of calculating technical provisions and standardizing them for all companies in order to attain fair comparison, and objective control and analysis of the positions of companies by the IA and in order to provide fairer financial statements that reflect the financial positions of the companies.

Furthermore, binding the companies to have an assessment for their technical provisions by an Actuary is the starting point towards directing the companies to work in accordance with sound technical foundations and avoid price competition that leads to non-technical products. Besides, having an Actuary Report on the assessment of technical provisions increases the fair presentation of financial statements that match the actual financial positions of the companies.

Accounting Policies Presentation Formats

The Regulations pertaining to the accounting policies aim at standardizing presenting the financial statements by binding the companies to prepare the financial statements in accordance with the accounting policies and the International Financial Reporting Standards (IFRS) in order to provide transparency and disclosure without concealing any material information that may misguide the beneficiaries of the financial statements and the oversight authorities.

The company shall present its annual financial statements including the notes thereon to the IA. Furthermore, the company shall present its interim (quarterly) financial statements including the notes thereon to the IA. The company shall also provide the IA with the annual financial statements using the approved forms.

Appendixes

Annex: Key Financial Stability indicators

| Financial Stability Indicator | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------------------------------------------------|------|-------|-------|-------|-------|-------|
| <u>Banking</u> | | | | | | |
| Total assets | 1562 | 1662 | 1734 | 1877 | 2124 | 2305 |
| Total loans and advances | 1061 | 1088 | 1143 | 1184 | 1276 | 1378 |
| Total deposits | 983 | 1050 | 1070 | 1168 | 1294 | 1439 |
| - demand and savings | 323 | 355 | 418 | 467 | 602 | 709 |
| - time deposits | 659 | 695 | 652 | 701 | 692 | 730 |
| Lending to stable resources ratio | 90% | 86% | 88% | 83% | 85% | 85% |
| Net total liquid assets | 131 | 153 | 159 | 178 | 217 | 234 |
| Collateralised funding by the CB | 6.7 | 1.4 | 1.3 | 0.5 | 0.5 | 0.5 |
| Net interbank lending by local banks | -40 | 30 | 16 | 78 | 88 | 82 |
| Capital market funding | 68 | 71 | 75 | 92 | 111 | 154 |
| Non-resident deposits | 89 | 120 | 112 | 134 | 115 | 154 |
| Capital adequacy ratio | 20% | 22% | 21% | 21% | 19% | 18% |
| Tier-1 capital ratio | 16% | 17% | 16% | 17% | 17% | 16% |
| Classified loans | 51 | 68 | 82 | 103 | 107 | 96 |
| Provision coverage ratio | 85% | 84% | 87% | 83% | 91% | 102% |
| Rescheduled loans (corporate) | | | 96 | 91 | 78 | 64 |
| Rescheduled loans (personal) | | | 17 | 11 | 9 | 6 |
| Net banks' profits | 19 | 23 | 27 | 27 | 32 | 39 |
| Net provision charges to total profit ratio | 106% | 76% | 66% | 57% | 45% | 36% |
| Net Return on Assets | 1.2% | 1.4% | 1.5% | 1.4% | 1.5% | 1.7% |
| Net Return on Equity | 9.8% | 11.6% | 12.5% | 11.2% | 11.9% | 13.6% |
| <u>Non-banking financial institutions</u> | | | | | | |
| Total assets of finance companies | | | 48 | 49 | 50 | 45 |
| Total assets of investment companies | | | 15 | 14 | 14 | 15 |

Table 11. Key financial stability indicators (in AED Bn or ratio)

Annex: FSTI Methodology

The FSTI is an average of the normalized quarterly variables at the end of the period if not mentioned otherwise.

Definition of the transformed variables

- I_{s_1} is the capital adequacy ratio.
- I_{s_2} is the lending/borrowing from banks overseas-to-total loans & advances ratio.
- I_{s_3} represents the liquid assets to total liabilities ratio.
- I_{s_4} is the negative value of the loan-to-deposit ratio.
- I_{v_1} is built by using the function $-(RE_t - REHP_t)$ if $RE_t > REHP_t$, $RE_t - REHP_t$ otherwise, where RE_t represents the average price of Dubai real estate at the period t and $REHP_t$ represents the value at t of the two-sided HP filter applied on RE_t for the period Q2 2006 - Q4 2014.
- I_{v_2} represents the growth Y-o-Y of the quarterly Real GDP, using proxies for the quarterly variables, as only annual data is published.
- I_{v_3} is the average quarterly Brent oil prices Y-o-Y growth.
- I_{r_1} is the negative of the composite MSCI UAE index PE ratio.
- I_{r_2} is calculated according to the following formulae: $\log_{10}(\sigma_t) * SER_t$. σ_t is the market volatility in the quarter t for the MSCI UAE index and SER_t represents the markets return Q-o-Q. It will show the direction and the size of the variation, as volatility in rising and falling markets has a different impact on the financial stability. Here we assume there will be no volatility below 1.

Normalisation and calculation of the FSTI

All variables are statistically normalized as per the below formulae:

$$Z_t = \frac{I_t - m}{\sigma}$$

Where I_t – the observed variable at the period t, m – its sample mean and σ – its standard deviation for the period June 2006 – December 2014.

The computational definition of FSTI is:

$$\text{FSTI} = \frac{\sum_{j=1}^4 Z_{s_j} + \sum_{j=1}^3 Z_{v_j} + \sum_{j=1}^2 Z_{r_j}}{9}$$

Annex: List of Acronyms

| Acronym | Description |
|----------------|--------------------------------------------------------|
| AED | The UAE Dirham |
| BCBS | Basel Committee for Banking Supervision |
| BIS | Bank for International Settlements |
| BoJ | Bank of Japan |
| BPS | Basis Points |
| BRFs | Bank Reporting Forms |
| BRICS | Brazil, Russia, India, China and South Africa |
| BSI | Banking Sector Index |
| CAR | Capital Adequacy Ratio |
| CBUAE | Central Bank of the UAE |
| CDS | Credit Default Swap |
| CPI | Consumer Prices Index |
| CSS | CBUAE's Credit Sentiment Survey |
| ECB | European Central Bank |
| EIBOR | Emirates Interbank Offered Rate |
| EWS | Early Warning System |
| FOMC | Federal Open Market Committee |
| FSIs | Financial Soundness Indicators |
| FSR | Financial Stability Report |
| FSTI | Financial Stability Trend Index |
| GBP | Great Britain Pound |
| GCC | Gulf Cooperation Council |
| GDP | Gross Domestic Product |
| GFC | Global Financial Crisis |
| GREs | Government-Related Entities |
| IMF | International Monetary Fund |
| JPY | The Japanese Yen |
| LGD | Loss Given Default |
| M1, M2, and M3 | Monetary Aggregates |
| MROs | ECB's Main Refinancing Operations |
| NBS | UAE National Bureau of Statistics |
| NEER | Nominal Effective Exchange Rate |
| NII | Net Interest Income |
| NIM | Net Interest Margin |
| NPLs | Non-Performing Loans |
| OECD | Organisation for Economic Co-operation and Development |
| PMI | Purchasing Manager' Index |
| ROA | Return on Assets |
| ROE | Return on Equity |
| RWA | Risk Weighted Assets |
| SHIBOR | Shanghai Interbank Offered Rate |
| SMEs | Small and Medium Enterprises |
| T1 | Tier Capital 1 ratio |
| UAE | United Arab Emirates |

| | |
|--------|--------------------------|
| UAEEI | UAE Economic Index |
| UAESMI | UAE Stock Markets Index |
| UK | United Kingdom |
| US | United States of America |
| USD | The US Dollar |
