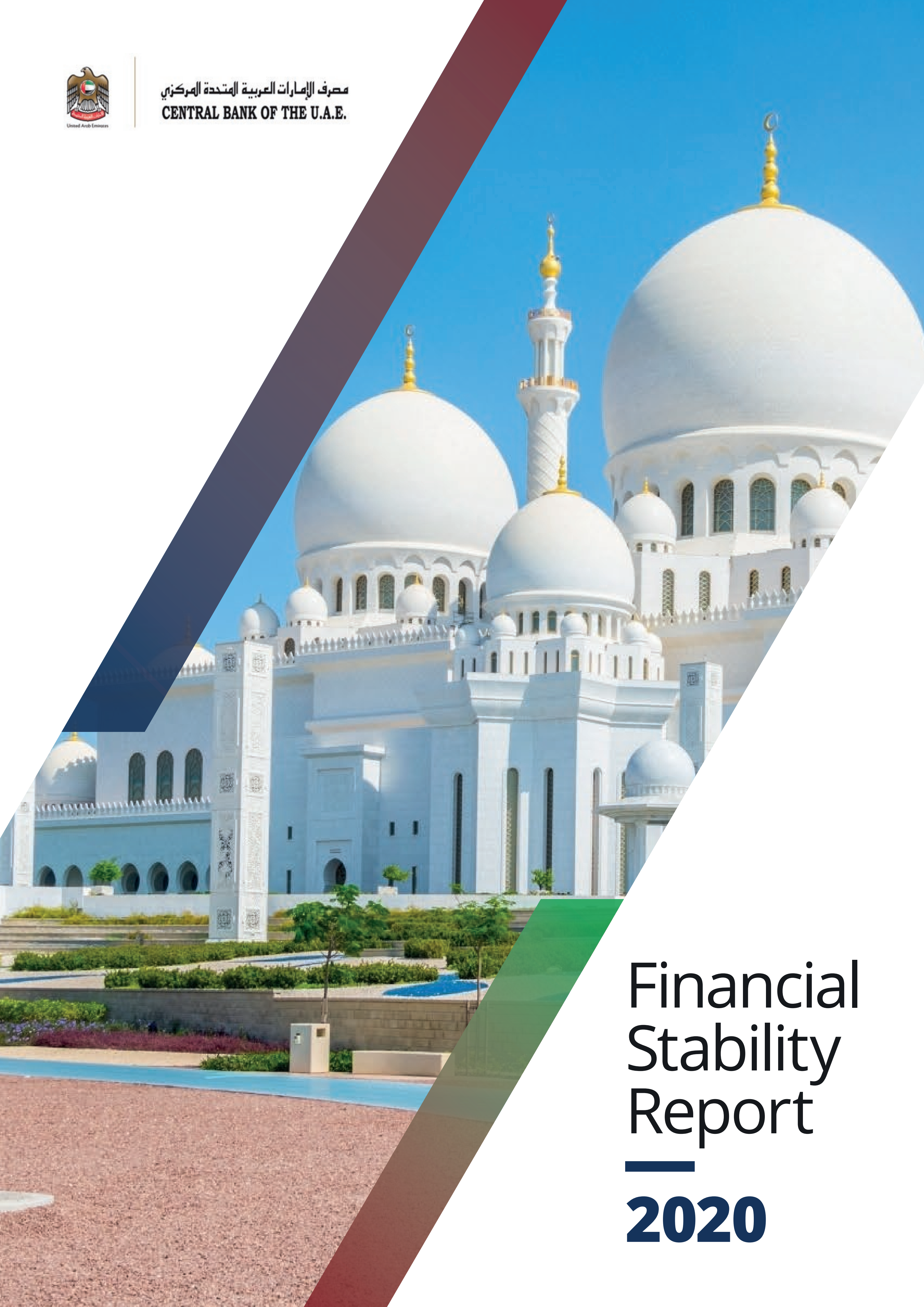
مصرف الإمارات العربية المتحدة المركزي
CENTRAL BANK OF THE U.A.E.



Financial Stability Report

2020

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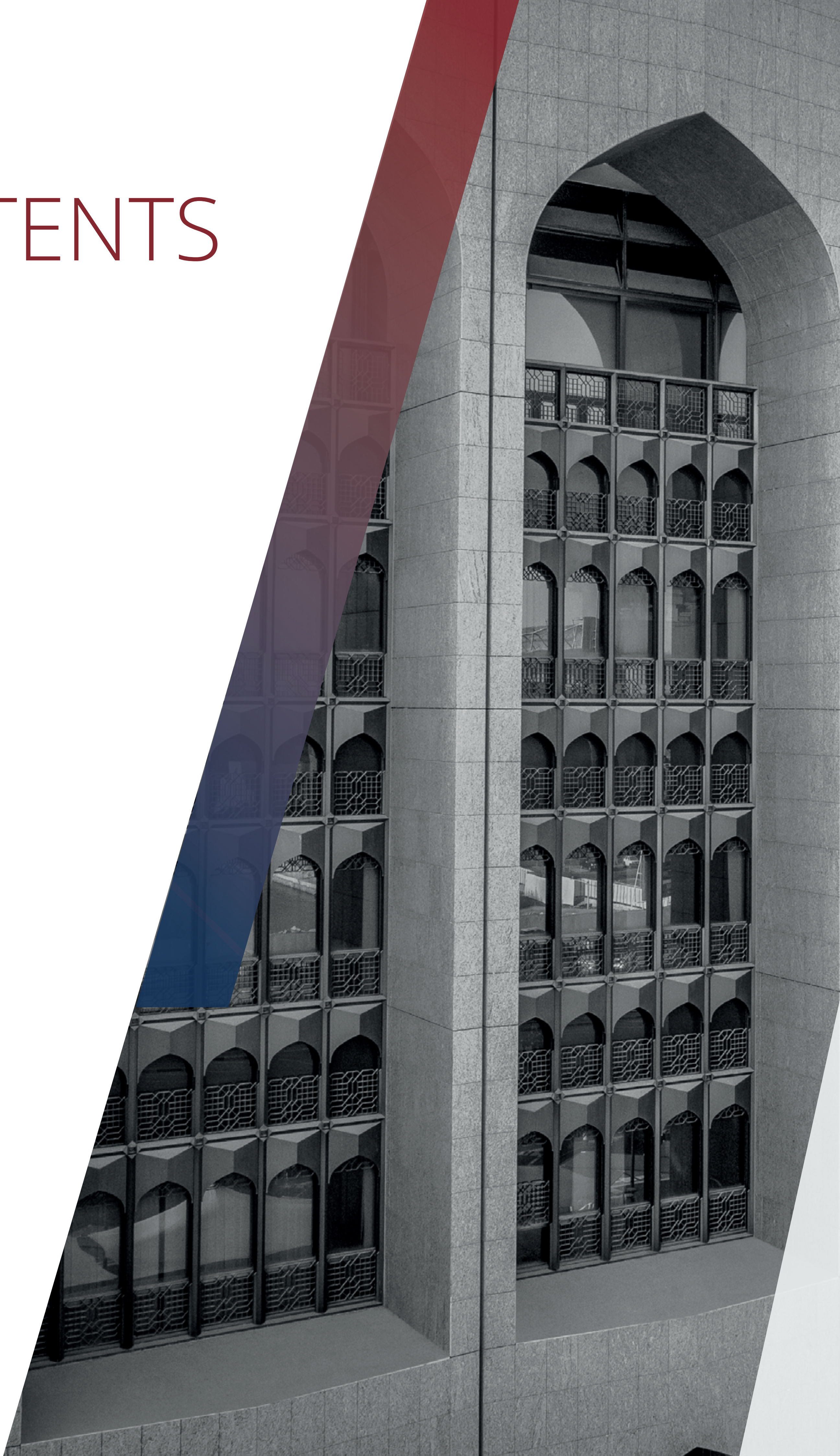


GOVERNOR’S STATEMENT

H.E. KHALED MOHAMED BALAMA

GOVERNOR

During 2020, economies around the world faced unprecedented challenges due to the COVID-19 pandemic. As a major global and regional travel and trading hub, the economy of the United Arab Emirates (UAE) was not spared. Restricted travel corridors and necessary health care containment measures negatively affected business activity as well as consumer behaviour. The UAE has been among the leading countries globally in implementing measures to contain and mitigate the spread of COVID-19, including a timely and broad rollout of vaccination.

In response to financial and economic repercussions of the pandemic, the Central Bank of the UAE (CBUAE) introduced a comprehensive stimulus package, the Targeted Economic Support Scheme (TESS) in March 2020. The TESS was widely adopted by all UAE national banks, alongside several foreign banks operating in the UAE, and rolled out to support bank clients, households, small and medium enterprises, and corporates negatively affected by the challenging economic environment. The scheme has provided banks with liquidity support and regulatory relief.

The stimulus package came at a critical juncture, ensuring that banks were able to mitigate funding and liquidity pressures and maintain their lending capacity. One year after its introduction, it is satisfying to see that the TESS has yielded intended positive impact for the UAE’s banking sector and the economy. The overall banking sector liquidity returned to pre-COVID levels and the banking sector provided deferrals on loans and financing to more than 300,000 households, 10,000 small and medium enterprises and a significant number of private sector corporations.

In 2021, the focus of the CBUAE’s crisis management efforts is shifting towards the support of the economic recovery while safeguarding financial stability. Most support measures will remain in place through 2021. Together with the UAE financial sector we will remain vigilant towards the challenges ahead and pave a way for a gradual economic recovery. The CBUAE has demonstrated high levels of crisis management readiness during the pandemic, which has been one of our key strategic focus areas, in line with the CBUAE’s mandate to ensure financial and monetary stability.

EXECUTIVE SUMMARY

Global economic output contracted in 2020 as a result of the COVID-19 pandemic. In the UAE, the real Gross Domestic Product (GDP) is estimated to have declined by 6.1% during the year, reflecting the implications of COVID-19 on the non-oil economy, as well as the reduction in hydrocarbon output based on the OPEC+ agreement. A slowdown in business activity negatively affected the corporate sector, in particular services and tourism. The UAE real estate prices continued on a downward trend, although the rate of decline was moderate compared to previous years. In tandem with the global economy, the UAE economy is expected to gradually recover during 2021 with a real GDP growth projection of 2.4%.

The UAE banking system remained resilient through the challenges posed by the repercussions of the COVID-19 pandemic. In the first quarter of 2020, the CBUAE introduced a comprehensive support package, the Targeted Economic Support Scheme. The banking system demonstrated a stabilising role during the COVID-19 disruptions. Its lending capacity and deposit growth were sustained, and the banks provided loan repayment deferrals to corporate and retail clients negatively affected by the pandemic. Notwithstanding a decline in profits due to increase in impairment charges and lower interest rate environment, the overall banking sector remained profitable, and the liquidity and solvency ratios returned to pre-COVID levels towards the year-end. The non-bank financial institutions, comprising of exchange houses, finance companies, and the insurance sector also demonstrated resilience.

The CBUAE actively monitored the situation across key supervisory metrics during the pandemic, in particular in relation to capital, liquidity, and credit quality. In addition, the CBUAE conducted frequent solvency and liquidity stress tests at different stages of the COVID-19 pandemic, built around alternative assumptions on the severity and timing of the pandemic and the economic recovery. Overall, the supervisory assessments and stress tests indicated that the UAE banking system has adequate capital and liquidity buffers to withstand significant shocks similar to those observed in 2020. However, vulnerabilities remain as the economic slowdown weighs on asset quality. Uncertainties still linger with respect to the pace and evenness of recovery among economic sectors. Therefore, the banking sector will need to remain cautious and address the resulting challenges.

The payment systems operated by the CBUAE performed smoothly without disruptions. Within the context of the COVID-19 pandemic, the usage of digital payments increased while paper-cheques transactions and ATM withdrawals declined.
The UAE has also become the largest financial technologies (FinTech) hub in the region. The pandemic has further accelerated the adoption and demand for FinTech services. The digitalisation of the financial industry requires greater attention to mitigate cyber risks. The CBUAE has implemented and enhanced key pillars of effective cyber resilience for the UAE banking system and central bank infrastructure.

The CBUAE progressed its work in strengthening the regulatory framework across all areas under its remit, while providing banks with additional operational capacity to respond to the repercussions of the pandemic by deploying temporary measures on the capital and liquidity frameworks. The CBUAE also reviewed its Macroprudential Policy Framework that aims to strengthen resilience and limit the build-up of systemic financial stability risks. Looking ahead, while uncertainty and risks surrounding the outlook for 2021 persist, the CBUAE will continue to closely monitor economic and market developments in order to ensure financial stability.

CENTRAL BANK OF THE UNITED ARAB EMIRATES KEY DATES

1973

UAE currency board was established as per the Federal Law No. (2) of 1973

1980

The Central Bank of the UAE was established as per the Union Law No. (10) of 1980 the Monetary System and Organisation of Banking

1985

Enhanced legal framework as per the Federal Law No. (6) of 1985 regarding Islamic Banks, Financial Institutions and Investment Companies

2009

The Financial Stability Department was formed at the Central Bank of the UAE

2018

Issuance of the Decretal Federal Law No. (14) of 2018 regarding the Central Bank and Organisation of Financial Institutions and Activities

2018

Establishment of the Financial Stability Policy Committee of the Central Bank of the UAE

2020

Launch of the Targeted Economic Support Scheme to mitigate the repercussions of the COVID-19 pandemic.

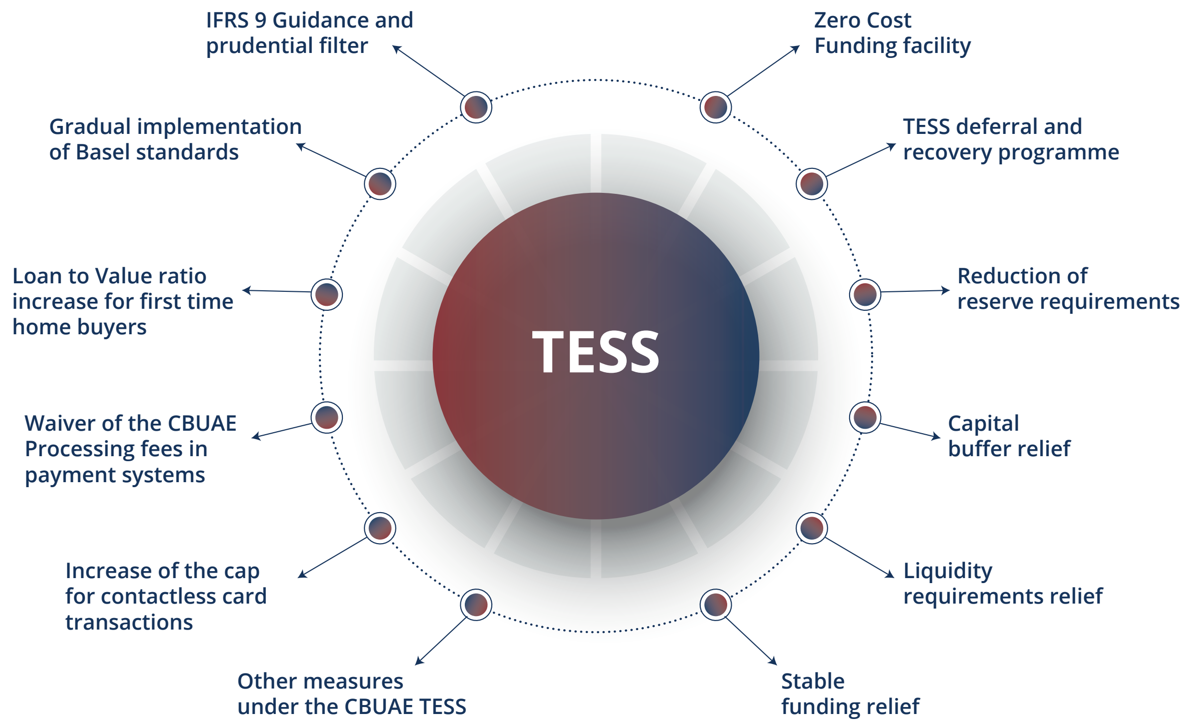
2021

The merger of Insurance Authority into the Central Bank pursuant to Decretal Federal Law No. (25) of 2020

OVERVIEW OF THE TARGETED ECONOMIC SUPPORT SCHEME IN RESPONSE TO THE COVID-19 PANDEMIC

In response to the pandemic's repercussions on the UAE financial system and the broader economy, the CBUAE implemented a comprehensive package, the TESS. The TESS has succeeded in mitigating liquidity and funding pressures, enhancing bank lending capacity, and supporting operational challenges of the financial system.

The TESS has been among the most comprehensive programmes implemented through the banking system in the region and also internationally. The CBUAE was recognised by the Frontline Hero Office in view of these measures as an essential UAE institution for safeguarding the financial system and the economy during the COVID-19 pandemic[1].



Total Customers Benefitted 321,823 | AED 56.0bn		
Individuals	309,393	AED 4.9bn
SMEs	10,005	AED 5.4bn
Corporates	1,847	AED 41.9bn
HNIs	578	AED 3.8bn

All UAE national banks along with several participating foreign banks operating in the UAE played an active and effective role in providing financial relief to businesses and households, positively contributing to the national economy.

The TESS loan deferral programme, which is one of the implemented measures, benefited more than 320,000 bank clients out of which up to 310,000 were retail customers, 10,000 small and medium enterprises (SMEs), and up to 2,000 private sector corporates during 2020.

[1] *Frontline Heroes Office salutes UAE's Central Bank as an essential frontline institution (WAM, 2020)*

SELECTED KEY MEASURES IMPLEMENTED UNDER THE TARGETED ECONOMIC SUPPORT SCHEME:

- TESS deferral programme facilitated the provision of temporary relief from the payments of principal and/or interest/profit on outstanding loans/financing for affected private sector corporates, SMEs and individuals.
- TESS Zero Cost Facility (ZCF) provided banks with AED 50 billion collateralised funding at zero cost from the CBUAE. The ZCF drawdown has been conditional on participation in TESS deferral and recovery programmes.
- The reduction in reserve requirements, reducing the reserves requirements by half for demand deposits for all banks, which can be used to support banks' lending to the UAE economy and their liquidity management.
- TESS recovery programme, introduced as of 1 January 2021, to facilitate the provision of new loans/financing to support the recovery of affected private sector corporates, SMEs and individuals.
- To further facilitate additional lending and liquidity capacity of banks to support the UAE economy, the TESS provided additional relief on existing supervisory requirements on capital, liquidity, and funding.
- The CBUAE issued guidelines on the application of International Financial Reporting Standards, prudential filter for capital adequacy, and a gradual implementation schedule of the remaining Basel standards.
- In support of households and the real estate sector, the CBUAE reduced the required down-payment for mortgages on owner- occupied residential properties for first-time buyers by 5 percentage points.
- In the payment systems domain, the CBUAE waived its processing fees for the payments system it operates and increased the cap on contactless card payments to facilitate non-cash transactions until the end of 2020.

PART ONE

MACRO-FINANCIAL CONDITIONS AND CYCLES

1.1 MACRO-FINANCIAL DEVELOPMENTS

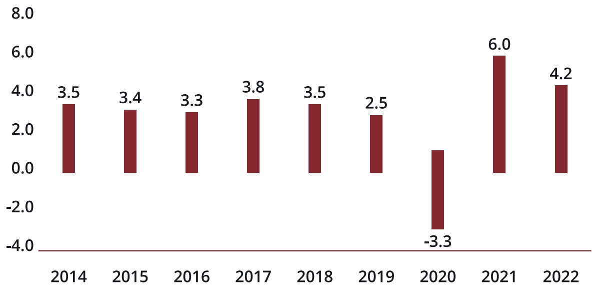
Global real GDP declined in 2020 amidst the COVID-19 pandemic, reflecting the repercussions of lockdowns, supply chain disruptions, the lasting impact of the trade tensions between the United States and China, and geopolitical tensions in some regions. Similarly, the real GDP growth of the United Arab Emirates was estimated to be negative in 2020, as both, oil and non-oil real GDPs declined. Looking forward, the timing of containing the COVID-19 pandemic, and its social and economic consequences will be decisive for the global and domestic economic activity in 2021. While the UAE financial system is strong and resilient, market participants should remain cautious and continue to factor in the uncertainties from the economic outlook.

GLOBAL ECONOMY

The world economy sustained severe contraction during the COVID-19 pandemic in 2020, albeit the initial projections were revised upward. The International Monetary Fund (IMF) estimates a 3.3% contraction in global output in its April 2021 report, an upward revision by 1.1 percentage points compared to its October 2020 projections. The higher projection in economic activity reflects easing of lockdowns, partial resumption of business travel, relatively successful virus containment, and the beginning of the vaccine production and administration. Nonetheless, the overall contraction in 2020 mainly reflected the repercussions of lockdowns, supply chain disruptions, the lasting impact of the trade war between the United States and China, and geopolitical tensions.

For 2021, the large -scale vaccine approvals and administration globally may herald a turnaround, with global real GDP growth attaining 6.0% during the year according to the IMF's baseline scenario published in the World Economic Outlook in April 2021. The timing and the strength of recovery are expected to differ across countries depending on the strength of the public health system, the effectiveness of policies undertaken, exposure to spillovers and other structural characteristics.

CHART 1.1.1: GLOBAL REAL GDP GROWTH RATES AND PROJECTIONS

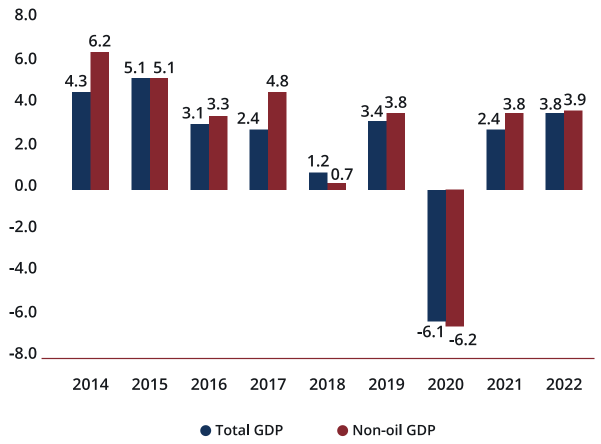


Source: IMF

UAE ECONOMY

As the regional hub for trade, logistics and tourism, the open economy of the UAE was affected by the repercussions of the pandemic. As a result, preliminary real GDP declined by 6.1% in 2020, compared to a 3.4% increase in 2019. The negative GDP growth is due to the decline by 6.2% in non-oil real GDP, in addition to a drop in the real oil GDP, resulting from the OPEC+'s cuts, in its efforts to stabilise oil prices, in an environment of subdued demand. CBUAE projects real GDP to recover to 2.4% growth in 2021, with non-oil GDP growing by 3.8%, while in 2022, a full recovery is expected, with overall real GDP increasing by 3.8%, while the non-oil real GDP rising by 3.9%.

CHART 1.1.2: UAE TOTAL AND NON-OIL REAL GDP GROWTH RATES AND PROJECTIONS



Source: Federal Competitiveness Statistics Center (2014 – 2019) and CBUAE (2020 – 2022)

UAE consumer prices fell by 2.1% in 2020, following a 1.9% drop in 2019. This was mainly driven by the continued decline in rent and utilities, which represent 34% of the consumption basket; lower oil price, which translated into lower fuel costs; as well as Nominal Effective Exchange Rate (NEER) appreciation of the Dirham.

FINANCIAL MARKET DEVELOPMENTS

The CBUAE policy interest rate/Base Rate declined in line with the US Federal Funds rate in 2020. Meanwhile, the Credit Default Swap (CDS) sovereign spreads of Dubai and Abu Dhabi remained low throughout the year, compared with historical levels. However, they increased in 2020 compared with 2019 mainly due to the pandemic. The average Dubai 5-year CDS spread in 2020 was 171.4 basis points (bps) (2019: 128.2 bps), while the average of Abu Dhabi CDS spread was 64.5 bps in 2020 (2019: 54.0 bps). By the end of the year, spreads returned to previous levels.

Capital markets in both Abu Dhabi and Dubai grew, with the total market capitalisation of both Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) reaching AED 1.1 trillion, an increase of 19.6% from 2019. However, in terms of domestic equity indices, the DFM share price index declined by 9.9% year-on-year, and the ADX index declined by 0.6% year-on-year in 2020.

MACRO-FINANCIAL RISKS

High level of uncertainty and risks are surrounding the outlook for 2021. Lockdown measures are reintroduced in many countries following the increase in infections, which could lead to a weaker growth than expected. However, there are also some upside risks, such as the agreement in December on the terms of the UK's exit from the EU, which has eliminated the no-deal Brexit downside risk.

On the downside, global growth would be weaker if the virus and its new variants are not well contained with an increasing number of infections and fatalities before vaccines are widely available and voluntary distancing or lockdowns prove stronger than anticipated. The slow distribution and less than expected efficacy of COVID-19 vaccines could delay economic recovery.

A premature withdrawal of policy support could lead to bankruptcies of viable but illiquid firms, which in turn would result in employment and income losses. The resultant tighter financial conditions could increase rollover risks for vulnerable borrowers, add to the already large number of economies in debt distress, and increase insolvencies among corporates and households.

Low interest rates, ongoing globally fiscal stimuli and booming stock exchanges could lead to bubbles. Similarly, swings in cryptocurrency prices could exacerbate risks of drastic asset price correction.

Despite recent normalisation of oil prices for oil exporting countries, such as the UAE, the potential prolonged decline in oil demand and/or prices could represent a risk, as this remains a major source of fiscal revenue.

On the upside, more vaccine manufacturing and administration, including those still under development, and increase of the efficacy of the therapies could lead to faster containment of the pandemic and rebound in confidence among firms and households. This would result in an increase of consumption and investment, and recovery of the labor market, with companies hiring and expanding their capacity for the expected rise in demand. Additional fiscal and monetary policy support would further boost the favorable spillover effects for trading partners and improve global activity.

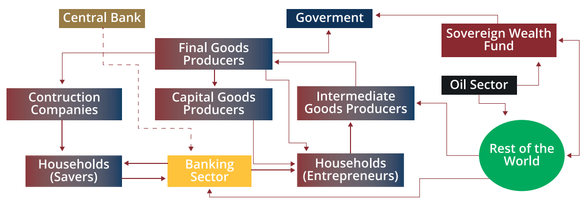
BOX: ASSESSING RISKS IN OASiS – A MACROECONOMIC MODEL OF THE UAE ECONOMY

Resilient financial sector continues to efficiently allocate financial resources and limits systemic risks during the period of stress, such as the COVID-19 global pandemic. Understanding macro-financial linkages and potential impact of central bank policies is a challenge as the outcome seen in the underlying macro-financial (non-experimental) data reflects decisions of consumers and firms as well as external factors, which are not easy to disentangle.[2]

Dynamic Stochastic General Equilibrium (DSGE) models are widely used by central banks for monetary and macroprudential policy analysis. Such models allow for the exploration of relevant transmission channels, counterfactual policy analysis, forecasting and scenario construction. Following the global financial crisis, the financial sector has been the focus of the research agenda, with the benchmark models enriched with detailed financial sector variables and transmission channels.

The CBUAE has developed an Optimizing Agents Simulated Stochastic model (OASiS), which is a DSGE model structured and estimated to match the characteristics of the UAE economy. The model economy is populated by rational optimizing agents and allows for real, nominal and credit frictions and borrowing constraints. It also includes hydrocarbon, banking and housing sectors.

CHART 1.1.3: SECTORS AND LINKAGES IN "OASiS"

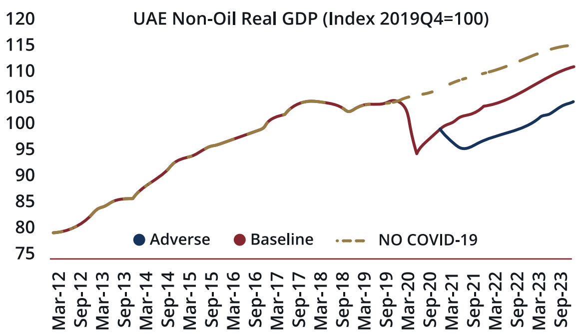


Source: CBUAE

Detailed structure of the banking sector in the model allows for rich dynamics and transmission of shocks through interest rate, credit, funding, and collateral channels. This is in line with the latest generation of operational DSGE models that incorporate financial frictions arising from net-worth fluctuations, lending constraints, risk-taking and liquidity constraints. Financial frictions are key to understanding the tail risks to economic activity, which is the focus of macroprudential analysis.

One usage of the OASiS model in the CBUAE is to develop consistent scenarios for stress testing. The scenario analysis in OASiS shows GDP at constant prices under different scenarios. The model incorporates stochastic trend and output gap shocks. The baseline scenario assumes partial recovery in the trend and consensus forecasts for external inputs such as oil price and OPEC+ oil production targets.

CHART 1.1.4: SCENARIO ANALYSIS IN "OASiS"



Source: CBUAE

The adverse scenario assumes additional shocks in 2021 and less favorable trajectories of external drivers. "No COVID-19" shows counterfactual trajectory of the UAE economy when severe shocks estimated for 2020 are set to zero.

In addition to generating consistent scenario projections for key macroeconomic variables, the model is also useful for understanding the impact and propagation of different shocks. Given assumptions on deterministic and stochastic trends, it is also possible to estimate the impact on trends and gaps to gauge the persistence of the impact.

2 *For instance, CBUAE supported the banking sector and the UAE economy through TESS following the unprecedented shock from the COVID-19 pandemic. Bank lending remained steady and economic activity recovered partially since the second quarter of 2020. To evaluate the effectiveness of TESS, one should compare the outcome with the policy (which we observe) to the outcome if the policy was not implemented (which is counterfactual and not observed). Such a comparison is usually only feasible within a structural macroeconomic model..*

1.2 MACRO-FINANCIAL CYCLES

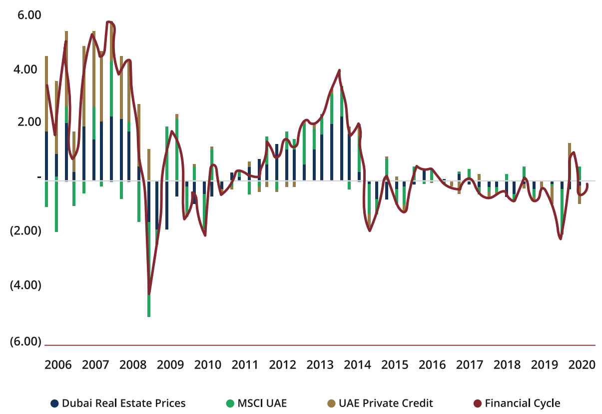
The UAE financial cycle experienced intra-year volatility during 2020 while showing signs of improvement towards the end of the year. Private credit and stock market performance played a stronger role in directing the financial cycle, while a soft real estate market continued to incite downward pressure. The credit cycle experienced a strong trend reversal during the year as non-oil GDP contracted, while credit continued to flow to the economy. The funding structure of the UAE banking system, represented by the non-core liabilities to core liabilities, remained at similar levels to previous years.

FINANCIAL CYCLE

Measuring financial cycles[3] is valuable in gauging the rises and falls in economic activity. As rising financial cycles can end in a crisis, it is important to constantly measure those trends and compare them to their long-term historical averages, even if a booming cycle does not end necessarily lead to a in crisis, but it always has its impact on growth.

The estimated financial cycle of the UAE has three equally weighed main components the UAE-wide private credit, average Dubai real estate sales prices, and the UAE Morgan Stanley Capital International (MSCI) index[4]. The compilation methodology of the financial cycle follows two main steps: the standardising of the variables given their different measurement units using their medians and standard deviations, followed by statistical treatments based on Hiebert et al[5] methodology.

CHART 1.2.1: UAE FINANCIAL CYCLE



Source: CBUAE, FCSA, Bloomberg, REIDIN, and CBUAE estimates

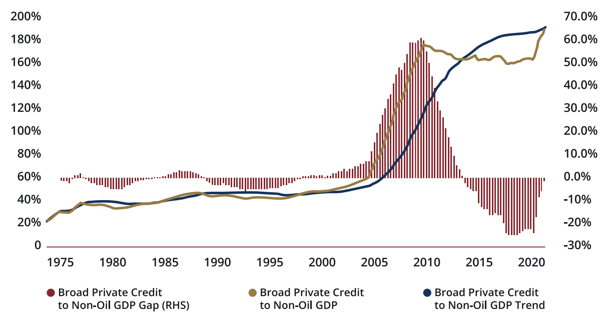
The financial cycle was more volatile during 2020 than in the previous year. In the first quarter of 2020, the cycle reached the second lowest point since 2008. However, it improved during the second quarter due to strong credit growth and continued to do so by year-end driven by the UAE stock markets recovery, while the real estate asset prices continued to underperform throughout the year. Overall, and as of December 2020, the financial cycle remained muted, fluctuating around its median.

CREDIT CYCLE

Private credit in the UAE experienced a stronger growth during 2020 compared to the last three years. The 3.8% private credit[6] growth during 2020 came from three components: UAE bank loans, issuance of bonds by UAE entities, and borrowing from abroad. However, the estimated nominal non-oil GDP decline in 2020 did have a significant impact on the private credit-to-non-oil GDP ratio, which stood at 188% as of December 2020 up from 163% in December 2019, as the denominator (non-oil GDP) has shrunk while the numerator (private credit) expanded.

The private credit-to-non-oil GDP gap, which is a widely adopted indicator to monitor potentially excessive credit growth, has narrowed in 2020, standing at only -1%, (2019:-20%) after around five years of hovering in the negative territory. This indicates that the credit grew at a similar growth rate as the non-oil GDP when compared to the long-term trend mainly due to the shrinking non-oil GDP in 2020.

CHART 1.2.2: BROAD PRIVATE CREDIT TO NON-OIL GDP: LEVEL, TREND, AND GAP



Source: CBUAE data and estimates, FCSA and Bloomberg

3 *For further in-depth content on financial cycles and its characteristics, please refer to the financial stability report 2019 of CBUAE.*

4 *The MSCI United Arab Emirates (UAE) Index is designed to measure the performance of the large and mid-cap segments of the UAE market. With 9 constituents, the index covers approximately 85% of the UAE equity universe.*

5 *Hiebert, P., Peltonen, T. and Schüler, Y., "Coherent financial cycles for G-7 countries: Why extending credit can be an asset", Working Paper Series, No. 43, ESRB, Frankfurt am Main, May 2017.*

6 *Total private credit is defined as the total credit borrowed by the resident private sector in the UAE, inclusive of GREs and exclusive of the government sector.*

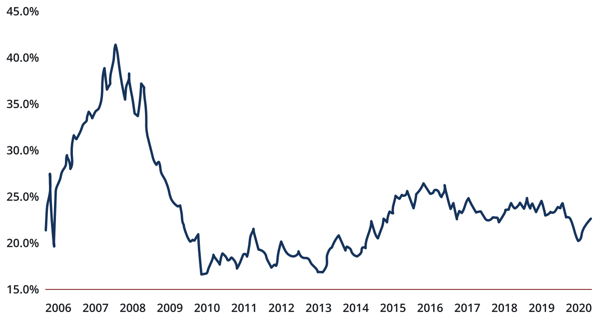
FUNDING STRUCTURE

The banking sector's composition of liabilities is an important factor in signaling potential changes in the level of risks taken by the banking sector based on the type of liabilities and their country of origin, and the risks that might eventually transmit to the real economy. CBUAE classifies core liabilities as resident deposits from governments, non-financial corporations, and households, while considering all the rest as non-core liabilities.

As credit growth has been below its historical mean in recent years. The loosening U.S. monetary policy and weakening U.S. dollar, to which the UAE dirham is pegged, have been factors contributing to keeping the non-core liabilities at stable levels.

The ratio of non-core liabilities to core liabilities dropped during 2020 by about 3.5% driven by an outflow from non-resident interbank and corporate deposits. However, these outflows fully recovered by year-end complemented by strong growth in core deposits, moving the ratio back to its mean of around 23%.

CHART 1.2.3: NON-CORE LIABILITIES TO CORE LIABILITIES RATIO



Source: CBUAE

FINANCIAL STABILITY TREND INDEX

The UAE Financial Stability Trend Index (FSTI) continued to improve in the last three quarters of 2020 after the initial drop of the index in the first quarter as a result of the COVID-19 pandemic.

The Financial Stability Trend Index is a quantitative measure developed by the CBUAE combining eighteen macro-financial indicators into one composite index. The indicators are grouped into three sub-indices; the Banking Index, the Economy Index, and the Securities Market Index, with each representing certain aspects of the macro-financial environment that affect the UAE financial system. While the index does not predict financial crises, it does reflect important macro-financial characteristics of financial stability. A positive FSTI number indicates supportive macro-financial conditions while a negative FSTI number suggests weakening conditions.

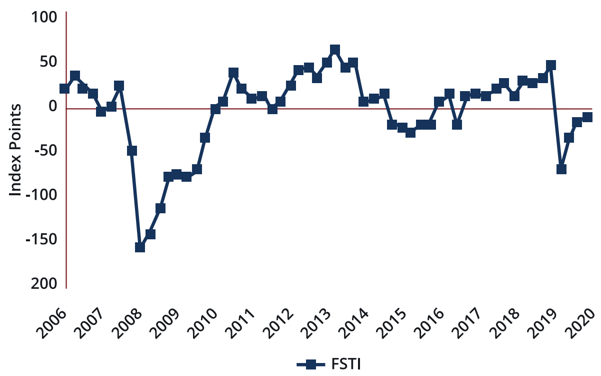
Throughout 2020, the FSTI showed signs of improvement after initially dropping into negative territory against the onslaught of the pandemic in the first quarter of the year. The next three quarters, however, saw the FSTI improving 57 index points indicating an improvement of the overall macro-financial environment albeit remaining in the negative territory.

The Securities Market sub-index was the largest contributor to the initial drop of FSTI in the first quarter of 2020, led by an increase in market volatility. The sub-index improved 227 index points by year-end mainly due to the stabilisation of the ADX and DFM measured by realised market volatility and their overall Price to Earnings (PE) ratio improvement.

The economy sub-index was the second largest contributor to the initial drop of the index in the first quarter of 2020, mainly driven down by the real non-oil GDP and spot price of Brent Crude Oil. By year-end, the sub-index improved by 43 index points as the real non-oil GDP and the spot price of Brent Crude Oil recovered.

The banking sub-index also contributed to the drop of the FSTI index in the first quarter of 2020, mainly brought down by the increase in the banking sector's market-implied probability of default and the banking sector's equities volatility. The sub-index improved 12 index points by year end, the improvement was mainly due to a stabilisation in the volatility of bank equities and the Eligible Liquid Assets to Total Assets Ratio (ELAR).

CHART 1.2.4 UAE FINANCIAL STABILITY TREND INDEX



Source: CBUAE

1.3 HOUSEHOLD AND CORPORATE SECTORS

Domestic household credit continued its contraction for the second year in a row by 0.9% in 2020, though at a rate slower than the one experienced in 2019. Mortgages experienced positive growth, while credit cards, car loans, and consumer loans fell. Domestic household deposits on the other hand showed the strongest growth in five years at 9.5%, adding another year of strong deposit expansion. A fundamental analysis of a sample of publicly listed companies in the UAE shows that non-financial corporates' balance sheets have remained resilient overall, with some deterioration in their levels of profitability.

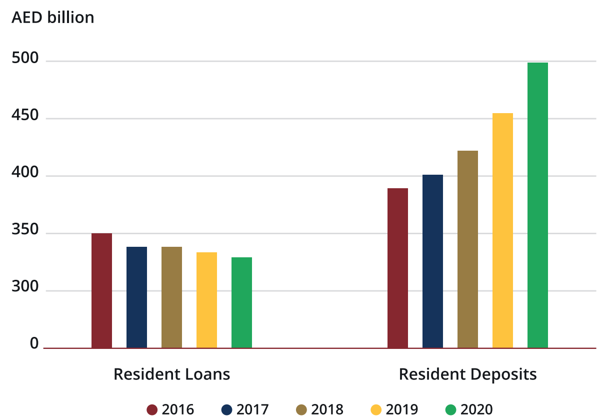
HOUSEHOLD LOANS AND DEPOSITS

In most emerging economies, domestic retail savers provide a stable source of funding to banks, and the UAE is no exception. Moreover, household over-indebtedness may affect financial stability at the aggregate level, thus, it is important to monitor those trends and ensure that the consumers are protected, and the banks' intermediation functions smoothly supported by a set of regulations that limits the risks of households over-indebtedness over time, while harnessing the benefits of financial inclusion and development.

UAE banks' lending to resident households is around one-third of the UAE's non-oil GDP, and one-fifth of the UAE banking sector's loans at around AED 330 billion as of December 2020. The vast majority (97%) of household loans are denominated in UAE Dirhams. UAE citizens represent one-third of the household loan portfolio, while the remaining two-thirds are UAE residents of other nationalities.

Households' loan portfolio continued to contract during 2020 by 0.9% (2019:-1.4%). The repercussions of the COVID-19 pandemic and its impact on both the credit underwriting standards and the credit demand from households contributed significantly to those trends.

CHART 1.3.1: HOUSEHOLD LOANS AND DEPOSITS



Source: CBUAE

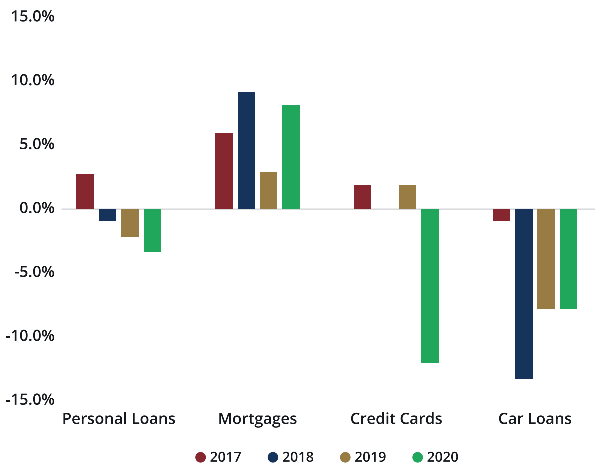
In contrast, deposits of resident households have shown strong growth during 2020 adding around AED 43 billion in deposits with a growth rate of 9.5% (2019: 8.0%), maintaining the status of the UAE household's as net depositors in the UAE banking system, while it is the norm in most of the countries.

Most households made their deposits in demand or saving accounts which made up about 80% of deposits as of December 2020, while the share of time deposits decreased from 26% in 2019 to 20% in 2020, discouraged by the low interest rate environment. Around 87% of household savings are denominated in UAE dirhams, while the rest is in foreign currencies.

Both non-resident household loans and deposits represent less than 2% and 5% of the overall households' loans and deposits respectively, which remained stable during 2020.

As the aggregate growth of household loans has been on a declining trend, a trend shared among the sub-categories of household loans during 2020, except for mortgages that grew at 8.1% (year-on-year) as of December 2020. Other main categories such as credit cards, car loans, and personal loans all declined by 12.2%, 7.9%, and 3.4% respectively. The decline in car and personal loans is a continuation of a trend that started last year, while credit cards strong decline started during 2020.

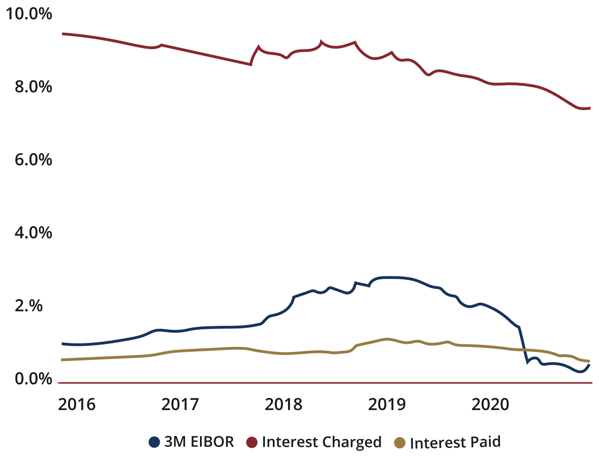
CHART 1.3.2: HOUSEHOLD LOANS GROWTH BY CATEGORY



Source: CBUAE

Interest rates have been declining during 2019 and 2020 as CBUAE monetary policy followed the rate cuts by the Federal Reserve. This trend was reflected in the 3-month EIBOR declining by around 1.7%, and so were the implied average loan and deposit rates. Moreover, fees charged by banks to households also declined for the first time by around 25% during 2020, as a result of the TESS measures, lower business activity and an overall decline in UAE population.

CHART 1.3.3: HOUSEHOLD INTEREST RATES AND EIBOR



Source: CBUAE

CURRENT REGULATIONS RELATED TO HOUSEHOLD DEBT

The CBUAE regulation on the maximum Debt-Service-to-Income ratio (DSTI) of a working individual is at 50%. CBUAE has also set a limit on consumer loans at 20 times the monthly salary or the total monthly income of the borrower and the repayment period of household consumer loans not to exceed 60 months. Banks and finance companies must ensure that these limits are not exceeded.

Car loans are treated separately from consumer loans and must not exceed 80% of the value of the financed vehicle.

The CBUAE as a response to the COVID-19 pandemic, has eased its macroprudential stance , as an example, the CBUAE increased the loan-to-value (LTV) ratios applicable to mortgage loans for first-time homebuyers by five percentage points. First-time buyers will benefit from being required to put up less of their own capital when making the first real estate purchase.

CORPORATE SECTOR

The UAE corporate sector[7] is the biggest borrower and depositor in the UAE banking sector, and thus its performance especially during times of uncertainty and change is vital for the health of the UAE banking sector and the overall economy, and therefore financial stability.

UAE corporates debt-to-non-oil GDP[8] increased sharply over the past year, increasing from 136% in 2019 to 152% in 2020. This increase is mainly related to the expected contraction in non-oil GDP rather than an increase in the aggregate debt figure, as it only increased by around 4% in 2020.

A slowdown in business activity affected the performance of the corporate sector negatively, and unevenly across different sectors, affecting the services and tourism sectors the most. This negative impact of was felt in the corporates asset quality as their non-performing loans deteriorated reaching 11.2% as of the end of 2020.

The rise of defaults were considered in our stress testing adverse scenarios and throughout the modeling process, as the loan portfolio of the corporate sector is the largest one, comprising about 37% of the total UAE loan portfolio, sizable increases in default rates across various sectors were incorporated that resulted in significant impact on banks' capital levels.

Moreover, the fundamentals of corporates are constantly analyzed within the CBUAE, from indicators that measure the capacity of corporates to meet their debt service obligations, their liquidity, profitability and leverage shows signs of resiliency especially for the large listed corporates in the UAE.

[7] *A sample of 31 publicly listed companies in different sectors that have filed their financial statements for 2020 and are part of the Dubai Financial Market General Index and Abu Dhabi Securities Market Index. The sample is not representative of the overall situation of the UAE corporates as it is biased to bigger and usually more credit worth corporates and have a sectorial bias towards telecommunications and real estate.*

[8] *Debt here includes UAE bank loans to UAE corporates, issuance of bonds by UAE corporates, and borrowing of UAE corporates from abroad through syndicated loans.*

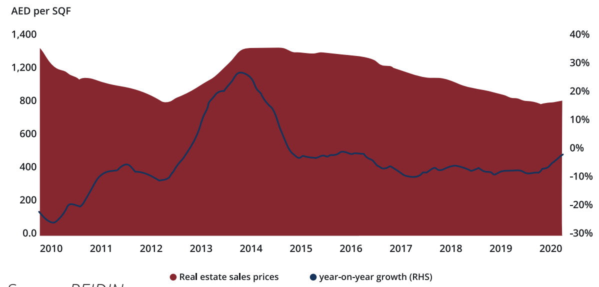
1.4 REAL ESTATE MARKET

The residential real estate market in the UAE continued its downward trend, albeit at a slower pace. The UAE government launched initiatives to soften the impact of the COVID-19 pandemic and safeguard the balance between supply and demand in the real estate market which could better coordinate supply and restore the balance to the market.

RESIDENTIAL REAL ESTATE MARKET

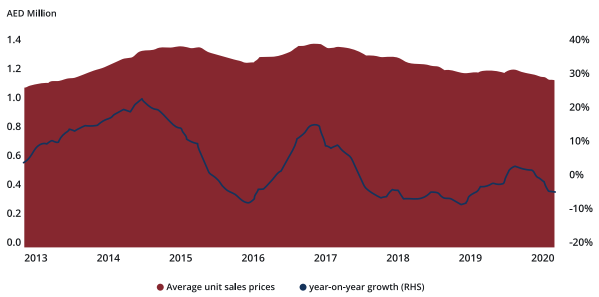
The real estate market[9] in Abu Dhabi and Dubai has been on a downward trend as residential real estate sales and rental prices continued to decline, albeit at a slower pace. During 2020, Abu Dhabi residential sales prices declined by 2.0%, whereas Dubai prices declined by 5.5%[10]. The new supply of residential real estate in Abu Dhabi reached around 2,900 units in 2020 while 38,900 units were added in Dubai. The imbalances in supply and demand persisted, however, the UAE government launched initiatives to better coordinate supply and restore the balance to the market.

CHART 1.4.1: ABU DHABI RESIDENTIAL REAL ESTATE SALES PRICES



Source: REIDIN

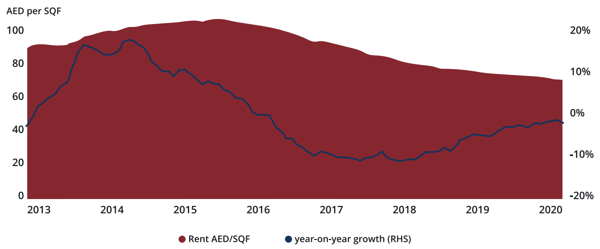
CHART 1.4.2: DUBAI RESIDENTIAL AVERAGE UNIT SALES PRICES



Source: DLD

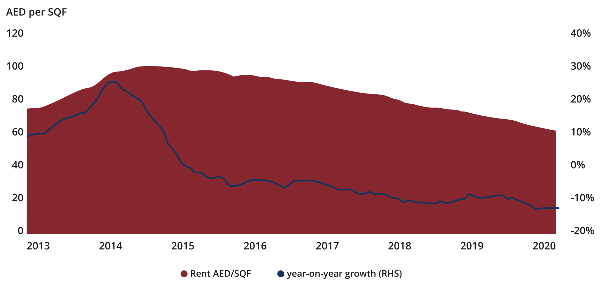
In 2020, residential rental prices continued to decline. Abu Dhabi rental prices fell by 4.3% compared to 12.2% in Dubai.[11] Annual average gross yield slightly picked up in Abu Dhabi reaching 7.0% while yields slightly dropped in Dubai to 6.7%. Despite sales and rental prices drop, rental yields in both cities continue to sustain their levels.

CHART 1.4.3: ABU DHABI ANNUAL RENTAL PRICES



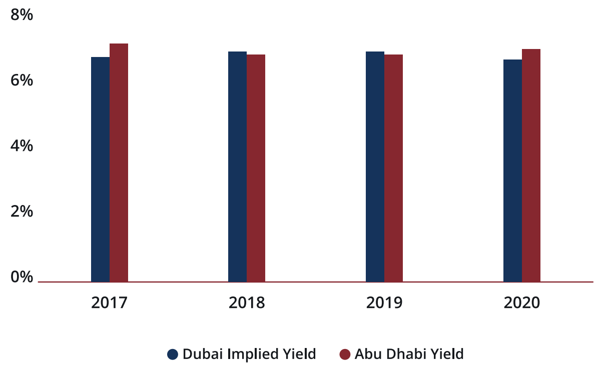
Source: REIDIN

CHART 1.4.4: DUBAI ANNUAL RENTAL PRICES



Source: REIDIN

CHART 1.4.5: AVERAGE RESIDENTIAL YIELD



Source: REIDIN for Abu Dhabi and DLD for Dubai

REAL ESTATE TRANSACTIONS

During 2020, the total number of sales transactions dropped by 15.6% in Dubai due to the sharp decline in sales of properties under construction (off plan) that account for 45.4% of total transactions. The number and value of off-plan properties decreased sharply by 31.9% and 37.3% respectively. On the other hand, the number and value of completed units increased by 5.4% and 2.0% respectively. Transactions data are not available for Abu Dhabi.

COMMERCIAL REAL ESTATE

COVID-19 affected the commercial real estate market as it experienced changes due to entities shifting to work from home or hybrid models of work from home and office. In addition, the closure of borders and airports resulted in a slowdown in global tourism which affected the hospitality sector. Office rental prices continued their downward trend. Abu Dhabi office rents declined at a slower pace by 1.9% compared to 4.3% in 2019 while in Dubai they declined by 7.5% compared to 6.1% in the previous year.

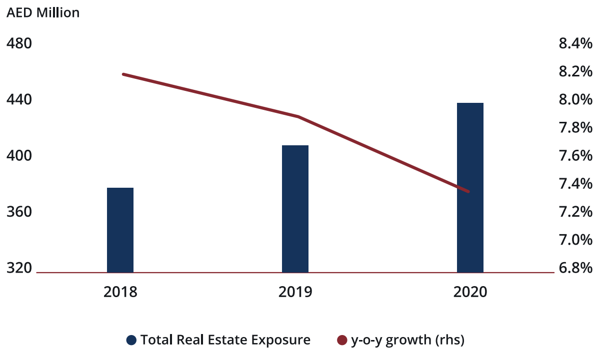
GOVERNMENT INITIATIVES

The UAE Government has been proactive during the pandemic to reduce the burden of the global situation caused by COVID-19. Fiscal stimulus measures and policy reforms were evident during 2020. The CBUAE adopted the TESS to support the national economy, consumers, and companies. The UAE federal and emirates governments proved their agility in launching initiatives that targeted different sectors while ensuring the health and safety of their citizens, residents, and visitors during the pandemic. Initiatives included reductions in fees across different sectors, extending residence permits and procedures to support the stock and bonds market.

BANKS' EXPOSURE TO REAL ESTATE

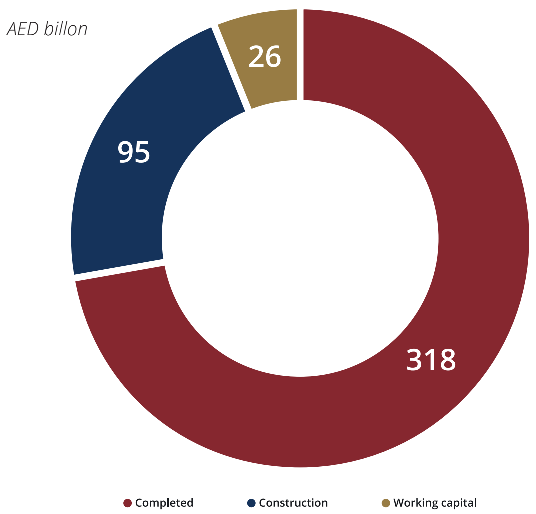
The growth of UAE banks' lending to real estate sector slowed slightly to 7.4% compared to 7.9% in the previous year. Overall exposure reached AED 439.2 billion in 2020, with the majority of the exposure concentrated in completed real estate projects representing 72% of total real estate lending.

CHART 1.4.6: UAE BANKING SYSTEM REAL ESTATE LOAN EXPOSURE



Source: CBUAE

CHART 1.4.7: REAL ESTATE EXPOSURE BY CATEGORY



Source: CBUAE

As part of the TESS, in March 2020 the CBUAE relaxed its LTV ratio by 5 percentage points for first home buyers. As of 2020, the mortgage portfolio of the banking sector increased by 8.1% compared to 2.7% in the previous year. Lower interest rates and an increase in LTV ratios had a positive impact on mortgage loan growth.

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9 *Sales price data for Dubai sourced from DLD, while other real estate market data are sourced from REIDIN. Data from DLD remain subject to revisions.*

10 *The changes in prices are calculated on a year-on-year basis comparing the end of period monthly figures for December 2019 to December 2020. The average annual rate of change of residential real estate sales prices in 2020 was -6.0% in Abu Dhabi and - 2.3% in Dubai.*

11 *Average annual rate of change of residential real estate rental prices in 2020 was - 4.4% for Abu Dhabi and -10.6% for Dubai.*

PART TWO

BANKING SECTOR ASSESSMENT AND REGULATORY DEVELOPMENT

2.1 BANKING SYSTEM ASSESSMENT

The UAE banking system remained resilient despite challenging operating environment from the repercussions of the COVID-19 pandemic. Core banking indicators pointed towards adequate funding and liquidity positions and sustained lending capacity. However, vulnerability of the banking sector remained as the economic slowdown weighed on asset quality. The surge in impairment charges and lower operating income reduced profitability. Nevertheless, aggregate capital buffers remained adequate and well above regulatory requirements. The banking sector played an active role in supporting the economy under the CBUAE's TESS.

OVERVIEW OF THE UAE BANKING SYSTEM

The COVID-19 pandemic and related containment measures affected corporate and household cash flows and balance sheets globally with potential for spillover effect to the financial system. The UAE banking system, however, remained resilient in 2020 despite the challenging economic backdrop caused by the pandemic.

The active policy response of the CBUAE through the TESS contributed towards maintaining strong market confidence in the UAE financial system, mitigating funding and liquidity pressures, sustaining banks' lending capacity, and addressing key operating challenges.

Measures to Mitigate the Impact of COVID-19 on the UAE Banking System

- Easing borrower cash-flow constraints
- Mitigate funding and liquidity pressres
- Sustain bank lending capacity
- Easing operational challenges

UAE Banking System Resilience Indicators

CAR	18.1%	Adequate aggregate capital buffers
ELAR | LCR	18.4% I 149.4%	Sustained liquidity position
Net NPL ratio	3.5%	Challenging asset quality conditions
ROA	0.7%	Sustained profitability, albeit lower

The UAE banking system entered the pandemic from a strong position, enabling banks to provide targeted relief measures to affected bank clients. Financial soundness indicators reflected the overall resilient position of the UAE banking system, underpinned by adequate capital and liquidity buffers, which were sustained during the pandemic.

Nevertheless, uncertainty remains with regards to the pace of the economic recovery and related asset quality pressures. As these factors continue to linger, the banking sector will need to continue to re-assess strategies and adapt to the evolving business landscape, including utilising the momentum for digitalisation of banking services.

The UAE banking system assets expanded 3.4%, in 2020, to AED 3.2 trillion (about 240% of total nominal GDP or 305% or total non-oil nominal GDP). The banking sector comprised of 58 banks, out of which 50 were conventional banks and 8 fully-fledged Islamic banks. The number of UAE national banks in 2020 amounted to 21, with a total asset size of AED 2.8 trillion reflecting the merger of two banks during the year. The number of foreign banks operating in the UAE remained at 37 with a total assets of about AED 0.4 trillion.

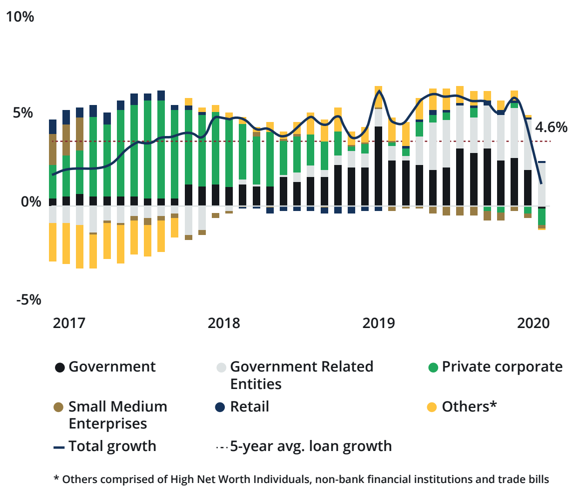
CREDIT ENVIRONMENT

Aggregate loan growth remained positive in 2020 at 1.2% year-on-year, despite the economic contraction. The lending growth moderated at year-end due to loan portfolio rebalancing and corporate loan repayments.

The aggregate lending growth figure was primarily supported by lending to Government-Related Entities (GREs). Growth of loans to SMEs improved during 2020 particularly during the second half of the year. Although retail lending remained subdued, the rate of decline was slower towards the end of the year as some of the restrictions to contain the spread of COVID-19 were eased.

Composition of the aggregate lending portfolio remained largely focused on private corporate sector, comprising about 37.0% of total portfolio, followed by retail, government and GRE loans at 18.8%,14.8% and 13.0% respectively. Lending to SMEs and High Net worth Individuals (HNIs) comprised 5.2% and 5.0% respectively, while the remaining are trade bills and loans to Non-Bank Financial Intuitions (NBFI).

CHART 2.1.1 UAE BANKING SYSTEM LENDING, CONTRIBUTION TO GROWTH (YEAR-ON-YEAR, %)



Source: CBUAE

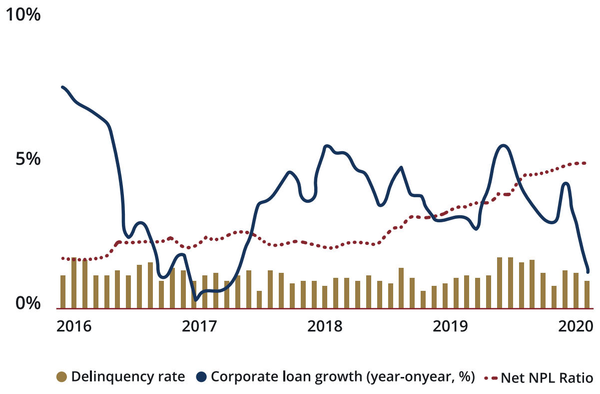
CORPORATE SECTOR EXPOSURE[12]

Overall, the corporate loan portfolio grew 1.3% during 2020, compared to the 3.1% growth in the previous year. Corporate loans extended to transportation, oil and gas real estate and services resumed growth during the year, while loan growth to other economic sectors, trade and construction in particular, were more muted.

Lending to GREs grew 20.9% during 2020 as these large corporations secured funding to manage cash-flow pressures. Despite the overall slower growth to corporates, loans to SMEs increased 2.2% year-on-year, particularly during the second half of 2020 (2019: 1.3%) as the banking sector retained the lending capacity to support the SME clients despite the challenging business environment. Private corporate loan growth declined throughout the year, recording a negative growth of 2.3% as at end of 2020.

Certain sectors remain more vulnerable to the repercussions of the pandemic, particularly tourism-related sectors, and services industries where border restrictions and precautionary consumer behaviors continue to weigh on business activities.

CHART 2.1.2 UAE BANKING SYSTEM CORPORATE LENDING: ASSET QUALITY AND LOAN GROWTH



Source: CBUAE

The weaker business environment resulted in cash-flow pressures in the corporate sector. In addition to the impact of weaker economic growth, idiosyncratic factors[13] during the year caused the asset quality of banks' corporate loan portfolio to deteriorate, reflected by an increase in Net Non-Performing Loan (NPL) ratio of the corporate sector to 5.0%,[14] a 1.5 percentage point increase from 2019.

The impact of the pandemic was more pronounced on the construction, manufacturing, and services sectors as Net NPL ratio in these sectors remained elevated at 9.2%, 7.8% and 7.3% respectively. The significant relief measures introduced by the CBUAE contributed to containing the systemic risk of rise in corporate defaults affected by temporary cash-flow disruptions, while keeping business loan delinquency[15] rates low and stable at around 0.9% for the overall corporate loan portfolio.

In addition, banks' exposure to the corporate sector through the holdings of corporate bonds increased, comprising around 20% of the total investment portfolio. However, the quality of these bonds remained strong as more than 80% are rated investment grade while approximately 43% are in the AA- to AAA+ rating buckets.

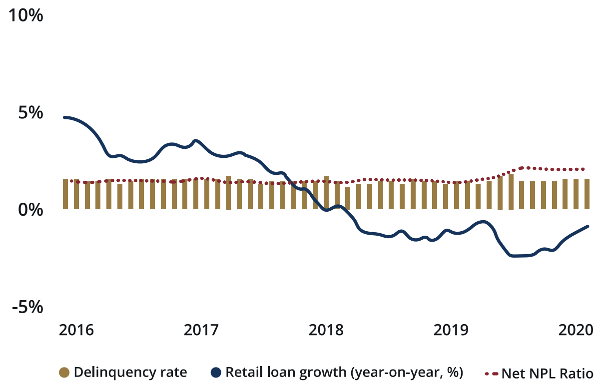
Corporates' liquidity risk may in turn put their solvency under test, should the pandemic persist. This could pose further challenges to banks in managing credit risk of the corporate loan portfolio. Therefore, banks should take greater vigilance towards their credit risk management.

12 *Corporate sector comprised of private corporates, government-related entities, small and medium enterprises and high net worth individuals*
13 *Related to restructuring or distress of certain large corporate borrowers not related to the impact of the pandemic in the UAE.*
14 *NPL ratio of the corporate sector as of the end of 2020 amounted to 11.2%.*
15 *Loans past due between 30 to 90 days.*

RETAIL CREDIT

Growth in retail loans remained negative at -1.0% during 2020, reflecting lower retail demand amid the economic downturn. Almost all sub-sectors had negative trend. Residential mortgage loans, however, continued to grow at 8.1% year-on-year compared to 2.7% in 2019. This reflects the higher take up rate amid falling house prices and the CBUAE measures to relax the LTV for first-time buyers under the TESS.

CHART 2.1.3 UAE BANKING SYSTEM RETAIL LENDING: ASSET QUALITY AND LOAN GROWTH



Source: CBUAE

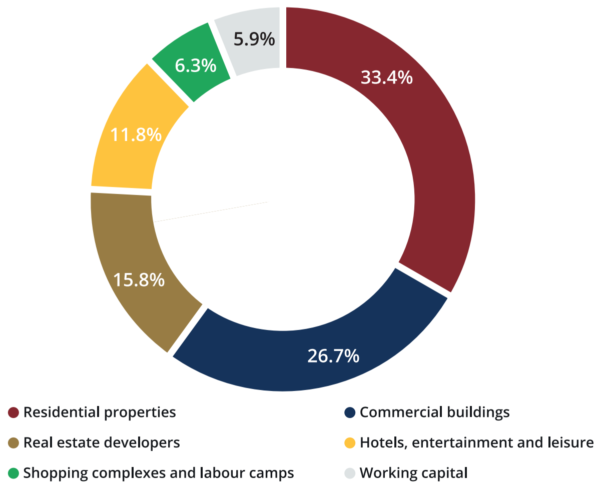
Despite slower growth of household loans in the first half of 2020, the household loans-to-GDP[16] ratio rose further to about 25% in 2020 from 22% in 2019, as the nominal GDP declined amid the contraction of the UAE economy.

The overall credit quality of banks' retail loan portfolio was slightly affected as the Net NPL ratio rose to 2.2% (2019: 1.5%), while banks' mortgage loan portfolio recorded a Net NPL ratio of 4.5% (2019: 3.6%) and a lower delinquency rate of 1.9%. (2019: 2.1%).

BANK EXPOSURE TO REAL ESTATE AND CONSTRUCTION SECTOR

Total banking system loan exposure to the real estate sector, which accounted for about 24.7% of total loans, grew 7.4% year-on-year, a 0.4 percentage point increase from 2019. Bank exposure to residential properties expanded to 33.4% of the real estate portfolio, reflected by the continued growth in mortgage loans. Commercial properties, on the other hand, which comprised of commercial buildings, hotels, shopping complexes and labour accommodations accounted for about 50.7%. The remaining share comprised of exposures to real estate developers.

CHART 2.1.4 UAE BANKING SYSTEM COMPOSITION OF REAL ESTATE LOAN PORTFOLIO



Source: CBUAE

CBUAE continues to carefully monitor risks in the real estate loan portfolio. In addition to the conventional risks, slower recovery and new remote working arrangements, based on 2020 experience, may aggravate the pre-existing balance of risks in a market with ample property supply. It may also, on the other hand, rebalance the supply-demand dynamics in the longer term.

In the non-residential property segment, the hospitality sector was affected the most by the pandemic as travel restrictions impacted travel and recreational activities. The average hotel occupancy rate in Dubai and Abu Dhabi plunged to 54% and 66% as of end 2020 respectively (5-year historical average: 78% and 73%).

The overall asset quality of the banking system real estate loan portfolio slightly deteriorated during the COVID-19 period. The Net NPL ratio increase to 5.1%[17] (2019: 4.0%) contributed largely by the increase in NPLs of the construction sector.

FUNDING AND LIQUIDITY

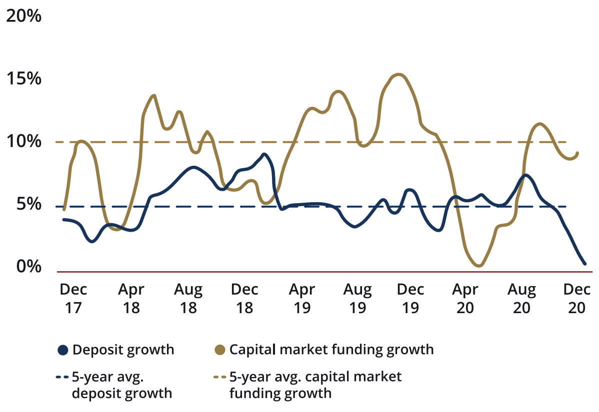
UAE banks' funding profile continued to be conventional, primarily through deposits accounting for 68.6% of total liabilities.[18] The deposit base of the UAE banks was mainly composed of resident deposits denominated in the local currency. Reliance on interbank funding remained low, accounting for 5.4% of total liabilities. Further, on aggregate, the UAE banking system remained a net lender in the non-resident interbank market, with higher cross-border interbank lending compared to borrowing, reflecting the strong liquidity position of UAE banks.

16 *Total nominal GDP*
17 *NPL ratio of the real estate and construction sector amounted to 10.7% as the end of 2020.*
18 *Liabilities excluding capital and reserves.*

Bank deposit growth remained positive at 0.8% year-on-year attributed to the higher deposit growth from the retail and GRE sectors. The retail deposit growth was particularly strong at 9.0% due to the reduction in retail spending during the pandemic containment measures and consequent higher saving propensity. Overall deposit growth moderated at year-end subject to an outflow of government deposits in December. The deposit structure shifted towards more liquid and short-term deposits during the year.

During the pandemic, non-resident deposit growth was more volatile, with more outflows at the onset of the pandemic compared to the year-end. Non-resident deposits which accounted for about 10.7% of total deposits declined 8.6% as of the end of 2020.

CHART 2.1.5 UAE BANKING SYSTEM DEPOSITS AND CAPITAL MARKET FUNDING GROWTH (YEAR-ON-YEAR %)



Source: CBUAE

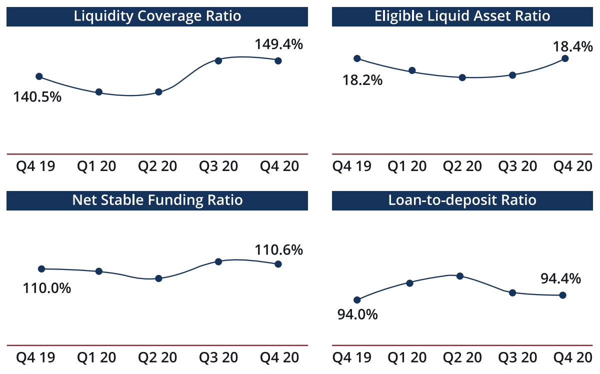
UAE banks maintained strong access to capital markets in 2020. Taking advantage of the low interest rates and favorable funding conditions, several UAE banks issued bonds at medium to longer-term maturities. The outstanding amount of capital market funding grew 10.1% in 2020, while the amount of new issuances in 2020 reached approximately AED 17.3 billion. (2019: AED 18.4 billion). The average maturity of total bank debt issuance stood at around 36 months, reducing the overall debt rollover risks and improving the UAE banks' funding profile. A large amount of the issuances were denominated in US dollar, which accounted for more than 94.5% of the debt portfolio.

The liquidity position of the UAE banking sector remained healthy as the Liquidity Coverage Ratio[19] (LCR) and the CBUAE regulatory ELAR were sustained at 149.4% and 18.4% respectively.

Through the first half of 2020, the banking system LCR and ELAR declined slightly but improved in the second half as the TESS measures successfully mitigated funding and liquidity pressures and supported confidence in the UAE financial markets. At the year-end, banks' high quality liquid assets (HQLA) exceeded the pre-COVID levels.

The Net Stable Funding Ratio[20] (NSFR) and Advances to Stable Resources Ratio (ASRR), which indicate the stability of bank funding conditions, were sustained throughout the year despite a slight drop at the onset of the pandemic. The aggregate NSFR improved to 110.6% at end of 2020 while the ASRR was 77.8%. Reflecting the faster pace of growth in deposits vis-a-vis loans during 2020, the average Loan-to-Deposit (LTD) ratio declined to 94.5%. The favorable liquidity and funding condition enables the banking system to sustain lending capacity and continue to support the economic recovery.

CHART 2.1.6 UAE BANKING SYSTEM LIQUIDITY INDICATORS TREND



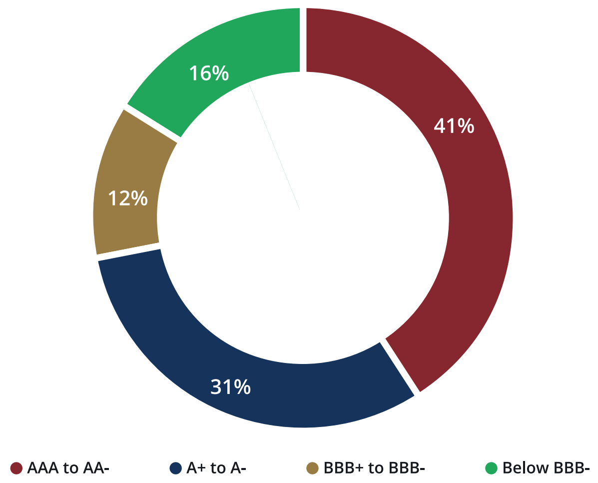
Source: CBUAE

INVESTMENT PORTFOLIO

The overall debt securities held by banks expanded by 15.5% to AED 411.0 billion, accounting for 13.0% of total assets. The increase was mainly attributable to higher holdings of both domestic and foreign bonds. Most (91.5%) of the debt securities portfolio comprised of banking book exposures, while only a smaller fraction was held in the trading book.

The majority (83%) of the debt holdings remained in investment-grade and around 41% were in the AA- and above rating buckets. Domestic debt securities, which accounted for 39% of the total debt securities portfolio, grew 17.4% year-on-year driven by an increase in holdings of domestic government debt. Foreign debt securities on the other hand also grew by 14.2%.

CHART 2.1.7 UAE BANKING SYSTEM'S COMPOSITION OF DEBT SECURITIES BY RATING BUCKET



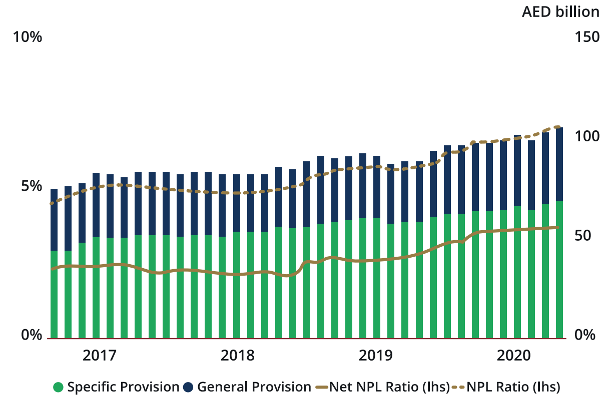
Source: CBUAE

ASSET QUALITY

The economic contraction during the pandemic has had an impact on the pace of growth in the overall non-performing loans. The higher headline NPL ratios in the UAE were also affected by legacy non-performing loans that were already provisioned and the restructuring of few large borrowers during the year. Consequently, the Net NPL ratio[21] and NPL ratio increased to 3.5% and 8.1% by the end of 2020 (2019: 2.5% and 7.5%). While the asset quality pressures due to the global pandemic remained, the likely economic recovery is expected to gradually alleviate credit quality concerns albeit with a lagged effect.

Forward-looking loan loss provision increased in 2020 amid the sharp contraction in economic activity. On aggregate, total provisions increased 18.4% year-on-year. Out of the total increase in provisions, specific provisions grew 18.2% while general provisions by 19.0% year-on-year. In the same period, non-performing loans increased by 25.6%. Therefore, the total provision coverage declined by 6.0 percentage points to 86.1%.

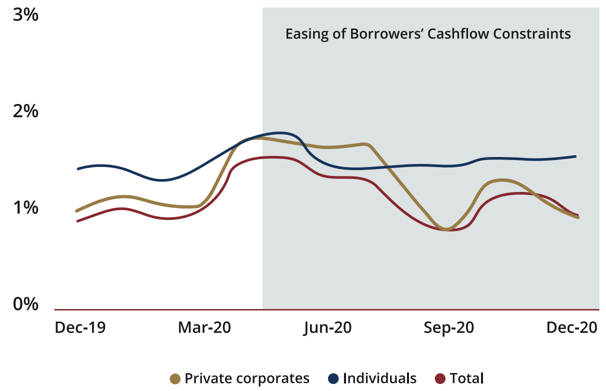
CHART 2.1.8 UAE BANKING SYSTEM ASSET QUALITY AND PROVISIONING LEVELS



Source: CBUAE

Policy support, particularly the TESS loan deferment programme managed to prevent large scale of loan defaults due to temporary cash-flow concerns. However, banks need to remain prudent in their credit risk management and restructuring practices, identifying and resolving credit quality deteriorations within their lending portfolios once the loan repayment moratoriums expire. The CBUAE ensures the continuity of the loan deferment and recovery programme through the TESS extension through 2021 to avoid any potential cliff effect that would be detrimental to financial stability.

CHART 2.1.9 DELINQUENCY RATES (30-90 DAYS PAST DUE) OF SELECTED LOAN PORTFOLIO



Source: CBUAE

[19] *Liquidity Coverage Ratio is applicable to 5 approved banks.*
[20] *Net Stable Funding Ratio applicable to 5 approved banks.*

[21] *The Net NPL ratio excludes specific provision and provides for a better indicator of asset quality taking into account the high provisioning levels in the UAE banking system..*

CROSS—BORDER EXPOSURES

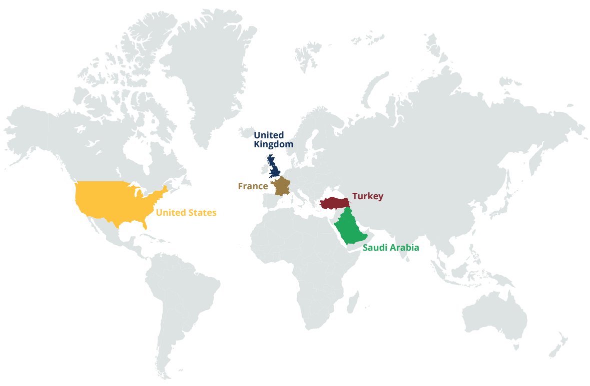
UAE banking sector's cross-border exposures are represented by non-resident assets and liabilities. Banks' aggregate non-resident liabilities largely comprised of non-resident deposits, capital market funding and interbank borrowing. Non-resident deposits and interbank borrowing accounted for 12.2% of total liabilities while capital market funding accounted for 8.0%. The relatively shallow domestic debt market is one of the factors driving the cross-border capital market funding.

Non-resident assets comprised of non-resident loans, interbank lending and investment assets. Non-resident loans and interbank lending accounted for about 10% of total banking system assets. Non-resident loans are largely to corporations in the Gulf Cooperation Council (GCC) region, while non-resident interbank lending were to counterparties in KSA, UK, Egypt and Turkey.

Banks' non-resident investments, which consist primarily of debt securities accounted for about 7.8% of total banking system assets. The non-resident debt securities investments comprising 47% of the total debt securities portfolio, are mainly rated AA+ and above. Most of these securities are from GCC sovereigns and government-related entities.

The overseas operations of UAE National banks expand across the GCC, Asia, Europe and the Americas. As of 2020, the UAE national banks have a total of 47 foreign branches and subsidiaries with notable presence in Turkey, UK, US, France and Saudi Arabia. The UAE national banks' overseas operations, with a total asset size of about AED 640 billion, have experienced a decline in profitability, as banks in other regions were similarly affected by slower economic activity resulting from the COVID-19 pandemic.

CHART 2.1.10: UAE DOMESTIC BANKING GROUP'S TOP 5 FINANCIAL FOREIGN BRANCHES/ SUBSIDIARIES

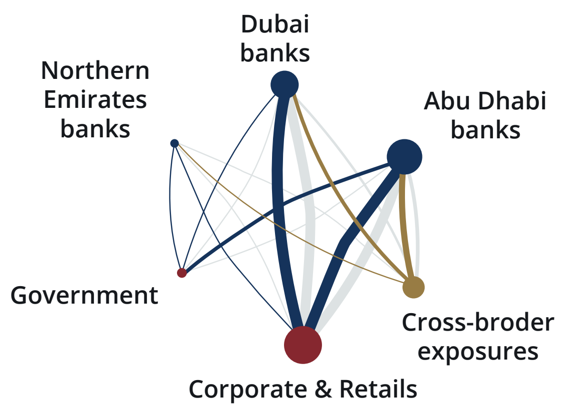


Source: CBUAE

Major overseas subsidiaries also continue to maintain relatively high levels of capital, which serve as strong buffers against potential credit losses. This will limit the need for capital support from the domestic parent banks.

The network analysis of the UAE banking system highlights the flow of lending and funding between UAE banks and different sectors of the UAE economy and external counterparties. The UAE banking sector remains primarily domestically funded, through corporate, government, and retail deposits. External exposures, both in terms of cross-border assets and liabilities are primarily concentrated in the large internationally active banking groups in Abu Dhabi and Dubai.

CHART 2.1.11: NETWORK OF UAE BANKS' LENDING AND FUNDING ACTIVITIES



Note:
- Blue and brown/gold lines represent funding channels
- Grey lines represent lending channels.
- Line thickness represents the size of funding and lending to each counterparty.
- Node size represents asset size of the banks and size of bank liabilities to the counterparties.

Source: CBUAE

CAPITAL

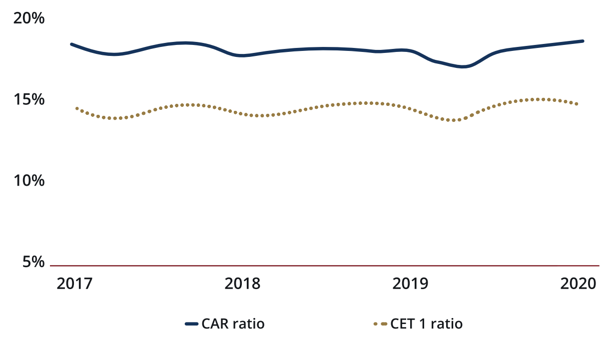
Banks' aggregate capital position remained stable in 2020, and banks continued to maintain healthy capital buffers above the regulatory minimum. The Capital Adequacy Ratio (CAR) stood at 18.1% while Common Equity Tier (CET-1) ratio at 14.8% in 2020, a slight increase of 0.5 and 0.1 percentage points from 2019.

The improvement in the capital adequacy ratios were as a result of the reduction of risk-weighted assets (RWA) by 0.5% year-on-year as lending was largely to GREs with lower risk-weights and the increase of available capital by 2.6% mainly attributable to retained earnings.

The largest Credit Risk Weighted Asset (CRWA) asset class remained claims on Corporates (including GREs), which accounted for approximately 49.6% of total CRWAs followed by Commercial Real Estate (11.7%) and claims on Individuals and SMEs (11.3%).

Banks in the UAE have limited exposure to market risk, which accounted for only 3.2% of the total risk-weighted assets.

CHART 2.1.12: UAE BANKING SYSTEM CAPITAL RATIOS



Source: CBUAE

BANKING SYSTEM PROFITABILITY AND COST-EFFICIENCY

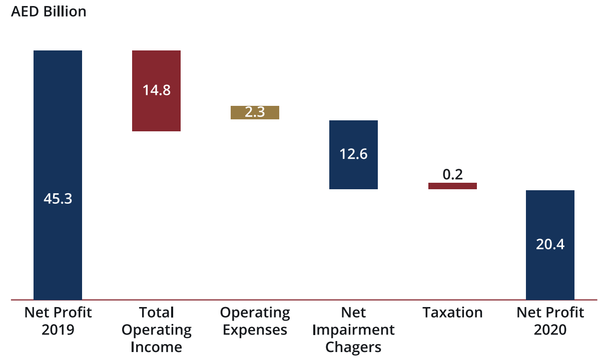
The global economy experienced disruption due to the spread of COVID-19 in 2020, which also affected the banking sector profitability around the world. Nonetheless, the overall UAE banking system remained profitable in 2020 with an aggregate net profit of AED 20.4 billion. Further, several UAE banks maintained dividend distribution to shareholders in 2020.[22]

As a consequence of the challenging operating environment in 2020, the aggregate net profit of the UAE banking system declined by 55.1% year-on-year. The reduction in the UAE banking system profitability compared to last year was mainly driven by lower total operating income and higher net impairment charges, which were significantly impacted by the repercussions of the COVID-19 pandemic.

Despite the improvement in the UAE banking system's operating expenses in 2020, reflecting cost efficiency measures introduced by banks amid the pandemic, the cost-to-income ratio, increased by 3.2 percentage points compared to the previous year and reached 37.0%. Moreover, UAE national banks cost-to-income ratio increased slightly and reached 33.8% compared to 31.1% in 2019. The cost-to-income ratio remains among the lowest compared to international benchmark.

Furthermore, the UAE banking system ROA recorded a reduction by 0.9 percentage points and reached 0.7%. The corresponding ROE of the UAE banking sector was 4.7% during 2020 compared the 11.0% during the previous year.[23]

CHART 2.1.13: BANKING SYSTEM'S PROFITABILITY DRIVERS



Source: CBUAE

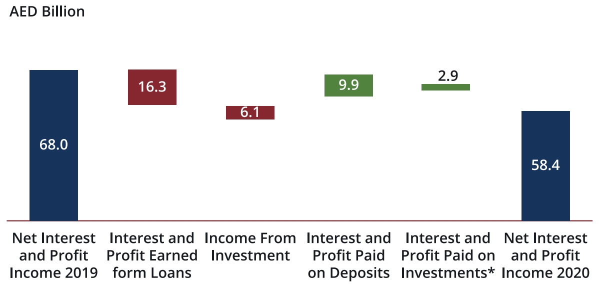
OPERATING INCOME OF THE UAE BANKING SYSTEM

The UAE banking system generated more than AED 85.4 billion of total operating income in 2020.[24] The total operating income declined by 14.7% compared to the last year.

The net interest and profit income has been the main component of the total operating income, with a share of 68.5 %. The aggregate net interest and profit income in 2020 declined by 14.1% year-on-year mainly due to higher reduction in the interest and profit income compared to the reduction in the interest and profit expenses. The lower interest rate environment and demand related factors due to the slowdown in the business activity during the pandemic were the main factors negatively affecting the interest revenue.[25]

[22] *The distribution of dividends was subject to CBUAE's prior approval based on predefined criteria.*
[23] *The ROE and ROA were calculated based on the monthly average equity and assets, respectively.*
[24] *The majority, 86.8% of total operating income was generated by UAE national banks.*
[25] *As the TESS programme facilitated provision of temporary relief to the financial system and bank clients negatively affected by the pandemic it had a stabilising effect on the volatility of bank balance sheets and their profitability.*

CHART 2.1.14: NET INTEREST AND PROFIT INCOME DRIVERS

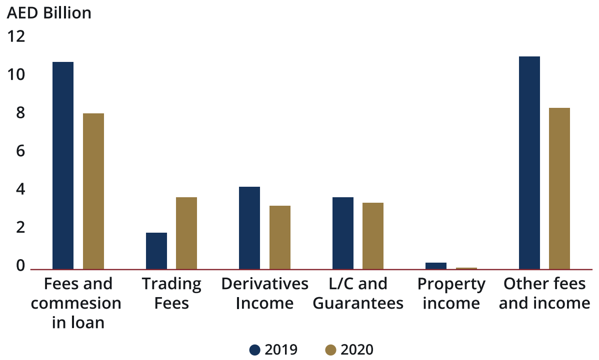


**Interest and profit paid on interbank, capital market and Central Bank funding*

Source: CBUAE

Furthermore, other operating income recorded a decline of 16.2% year-on-year; this reduction was mainly from fees and commission. In particular, the reduction in fees and other non-interest revenue were directly impacted by the lower business activity in the period when lockdown measures were introduced by the authorities to mitigate the spread of the COVID-19.

CHART 2.1.15: BANKING SYSTEM'S OTHER OPERATING INCOME



Source: CBUAE

OPERATING EXPENSES AND IMPAIRMENT CHARGES IN THE UAE BANKING SYSTEM

Despite the challenges in bank operations and lock down measures, the operating expenses of the UAE banking system declined by 6.7% year-on-year. Both national banks and foreign branches operating in the UAE recorded a reduction in operating expenses by 7.5% and 3.4% respectively, optimising their operating efficiency amid the challenging business and economic environment.

The reduction in operating expenses was mainly from staff expenses and bonus expenses. However, the premises expenses, depreciation and amortisation recorded an increase.

The UAE banking system's net impairment charges increased by 61.8% year-on-year, due to the deterioration in the asset quality and forward-looking loan-loss provisions. The net impairment charges, comprising higher specific provision and collective provision, increased by AED 12.6 billion compared to the last year, which represented the highest year-on-year increase in provisions since the global financial crisis.

TABLE 2.1.1: BANKING SYSTEM PROFITABILITY

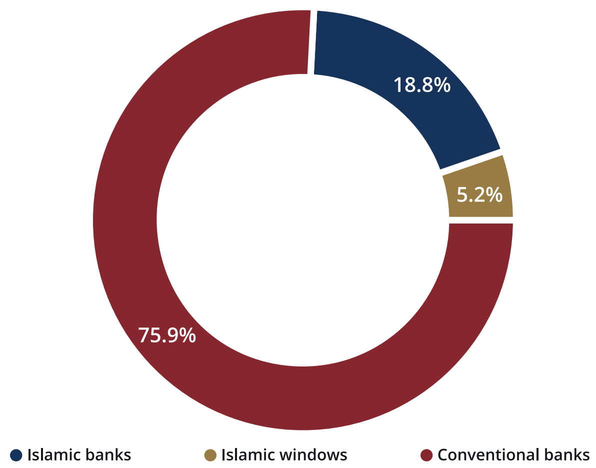
The UAE Banking System Profitability	Year-on-Year
Net Interest Income	-14.1%
Other Operating Income	-15.5%
Total Operating Income	-14.4%
Total Operating Expenses	-7.3%
Net Impairment Charges	65.3%
Net Profit	-55.1%

Source: CBUAE

BOX: ISLAMIC FINANCE SECTOR

The UAE has a well-established Islamic financial sector, comprising fully-fledged Islamic banks, Islamic windows and Islamic finance companies with total assets size of AED 782.0 billion. There are currently eight fully-fledged local Islamic banks and two fully-fledged foreign Islamic banks licensed to operate in the UAE. In addition, 17 conventional banks have established Islamic windows with asset size of approximately AED 166.2 billion in 2020, increasing their diversity and market outreach. Furthermore, there are 11 Islamic finance companies in the UAE accounting for around 55% (AED 17.6 billion) of the total assets of the finance companies' sector in 2020. Fully-fledged Islamic banks' assets in the UAE grew by 5.0% during 2020 accounting for about 19% of total banking system assets, while Islamic windows' assets decreased by 2.4% accounting for approximately 5% of total banking system assets. The strong growth of the fully-fledged Islamic banks in the UAE is reflected by a compounded annual growth rate over the last five years of 5.6%.

CHART 2.1.16: BREAKDOWN OF UAE ISLAMIC BANKING SECTOR ASSETS



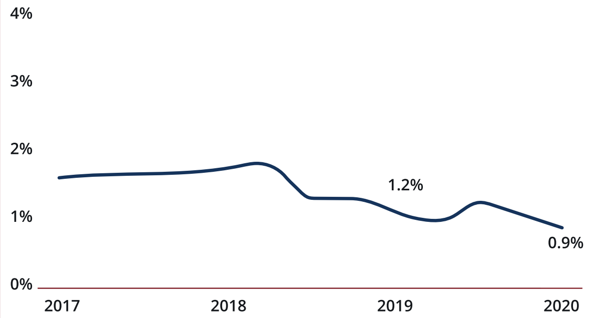
Source: CBUAE

The UAE fully-fledged Islamic banks' assets comprised mainly of financing, accounting for about 65% of the total assets followed by investments in financial assets of about 11%, while the remaining comprised of balances at the central banks, interbank financing and other assets. UAE Islamic banks' financing portfolio comprised largely of private corporate and retail financing. Financing extended to government and GREs have also gained prominence with the share to total financing increasing to 22% in 2020, while the Islamic banks' financing of SMEs have remained relatively small as a share of the overall portfolio. Retail portfolio composition is mainly in retail mortgages accounting for 42% of total retail portfolio followed by personal consumer financing at 41%. In terms of financing by economic sector, construction and real estate sector financing exposure comprised about 21% of total financing portfolio, while trade and services sectors accounted for 16%.

Islamic banks in the UAE are largely funded domestically, with resident deposits accounting for about 93% of total deposits. Deposits comprised 80% of total liabilities while capital market issuances formed about 6%. Retail deposits accounted for the highest share of total deposits at 39%, private corporates at 24% followed by deposits from Government and GREs. Although accounting for about 6% of total liabilities, sukuk issuances gained prominence during 2020, reflected by a strong capital market funding growth.

Majority of the sukuk issuances were in foreign currency representing 77%, while Dirham denominated sukuk accounted for only 23% of total issuances. The sukuk issuances in recent years have been particularly in longer-term maturities, which improves the overall funding stability. As of end of 2020, medium term (1-5 year) sukuk issuance accounted for about 46% of total portfolio while issuance of more than five-year maturity, which began in 2020 accounted for 15% of portfolio.

CHART 2.1.17: RETURN ON ASSETS OF UAE ISLAMIC BANKS



Source: CBUAE

Main drivers of Islamic banks' earnings were net profit incomes from financing activities and fees from financing-related activities, although fee-based income remained relatively small in comparison with core financing activities. Operational efficiency of Islamic banks improved over the years as the aggregate cost to income ratio improved to 35.4% in 2020 from about 40% in 2016.

COVID-19 AND IMPLICATIONS TO THE UAE ISLAMIC BANKING SECTOR

The UAE Islamic banking sector entered the COVID-19 crisis from a resilient position with adequate capital and liquidity buffers. The challenging environment nonetheless affected banks' credit risk exposures and put pressure on profitability. Nonetheless, as at end of 2020, the liquidity and capital buffers remained adequate. Capital Adequacy Ratio of the fully-fledged Islamic Banks stood at 19.9%.

During the year 2020, Islamic banks maintained funding and liquidity buffers above pre-COVID-19 levels and sustained their financing capacity. The sector was supported by the CBUAE's TESS which helped to mitigate liquidity pressures and strengthen market confidence. UAE Islamic banks played substantial role in providing relief to customers negatively affected by the COVID-19 pandemic.

During the course of the pandemic in 2020, financing growth of the UAE Islamic banks continued at 7.0% year-on-year, deposits grew by 2.1% year-on-year, while banks also tapped into capital market funding with growth rate at the end of 2020 of 6.8%. The challenging operating environment resulted in higher impairment provisions during 2020, which grew by around 11.7%. While the sector remained profitable, aggregate profitability was reduced, reflected by slight contraction in ROA (0.9%) vis-à-vis 2019 (1.2%).

2.2 DOMESTIC SYSTEMICALLY IMPORTANT BANKS

The CBUAE revised the assessment methodology for designating Domestic Systemically Important Banks (D-SIBs) during 2020. The list of banks remained unchanged as First Abu Dhabi Bank (FAB), Emirates NBD (ENBD) Abu Dhabi Commercial Bank (ADCB), and Dubai Islamic Bank (DIB) remain D-SIBs. As part of the TESS, the CBUAE released the D-SIBs buffer to mitigate the repercussions of COVID-19.

The Central Bank of the UAE annually assesses national banks at their consolidated group level and foreign banks at their UAE branch level; to designate banks whose failure could escalate to systemic risk for the UAE banking sector and eventually impact the economy. During 2020, the revised D-SIBs Assessment Methodology has been approved, reflecting international best practices.

The new assessment resulted in the designation of the same banks as D-SIBs. Additional capital requirements were set at 0.5% CET-1 for ADCB and DIB, and at 1.5% of CET-1 for FAB and ENBD.

To ensure a higher level of loss absorption capacity, banks designated as D-SIBs are subject to higher capital requirements and stricter supervisory implications such as stricter liquidity requirements, comprehensive recovery plans, additional disclosure and reporting, as well as more frequent on-site and off-site supervision.

As a response to the pandemic, the CBUAE released the D-SIBs buffer. Starting from 15 March 2020, banks were allowed to use 100% of their DSIB buffer as part of the TESS.

TABLE: 2.2.1 D-SIB BUFFER

Bucket	Additional CET-1	Bank
Bucket 1	0.5%	ADCB, DIB
Bucket 2	1.0%	
Bucket 3	1.5%	FAB, ENBD
Bucket 4	2.0%	
Bucket 5	2.5%	

D-SIBS ASSESSMENT METHODOLOGY

Criteria	Weight	Indicators[26]
Size	30%	Bank's share of total exposure[27]
Interconnectedness	25%	Bank's share of interbank domestic assets Bank's share of interbank domestic liabilities
Substitutability	25%	Bank's share of the value of resident private sector deposits Bank's share of the value of private sector loans Bank's share of the value of payment settlements
Complexity	10%	Banks' share of total banks derivatives at net notional amount Bank's share of holdings of traded and available for sale securities Bank's share of Market Risk-Weighted Assets
Concentration	10%	Bank's share of its top borrower Bank's share of assets abroad

In addition to the quantitative scoring methodology, an additional qualitative measure, Supervisory Overlay, gives the CBUAE the flexibility to use supervisory judgment in the designation. It allows the use of both additional quantitative variables and qualitative factors at the discretion of the CBUAE (example: Total Assets as a percentage of GDP and mergers and acquisitions activity).

[26] *The score of each indicator is weighted equally across each criterion to arrive at the total score.*
[27] *Consolidated for UAE national banks.*

2.3 REGULATORY STRESS TESTING IN THE UAE

The 2020 bottom-up stress test was postponed to 2021 to ease the operational burden of the UAE banks. Instead, the CBUAE conducted frequent top-down solvency and liquidity stress tests by using a number of hypothetical adverse scenarios at different stages of the COVID-19 crisis. Under the latest solvency stress test, several scenarios with different severity of initial impact and paths of recovery were considered. The banking system's average Common Equity Tier-1 ratio fell by 243 bps from 14% to a trough of 11.6% in 2021 under the hypothetical adverse scenario. In the liquidity stress tests, the banking system's liquidity ratios continued to remain above the regulatory requirements despite of hypothetical severe market wide liquidity shocks. Overall, the suite of top-down stress tests indicated that the UAE banking system has solid capital and liquidity buffers to withstand the significant hypothetical shocks.

REGULATORY STRESS TESTING AMID COVID-19 PANDEMIC

At the beginning of 2020, the outbreak of COVID-19 pandemic started to have tremendous impact not only on public health but also on the global and the UAE economy. The UAE banks had strong capital and liquidity positions before entering the pandemic and remained resilient to withstand severe shocks. As a part of the COVID-19 relief package from the CBUAE, it was decided to postpone the bottom-up stress test until 2021[28]. The decision was taken to provide operational relief to participating banks to allow them to focus on their core operations.

TOP-DOWN STRESS TESTS IN 2020

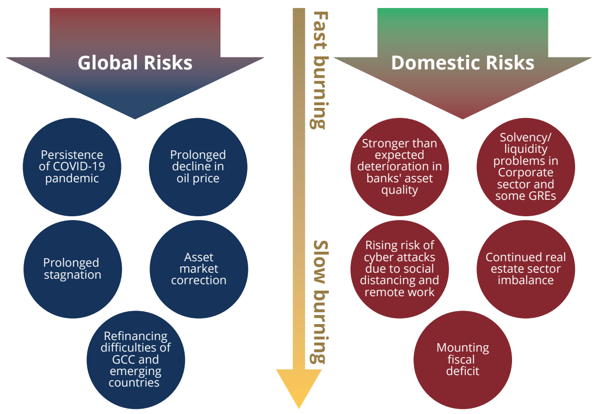
The CBUAE stress testing framework provides a comprehensive assessment of potential vulnerabilities of the banking sector in a forward-looking manner. In responding to the COVID-19 crisis, the CBUAE closely evaluated the impact of adverse shocks to the economy on banks' capital and liquidity adequacy through frequent top-down stress tests. The following highlights the various stress tests conducted by CBUAE internally:

- Semi-annual comprehensive solvency stress tests;
- Quarterly sensitivity solvency stress tests;
- Monthly liquidity stress tests

RISK AND SCENARIOS

The most significant systemic risk in 2020 was the severe global recession due to the COVID-19 pandemic. To address this risk in stress tests, hypothetical macroeconomic scenarios were built around alternative assumptions on the severity and duration of the pandemic. Due to the substantial uncertainty, the scenarios considered the consensus GDP forecast and the second wave of COVID-19 outbreak, implying a considerably delayed recovery.

CHART 2.3.1: KEY RISK TO UAE ECONOMY



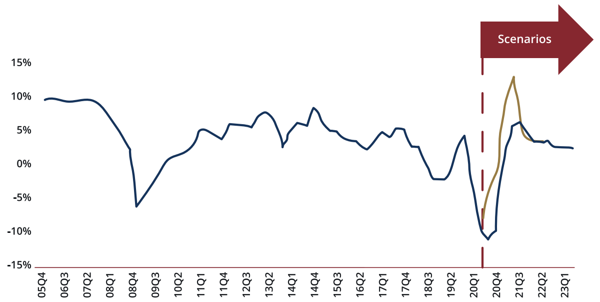
Source: CBUAE

In addition, the hypothetical adverse scenarios also included shocks relevant for the UAE economy, such as concurrent global recession, persistent decline in oil price, solvency and liquidity pressures in corporate and GRE sector, slump in equity market, and repricing in real estate sector.[29]

The latest adverse scenario used for the stress test conducted in Q3 2020 implied 8.8% decline in non-oil real GDP in 2020 and oil price below USD40 until the end of 2021.

[28] *Bottom-up stress tests are sometimes called bank-run stress tests where a bank conducts a stress test using its own models.*
[29] *Scenarios consist of scenario narrative and variable paths. Scenario narrative summarises shocks and associated propagation channels. Variable paths include quarterly scenario projections over three-year forecast horizon for 12 main macroeconomic variables covering key sectors of the economy.*

CHART 2.3.2: REAL NON-OIL GDP PROJECTIONS (YEAR-ON-YEAR,%)



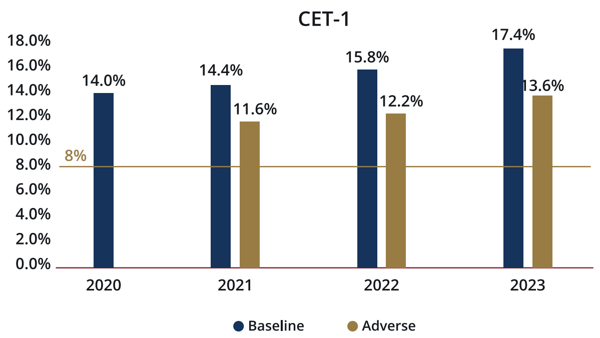
Source: CBUAE

TOP-DOWN SOLVENCY STRESS TEST

Solvency stress tests combine impacts of the baseline and adverse scenarios on banks' balance sheets and income statements, focusing on projected capital adequacy. Credit risk parameters and provisions of different portfolios and key elements of financial statement (such as net interest income, non-interest income, risk-weighted assets, etc.) are connected with macroeconomic drivers using econometric models.

In the latest top-down solvency stress test, banks remained adequately capitalised with the average CET-1 ratio above 14.4% under the baseline scenario. Average banking system CET-1 ratio fell by 243 bps from 14.0% to a trough of 11.6% in 2021 under the adverse scenario[30].

CHART 2.3.3: CET-1 CAPITAL PROJECTIONS Q2 2020

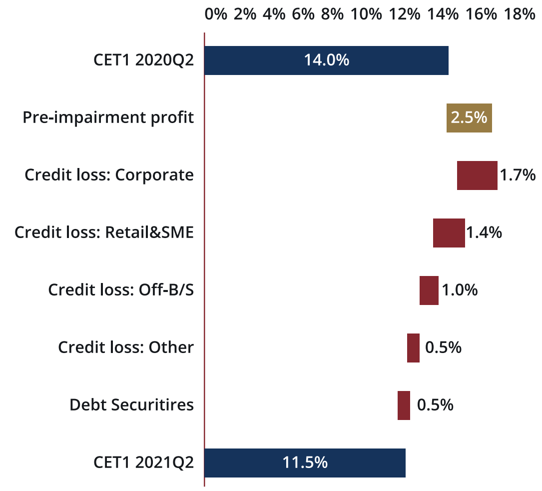


Source: CBUAE

The stress test modelled a sizable increase in default rates across corporates, SMEs, and individuals which contributed most to the decrease of capital. Overall, the top-down stress tests showed that the UAE banking sector could withstand significant shocks and maintain the capital level above the minimum requirement, despite stressed starting position and rather severe adverse scenario.

[30] *The current minimum CET-1 ratio requirement is at 8%*

CHART 2.3.4: DECOMPOSITION OF CET-1 RATIO DECLINE Q2 2020

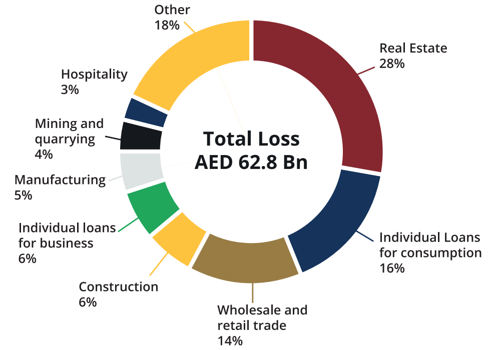


SENSITIVITY STRESS TEST

The CBUAE conducted quarterly sensitivity stress tests based on its analysis of the most vulnerable economic sectors under the COVID-19 pandemic. Sensitivity stress tests apply stress directly to banks' sector-specific credit risk parameters and key elements of financial statements based on historical simulations and expert inputs. Projections are generated based on historical profit and loss distributions.

Based on international evidence and UAE data analysis, hospitality, wholesale and retail trade, transport and storage, and construction sectors were identified as the most vulnerable. Under the most severe assumptions, 50% additional stress was applied to the risk parameters of the worst historical values for the vulnerable sectors. The results showed that significant share of credit risk losses was attributed to the vulnerable sectors hypothetical adverse scenario.

CHART 2.3.5: CREDIT RISK LOSS IN SEVERELY ADVERSE SCENARIO Q4 2020



Source: CBUAE

The sensitivity stress test showed a similar impact on the banking sector as the comprehensive solvency stress tests. The UAE banks would incur significant credit losses under the hypothetical adverse scenario from the vulnerable sectors. However, the banking sector, in aggregate, would be able to meet the minimum capital requirement.

LIQUIDITY STRESS TEST

The UAE banking system continued to have adequate levels of liquid assets and a stable deposit base during the year. Strong liquidity buffers enabled banks to accommodate drawdowns when businesses relied heavily on banks' funding as the COVID-19 shock hit. In response to the stress situation arising from the pandemic, CBUAE took action to maintain financial stability through the TESS. It provided the banks liquidity at a scale which was necessary and effective in supporting market functioning.

The CBUAE uses liquidity stress tests to assess the resilience of the banking sector to liquidity shocks. The methodology was developed based on the Basel III liquidity coverage ratio standard to monitor banks' liquidity position over a longer stress period (i.e. up to 60 days). It covers idiosyncratic and market-wide liquidity risk by incorporating additional risks such as funding concentration and non-resident funding risk in the UAE.

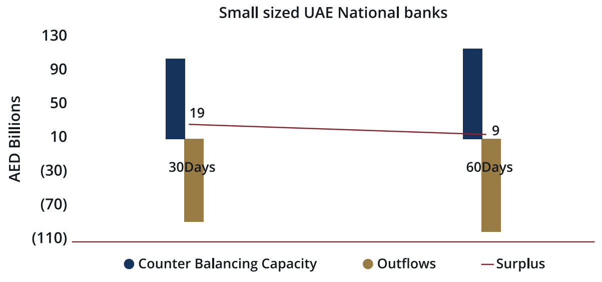
Deposit withdrawals from large depositors or non-resident customers could also result in significant liquidity stress in the market or on individual banks. To manage these risks, liquidity stress test applied higher outflow rates on deposits where funding concentration was high or have non-resident depositors as funding source.

The stress tests were performed monthly as one of the heightened risk monitoring measures taken by the CBUAE to ensure that liquidity risks could be detected early and promptly addressed. The results also helped the CBUAE to review liquidity position of the banks and decide on supervisory actions.

The latest liquidity stress testing results showed that banking system has the capacity to withstand sudden shifts in deposit base without encountering liquidity challenges. However, some banks relying on wholesale funding and having higher depositor concentration would be more vulnerable under stress conditions.

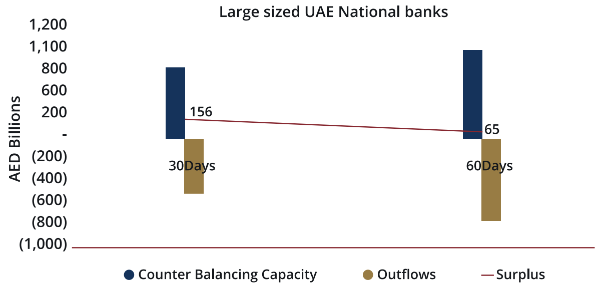
In the stress test, banks' liquidity ratios remained above the regulatory requirements. The survival day stress test showed that the UAE banking sector as a whole could withstand 30 days and 60 days stress (i.e. banks have sufficient high quality liquid assets and inflows from other assets to cover short term liabilities outflows).

CHART 2.3.6: SURVIVAL DAYS – SMALL BANKS



Source: CBUAE

CHART 2.3.7: SURVIVAL DAYS – LARGE BANKS



Source: CBUAE

Stress Test Review and Policy Actions

The CBUAE continues to use stress tests for both macroprudential and micro-prudential supervision. In micro-prudential supervision, the banking supervision department would incorporate the identified risks from a stress test in its examination and decide what supervisory actions are required for a given bank if the stress test indicates a capital shortfall. The banking supervision department also incorporated stress testing results in its dividend approval process. Banks faring poorly in a stress test would incur negative decision against the banks' dividend plan.

In macroprudential supervision, stress testing results serve as a valuable tool to assess banking system vulnerabilities in a forward-looking manner and informs the calibration of the counter-cyclical capital buffer and the use of other macroprudential instruments.

Overall, the suite of top-down stress testing results showed that the UAE banking system has adequate capital and liquidity buffers to withstand sizeable shocks like those observed in 2020.

BOX: CLIMATE CHANGE RISK AND FINANCIAL STABILITY IN THE UAE

As the global economy emerges from the COVID-19 pandemic, climate change risk has climbed high on global policymakers' agenda. The potential disruption of business activities and financial implications from climate change risk could prompt profound structural adjustment to the global economy. In this regard, the financial sector is not immune to climate risks. International research showed that climate risk could potentially trigger disorderly price adjustments, climate-related bankruptcies, as well as changing consumer preferences, policies, and technologies.[31]

Potential risks to financial stability are typically classified as physical and transition risks. Physical risks pertain to the potential financial losses resulting from extreme climate events, which could entail direct damage to corporates' assets and indirect impacts from supply chain disruption. Transition risks relate to the process of adjusting to a low-carbon economy, which would involve significant policy, legal and technology changes.

POLICY INITIATION BY BANKING REGULATORS

International and regional banking supervisory bodies have taken concrete steps towards financial stability risk assessment on climate change risks. For example, the Basel committee on Banking Supervision recently established a high-level Task Force on Climate-related Financial Risks (TFCR). The TFCR is responsible for enhancing global financial stability by undertaking initiatives on climate-related financial risks[32]. The Financial Stability Board initiated activities related to risk reporting and disclosure under the Task Force on Climate-related Financial Disclosures. In addition, central banks and financial supervisors established a Network for Greening the Financial System (NGFS), which has placed a significant effort to support the transition to a low-carbon economy and manage climate change risk. On the regional front, the European Central Bank (ECB) has issued a guidance on supervisory expectations relating to the management and disclosure of climate-related risks. ECB Banking Supervision has also requested banks to conduct a climate risk self-assessment and draw up action plans ahead of a bank-level climate stress test in 2022.

THE UAE'S AGENDA

To address the challenges from climate risk, the UAE has adopted a green strategy to steer towards a more sustainable and circular economy. Under the leadership of the UAE government, a national green growth framework, the "UAE Green Agenda 2030" was adopted a few years ago[33]. In addition, the UAE has committed to setting a target of 50% clean energy in its total energy mix by 2050 and reducing the carbon footprint of power generation by 70% in line with the UAE Energy Strategy 2050.[34]

Under the overarching national green strategy, the CBUAE along with other UAE authorities, issued the "Guiding Principles on Sustainable Finance", in January 2020. The guiding principles will catalyse the implementation of the UAE's sustainability agenda by setting up a roadmap for UAE financial entities to develop strategies incorporating sustainable practices in their business activities, decision-making, and risk management. Although these principles are voluntary and represent the first stage of the authorities' joint work, UAE banks are encouraged to incorporate these principles in their risk management framework to ensure a gradual and smooth transition towards the national and international green strategies.

THE CBUAE'S CLIMATE RISK AWARENESS SURVEY

Financial institutions might face both transition and physical risks from the ongoing impact of climate change. Therefore, it is important for UAE banks to consider integrating climate change risk into their lending and operational processes for identifying, assessing and managing both physical and transitional risks. Against this backdrop, the CBUAE has initiated a stocktaking survey on climate risk to increase climate change risk awareness. In addition, the CBUAE is planning to incorporate risk assessment of climate change in its strategic plan to develop climate risk monitoring, scenario planning and stress testing.

[31] *See for example Network for Greening the Financial System (NGFS) 2019: "A Call for Action, Climate Change as a Source of Financial Risk"*
[32] *See for example BCBS 2021: "Climate-related risk drivers and their transmission channels".*
[33] *Please refer to the UAE Green Agenda Programs (2015-2030) for details.*
[34] *Please refer to UAE Energy Strategy 2050*

2.4 OVERVIEW OF REGULATORY DEVELOPMENTS

In 2020, the CBUAE significantly progressed its work in strengthening the regulatory framework across all areas under its remit. The CBUAE's regulatory framework is designed around five key pillars: (i) Risk Management, (ii) Basel Capital and Liquidity Framework (iii) Controls and Compliance, (iv) Resolution Framework and (v) Market Development. Corporate governance standards and consumer protection principles are also overarching and underpinning key elements of the framework. The CBUAE in providing banks with additional operational capacity and to effectively manage and respond to the COVID-19 repercussions, deployed temporary measures on the capital and liquidity frameworks. This is in addition to a deferred timeline of Basel III full implementation.

In 2020, there was significant focus on progressing the regulatory framework under the market development pillar. The CBUAE issued new regulations on loan-based crowdfunding, stored value facilities and developed a suite of new regulations covering large value payment systems, retail payment systems and retail payments services and card schemes. These regulations aim to allow the entry of new service providers to the UAE market and form part of a wider strategy of the CBUAE to facilitate the entry of innovative and specialised firms into the financial ecosystem, providing UAE residents with better access to a wider array of financial services that cater to their specific needs. A new regulation to support enhanced access to credit for SMEs was also completed in 2020. In addition, a comprehensive consumer protection regulatory framework was developed and the CBUAE progressed its efforts on new regulatory standards in relation to Islamic finance.

Under the controls and compliance pillar, regulations covering major acquisitions and transfer of significant shareholding were issued along with an update of the dormant account's regulation.

The regulatory development work also encompassed the enhancement of the CBUAE capital and liquidity regulatory framework. Several new capital standards were issued in 2020, to complete the Basel capital adequacy standardised approach for banks operating in the UAE.

Under the resolution framework pillar, the CBUAE established its regulatory policy to support financial stability within the UAE financial sector. The regulations are expected to be adopted in 2021.

In 2020, the CBUAE also continued the development of the regulatory framework for Islamic finance for financial institutions. The CBUAE issued the Shari'ah Governance for Islamic financial institutions and a standard for institutions housing an Islamic window. Work was also completed on new risk management and liquidity standards for Islamic financial institutions.

TABLE 2.4.1 : SUMMARY OF REGULATORY INITIATIVES BY THE CBUAE

Areas	Description
Major Acquisitions	The regulation establishes what constitutes a major acquisition and introduces related requirements for banks in terms of the governance surrounding these. For major acquisitions, banks are required to seek prior CBUAE approval, while for acquisitions of a certain size that fall below the major acquisition thresholds, they will need to notify the CBUAE.
Transfer of Significant Shareholding	The regulation seeks to provide a control framework around banks' significant shareholders. The transfer of significant shareholding requires banks to maintain a register with details of all shareholders and requires them to notify the CBUAE whenever a person obtains a shareholding above a certain threshold. Shareholdings above a higher threshold require prior CBUAE approval.
Loan-Based Crowdfunding	The loan-based crowdfunding regulation establishes a framework for licensing, regulating, and monitoring loan-based crowdfunding activities. The regulation introduces two categories of licenses, depending on the projected lending volume.
Consumer Protection	In 2020, the CBUAE completed the new framework for consumer protection, including multiple rounds of consultation with the industry on the envisioned regulation and standards. The regulation sets forth a number of principles to be followed by licensed financial institutions to ensure the protection of consumers' interest. The standards provide more details on the CBUAE's expectations in relation to the conduct by banks when dealing with consumers.
Basel III Framework	CBUAE Basel III framework standards were issued in 2020 covering credit risk, market risk, operational risk, and the leverage ratio. Due to the COVID-19 pandemic, the CBUAE extended the phase-in period for the implementation of these remaining Basel III standards which will be implemented in a phased approach. Full implementation will be reached in Q2 2022.
Payments and Settlements Systems	The CBUAE issued a new regulation on stored value facilities in 2020 and have issued regulations on large-value payment systems, retail payment systems, and retail payment services and card schemes in early 2021. These regulations and the new licensing regimes they introduce, while having more stringent requirements in terms of governance, risk management, and cyber security, provide a level playing field for all market participants and allow the entry of new service providers previously not eligible for these licenses and the activities they permit its holder to conduct.
Islamic Finance	In 2020, the CBUAE issued the Shari'ah Governance for Islamic financial institutions and a standard for institutions housing an Islamic window. The standard addresses issues related to the governance of the Islamic window within the licensed financial institutions, the Shari'ah-compliant management of assets and liabilities, IT systems, and reporting of the Islamic window's activities. The Higher Shari'ah Authority (HSA) issued resolutions regarding Shari'ah aspects of particular practices in the market and issued high level guidance regarding Shari'ah aspects of LIBOR transition and related impact on financial services offered by Islamic financial institutions. In addition, the HSA initiated efforts to standardise the sukuk industry in the UAE. A collaborative effort with UAE Banks Federation (UBF) sukuk Committee marked the first steps toward underlining the importance of safeguarding the sukuk market from reputational risks.
Resolution Framework	In 2020, the CBUAE continued its work on the resolution framework. The Framework will cover recovery and resolution planning and early intervention measures.

BOX: MACROPRUDENTIAL POLICY FRAMEWORK

The 2020 Macroprudential Policy Framework review incorporates the latest updates in international research findings, enhancements based on the benchmarking of global best practices, and the CBUAE experience of macroprudential policy.

The UAE Macroprudential Policy Framework was approved by the CBUAE Board of Directors in 2017. The objective of the framework was to operationalise the UAE macroprudential policy that aims to strengthen the resilience and limit the build-up of systemic risks within the financial system. The framework addresses both cyclical and structural dimensions of systemic risks, serving as a manual for using macroprudential policy including Early Warning Indicator (EWI) selection and threshold levels, instrument selection and policy implementation, governance and decision making, and policy evaluation and monitoring.

In 2020, the framework was revised to reflect updates in international research findings, and benchmarking with international best practices. The update also reflects CBUAE's experience in prescribing and deploying macroprudential policy to counteract the potential build-up of systemic risk that could entail serious negative consequences for the financial system, services, and real economy. Several enhancements and operational changes were made to the framework such as updating the set of EWIs and thresholds along with a review of the D-SIBs assessment methodology.

2.5 IMPLEMENTATION OF CAPITAL AND LIQUIDITY STANDARDS IN THE UAE

CBUAE deployed a wide range of regulatory measures to provide additional capacity for banks to effectively manage and respond to the impact of the pandemic. This includes a deferred timeline for the Basel III full capital framework implementation. CBUAE adopted a gradual phased-in approach which begins from Q1 2021 to Q2 2022. In addition, the CBUAE operationalised temporary relief measures on capital and liquidity frameworks to enhance banks capacity to support the economic activity. These measures are described in table 2.5.1.

TABLE 2.5.1: CAPITAL AND LIQUIDITY REQUIREMENTS IN THE UAE

Minimum Capital Requirements	Minimum Requirements as of January 2021	Minimum Requirements under the TESS during 2021
Minimum CET-1 ratio	7.0%	7.0%
Minimum Tier-1 ratio	8.5%	8.5%
Capital Conservation Buffer (CCB)	2.5%	1.0%
Domestic Systemically Important Banks buffer	0.5%-1.5% individual capital surcharge for identified D-SIBs	0.0%
Counter-Cyclical Buffer (CCyB)	0%-2.5% CCyB for UAE exposures 0%	0%-2.5% CCyB for UAE exposures 0%
Minimum Liquidity Requirements	**Minimum Requirements as of January 2021**	**Minimum Requirements under the TESS during 2021**
Liquidity Coverage Ratio	100%	70%
Eligible Liquid Assets Ratio	10%	7%
Advances to Stable Resources Ratio	100%	110%
Net Stable Funding Ratio	100%	90%

BOX: TESS AND BASEL III FRAMEWORK:

- Under the CBUAE's TESS, eligible banks are permitted to tap into capital buffers, freeing up AED 50 billion of additional funds for banks to lend. Eligible banks can tap into the Capital Conservation Buffer up to 60%, while D-SIBs are allowed to use 100% of their D-SIB buffer until end of 2021.
- LCR/NSFR approved banks (4 of 5 are D-SIBs) may operate at 70% LCR instead of 100% and 90% NSFR instead of 100%.
- For the purpose of calculating NSFR and ASRR, the funding obtained through the CBUAE Zero Cost Funding facility under TESS programme should be treated as stable funding with a 50% factor, irrespective of maturity.
- Eligible ELAR/ASRR banks may operate at minimum 7% ELAR instead of 10% and at maximum 110% ASRR instead of 100%.
- Combined all TESS measures, capital and liquidity measures adopted by the CBUAE since 14 March 2020 total AED 256 billion.
- A new regulation was issued regarding the treatment of accounting provisions for regulatory purposes, starting from 2020 to 2024. The prudential filter adds back a certain proportion of accounting provisions to the regulatory capital of banks and finance companies.
- Issued new International Financial Reporting Standard 9 (IFRS 9) guidelines in the context of COVID-19.
- A change in the capital standards, reducing the risk-weights applicable to SMEs to 75% and 85% respectively depending on the category of SMEs and expanding the definition of SMEs to qualify a larger segment for SME treatment and capital relief.
- Postponement of Basel III implementation: The CBUAE approved a phased-in Basel III implementation in the UAE as follows:
  - Q2 2021: Credit, Market, and Operational Risk Standards
  - Q4 2021: Counterparty Credit Risk, Leverage Ratio, Securitisations, Equity Investment in Funds, Pillar 3 Standard (without credit value adjustments)
  - Q2 2022: Credit Value Adjustment and Pillar 3 (with credit value adjustments)

PART THREE

NON-BANK FINANCIAL INSTITUTIONS AND CAPITAL MARKETS

3.1 UAE INSURANCE SECTOR

The insurance sector in the UAE performed a significant role during the pandemic. Despite the impact globally, the insurance sector in the UAE overcame the consequences of the pandemic due to many reasons such as initiatives and stimulus packages addressed to the insurance sector especially to SMEs in the sector, robust infrastructure with the ability to provide services, and the implementation of contingency plans in each company in the sector. As of January 2021, the CBUAE has also become a licensing, regulatory and supervisory authority for insurance sector, through the integration with Insurance Authority.

INSURANCE SECTOR PERFORMANCE

The total assets of the insurance sector grew by 4.9% during 2020 reaching AED 118 billion. On aggregate, 62 licensed insurance companies are operating in the UAE, of which 26 are foreign companies, 24 National and 12 Takaful. The sector recorded a profit of 2.9 billion according to preliminary financial results for 2020.

TABLE 3.1.1: KEY FINANCIAL INDICATORS FOR INSURANCE COMPANIES

AED million	2019		2020	
	National	Foreign	National	Foreign
Total Assets	66,484	46,075	71,797	46,253
Total Investments	33,648	35,315	34,485	35,495
Paid up Capital	7,722	0	7,739	0
Total Equity	21,436	4,997	21,611	5,696
Gross Written Premiums	29,038	14,982	29,295	13,389
Total Profit (Loss)	1,741	843	2,025	909

*Preliminary data

Source: CBUAE

TABLE 3.1.2: NUMBER OF RELATED INSURANCE PROFESSIONS

	2019	2020
Insurance Brokers	167	166
Insurance Agents	23	25
Insurance Consultants*	44	47
Loss & Damage Adjusters*	109	116
Actuaries*	59	64
Third Party Administrator	26	24
Insurance Policies Price Comparison Websites**	0	2

* Individuals and Companies
**New profession in 2020

Source: CBUAE

INITIATIVES AND STIMULUS PACKAGES FOR INSURANCE SECTOR TO COUNTER THE REPERCUSSIONS OF COVID-19

The legislation and incentive packages issued for the insurance sector since the beginning of the COVID-19 crisis have had a major impact on supporting the resilience of the insurance sector and ensuring insurance business continuity and reducing the impact on the sector.

The following actions were taken by the Insurance Authority:

I. Circulars to insurance sector on precautionary and preventive measures to maintain public safety and health of all employees and the continuity of the practice of its work technically and operationally.

II. Activating precautionary measures and recovery plan, including activating the system of "remote working", for some categories of employees in the insurance sector.

III. The stimulus package included amendments to the legislations, resolutions and regulatory circulars such as:
   - Insurance brokerage regulations that reduced the amount of the letter of guarantee by an amount of AED one million, equivalent to 33% of the previous value of the letter of guarantee. In addition, the insurance brokerage companies were given an additional period to submit their annual and interim financial statements and reports to facilitate doing business for these SMEs companies and assist them in performing their duties seamlessly during this stage.
   - The period granted to the entry into force of the new Life and Family Takaful Insurance Regulations was extended for an additional period of (six months) starting April 2020.
   - Extending the submission dates of annual reports and financial statements for the brokers business to four months from the end of the fiscal year and extending the submission period of the quarterly reports and statements to 45 days as from the end of the quarterly period.

IV. Launching of the free insurance professional training academy for the insurance sector to achieve continuous training in various areas of insurance.

V. Extending the applications submission period regarding the regulatory rules instructions for the experimental environment of financial technology "Sand Box" in the Insurance Sector, and launching the fast track on making decisions regarding the applications submitted by different companies.

VI. Performing the work remotely for the Insurance Dispute Settlement and Resolution Committees.

VII. Modification of the Motor Vehicle Insurance Tariffs System until the end of the period of COVID-19 as follows:
   - 50% insurance premium discounts for motor vehicles owned by workers in the frontlines and other categories.
   - The right to change the calculation of the premiums for new or renewed motor vehicle insurance policies by making them related to the kilometers driven "Pay-Per-Kilometer", provided that the insurance premium does not exceed the maximum specified in the tariffs for the vehicle insurance rates.
   - Virtual workshops and seminars have been organised to the insurance sector regarding "Insurance & COVID-19", which enhanced the awareness of the insurance sector.

New Insurance Legislations

In addition to the initiatives and stimulus packages for the insurance sector during the pandemic, there are new insurance legislative initiatives to enhance the development of the insurance sector:

I. New Instructions for licensing Insurance Producers

The new instruction for licensing insurance producers has been issued which has contributed to organising the "Insurance Producers" in line with their roles and duties in the insurance process.

II. Amendment of the Unified Motor Insurance Policy

Certain provisions of the Unified Motor Insurance Policy against Third-party Liability & Unified Motor Insurance Policy against Loss and Damage have been amended.

III. The Electronic Insurance Regulation

New solution supports e-insurance and smart insurance operations which includes the general provisions for approval to practice e-insurance operations and management of the websites, as well as provisions for licensing insurance policies price comparison websites (Aggregators), two websites have been licensed as a new insurance profession in 2020.

IV. IFRS 17 Financial Impact Assessment

As part of the UAE insurance sector's efforts to implement the IFRS-17 in the industry, a comprehensive report has been published on the financial impact assessment of the new IFRS-17 standard on the insurance business.

V. Amendment of the Instructions for Licensing Health Insurance Third Party Administrators (TPA)

A quarterly report shall be submitted from TPA including the company's business results, to supervise and follow-up business closely every three months.

Innovation is the foundation of sustainability in the insurance sector, therefore, the new Digital Supervision Platform (DSP) is a qualitative transfer to the next generation of supervision of the insurance business in the UAE.

3.2 FINANCE COMPANIES

The total assets of the 22 active finance companies contracted in 2020 impacted by the repercussions of the COVID-19 pandemic. Overall, finance companies' profitability and asset quality remained under pressure, although half of the active finance companies recorded a profit in the year. Furthermore, the sector remained adequately capitalised, and the overall liquid assets ratio of the sector was above the minimum requirement.

OVERVIEW OF FINANCE COMPANIES

Finance companies' total assets continued to decline in 2020, amid the repercussions of the COVID-19 pandemic. Total assets of the active finance companies in 2020 represented 1.0% of the total banking system assets, which reflects a very limitied capacity to transmit systemic risks to the UAE financial system.

Similar to the financial sector globally, the profitability and the asset quality of the finance companies sector remained under pressure in 2020. Nonetheless, overall the finance companies remained adequately capitalised, and the overall liquidity ratio of the sector was above the minimum requirements, although there were some notable differences between individual finance companies.

CBUAE issued the ***Finance Company Regulation*** in 2018 with a three-year implementation period. Considering the repercussions of the COVID-19 pandemic, the CBUAE extended the original transition period to the 30 June 2023, with overall compliance of around 70% in 2020.

ASSETS OF FINANCE COMPANIES

The total assets of the 22 active finance companies operating in the UAE declined by 15.5% and reached AED 31.6 billion.[35] Looking ahead, the challenging operating environment for finance companies, underpinned by the repercussions of the pandemic, is expected to result in further reduction of the total assets of finance companies.

Furthermore, bank-owned finance companies accounted for around 25.2% of the total assets, whereas the Islamic finance companies accounted for around 55.6 % of the total assets of the sector. All four segments recorded an asset reduction during 2020.

TABLE 3.2.1: TOTAL ASSETS OF FINANCE COMPANIES BY OWNERSHIP AND TYPE.

Active Finance Companies Segments	Number	Share of Total Assets
Ownership		
Bank-Owned	6	25.2%
Non-Bank-Owned	16	74.8%
Type		
Islamic	11	55.6%
Conventional	11	44.4%

Source: CBUAE

Loans remained the key component of finance companies' assets and accounted for 55.9% of total assets in 2020, followed by cash, placements, and investments, fixed and other assets.

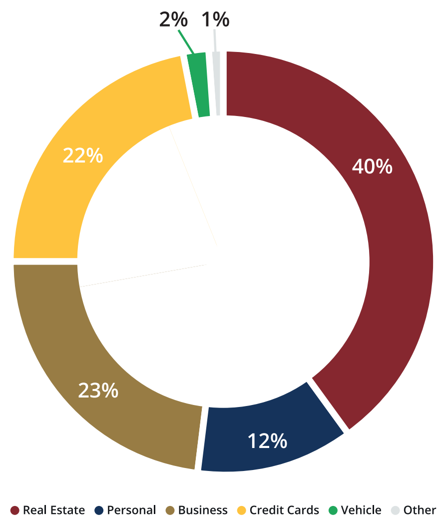
LENDING ACTIVITIES

Finance companies significantly reduced their underwriting activities during 2020, due to the repercussions of the COVID-19 pandemic. This resulted in a decline of gross loans by 22.9% to AED 17.7 billion.

The lending portfolio of the finance companies consisted mainly of real estate loans, which accounted for 39.6% of the total portfolio, followed by business loans, credit cards, and personal loans. During 2020, all these loan segments recorded a decline in lending.

[35] *Total assets of finance companies represented approximately 2% of the nominal GDP and approximately 3% of the nominal non-oil GDP.*

CHART 3.2.1: FINANCE COMPANIES LOANS PORTFOLIO



Source: CBUAE

LIABILITY AND DEPOSITS

Finance companies are prohibited, as per CBUAE regulation, from taking retail deposits. Therefore, corporate deposits, funding from banks and related parties are the main sources of funding for the finance companies. In 2020, total funding contracted by 27.8% and reached AED 12.3 billion compared to AED 17.0 billion in 2019.

LIQUIDITY

Bank-owned finance companies were eligible to access the TESS[36] ZCF through their parent banks. However, non-bank-owned finance companies did not access the TESS ZCF, which was subject to eligible collateral requirements for monetary operations with the CBUAE.

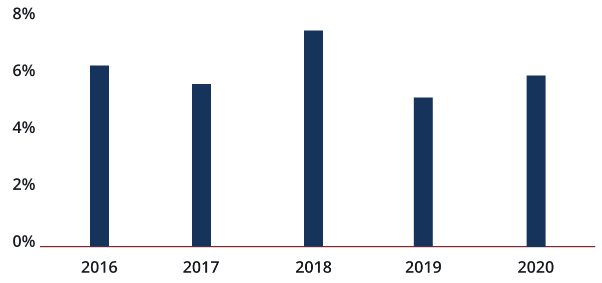
Finance companies' overall Liquid Assets Ratio (LAR),[37] improved in 2020 and reached 30.6%, which is well above the minimum regulatory requirement of 10.0%. The increase in the LAR was partly motivated by pre-cautionary liquidity preference due to the COVID-19 uncertainty and weaker demand for new financing during the year.[38]

ASSET QUALITY

The asset quality of finance companies in the UAE deteriorated in 2020, primarily due to the negative impact of the pandemic on business activity. The Net NPL ratio[39] increased to 6.1% in 2020 compared to 5.2% in 2019.

However, the Provision Coverage ratio[40] remained stable at 97.0% in 2020, as the increase in total provisions was commensurate with the increase in non-performing loans.

CHART 3.2.2: FINANCE COMPANIES NET NPL RATIO



Source: CBUAE

CAPITAL ADEQUACY

Overall, the finance companies sector remained adequately capitalised in 2020, with Capital to Total Assets ratio of 40.6%. The Capital to Total Assets ratio improved by around 5 percentage points compared the same period last year. Although aggregate Capital Funds[41] declined, the higher reduction in total assets contributed to the improvement of the capital ratio. Furthermore, bank-owned finance companies recorded a higher overall Capital to Total Assets ratio than the non-bank owned.

PROFITABILITY

The sector recorded a net loss of AED 978.6 million during the year (AED 2019: -904.2 million). Reflecting the challenging operating environment for the sector, only half of finance companies recorded profit during 2020.

The continued relatively high cost-to-income ratio of 75.2% finance companies, in addition to the higher impairment charges amid the COVID-19 pandemic, contributed to the net loss during 2020.

36 *Targeted Economic Support Scheme to contain the repercussions of the COVID-19 pandemic.*
37 *Liquid assets as defined in Art. 12.1 of the Finance Companies Regulation divided by net aggregate liabilities.*
38 *Bank-owned finance companies reported a significantly Higher Liquid Assets Ratio (128.8%) than non-bank owned institutions (18.4%).*
39 *Net NPL is defined as non-performing loans divided by gross loans, with interest in suspense and specific provision are deducted from both numerator and denominator.*
40 *General and Specific loan provisions divided by non-performing loans minus IIS.*
41 *Pursuant to Art. 11.1 of the Finance Companies Regulation aggregate capital funds consist of paid-up capital, reserves and retained earnings.*

TABLE 3.2.2: LICENSED ACTIVITIES OF FINANCE COMPANIES

Product / Service	Overview of permitted activities for licensed Finance companies	License category
Retail Finance	• Retail finance, including personal loans, credit cards and vehicle loans.	A finance company can apply for a license to conduct one or more of these licensed activities.
Mortgage Finance	• Mortgage finance, including residential mortgages and commercial mortgages.	
Wholesale Finance	• Wholesale finance, including loans to large corporate borrowers, small and medium sized enterprises, micro-financing, finance and operating leasing and wage protection scheme.	
Pre-paid Cards	• Issuance of pre-paid cards.	
Agent services	• Distribution of third-party products as an agent; provided that the finance company received approval from the relevant competent authority for the distribution of the third-party products.	

* Finance companies are prohibited to have retail customer deposits and to open deposit accounts on behalf of individuals. Further, finance companies are prohibited from conducting money-exchange business.

3.3 EXCHANGE BUSINESSES IN THE UAE

The key activities of the 88 actively operating Exchange Houses licensed by the Central Bank of the UAE are: (i) foreign currency exchange, (ii) remittance operations, and (iii) payment of wages through the Wage Protection System (WPS). The Exchange Houses sector was affected by the COVID-19 pandemic, yet remained resilient despite the negative downturn. Nevertheless, the sector is expected to recover its profitability during 2021.[44]

OVERVIEW OF EXCHANGE BUSINESSES

Exchange houses in the United Arab Emirates have an important role in the non-bank financial system infrastructure by providing foreign exchange services, remittances operations, and payment of wages through the WPS.[42]

The CBUAE supervised 88 actively operating exchange houses with total assets of approximately AED 10 billion as of December 2020. Nonetheless, the majority of the sector's operations are concentrated in a few large exchange houses.

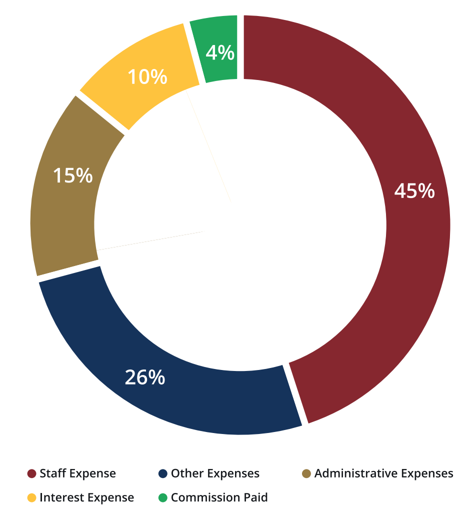
A number of 37 exchange houses have category C licenses allowing them to provide all three core products/services.[43] Category B licenses allowing foreign exchange operations and remittance operations are held by 42 exchange houses, while category A licenses, which allow only foreign exchange operations are held by nine exchange houses. Exchange houses operating in the UAE are required to comply with all applicable laws, rules, regulations, standards and notices issued by the CBUAE. Exchange houses are subject to risk-based examination by the CBUAE. In ensuring strict compliance with applicable rules and regulations, the CBUAE revoked licenses of three exchange houses and imposed fines on additional two exchange houses during 2020.

PRODUCTS AND SERVICES OF EXCHANGE HOUSES

The three key activities of exchange businesses are foreign currency exchange, remittance operations, and payment of wages through the WPS. During 2020, remittance operations accounted for 72% of core income of exchange businesses, foreign currency exchange represented 17% of core income, and administration of wages through the WPS accounted for 9%. Other special products and services accounted for the remaining 2% of core income.

In terms of operating expenses, most of the cost of exchange houses was attributed to staff expenses at 45%, with the remainder was attributed to business expenses including commissions and interest, and administrative expenses such as rent and utilities.

CHART 3.3.1: EXPENSES OF EXCHANGE BUSINESSES



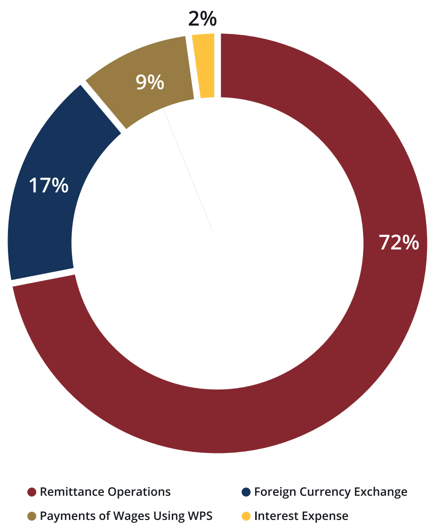
Source: CBUAE

During 2020, core income of exchange businesses operating in the UAE declined by 31.2%. The core operations were negatively affected by the challenging business environment during the COVID-19 pandemic, particularly travel restrictions and slowdown in business activity. The decline in core income was most notable in foreign currency exchange income, which declined to less than half compared to the previous year.

Total expenses of exchange houses, during 2020 also declined by 7.1%, as the segment optimised its cost structure through staff and administrative expenses. Nonetheless, the overall exchange houses sector recorded a net loss in of AED 185 million in 2020, due to the significant reduction in core income during the COVID-19 pandemic, compared to a profit of AED 665 million in the previous year.[44]

[42] *The Exchange Houses also provide these financial services to underbanked clients and thereby enhance financial inclusion.*
[43] *For more details on licensed activities of Exchange Houses please see table 3.2.1*
[44] *During 2020, one of the largest exchange house operating in the UAE was undergoing restructuring, which also negatively affected the performance of the segment during 2020. The restructuring of the exchange house was overseen and under enhanced supervision by the CBUAE.*

CHART 3.3.2: CORE INCOME OF EXCHANGE



Source: CBUAE

Some exchange houses operating in the UAE closed branches in various locations, while others restricted working hours due to the COVID-19 measures. Due to restrictions imposed by the pandemic, customers' preferences shifted toward digital channels. Consequently, a major trend in the remittance industry in 2020 was an efficient adoption of digital channels to conduct remittance operations.

Through the expected economic recovery and easing of travel restrictions, the exchange business segment has the potential to improve its profitability during 2021. Exchange business is underscored by the UAE's status as the second-largest global market for outbound remittances after the US,[45] which highlights the vital role of exchange businesses in the country's non-bank financial infrastructure.

REMITTANCES OPERATIONS

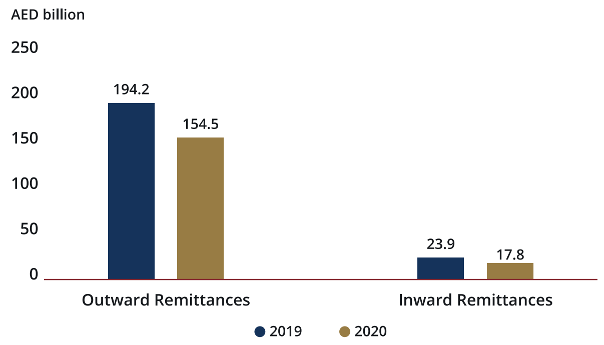
The total amount of outward remittances through exchange houses, during 2020 represented AED 154.5 billion comprising personal remittances (AED 113 billion), trade (AED 29.9 billion), investment (AED 1.15 billion) and other purpose (AED 10.3 billion). The top five destinations for outward remittances were India (34%), Pakistan (15%), Philippines (7%), Egypt (6%) and the USA (5%). During 2020, the outward remittances through exchange houses declined by 20% amid the repercussions of the global pandemic.

The overall inward remittance through exchange houses in the UAE accounted for AED 17.7 billion comprising personal remittances (AED 5.8 billion), trade (AED 8.6 billion), investments (AED 1.3 billion) and other purposes (AED 2.1 billion). The top countries for inward remittances were Oman (16%), Kuwait (13%), Yemen (13%), Iraq (7%) and Jordan (6%). Total inward remittances recorded by the exchange business sector experienced a decline by 26% compared to the previous year.

CAPITAL AND LIQUIDITY OF EXCHANGE BUSINESSES

Total assets recorded by the exchange business sector represented AED 10 billion in 2020. Overall, the exchange business sector had an adequate capital position of AED 2.5 billion, which represented approximately 25% of total assets.

CHART 3.3.3: REMITTANCE



Source: CBUAE

The required minimum paid up capital for exchange houses based on CBUAE regulation is AED 50 million for entities incorporated as limited liability companies and for exchange houses operating as sole proprietorships or partnerships, the minimum paid-up capital ranges between AED 2 million to 10 million. The CBUAE requires exchange houses to maintain adequate liquidity. According to the CBUAE regulations, current assets of exchange houses must represent at least 1.2 times the current liabilities.

[45] *Oxford Business Group, Al Fardan Exchange (2020): COVID-19 Response Report.*

TABLE 3.3.3: LICENSED ACTIVITIES OF EXCHANGE BUSINESSES

Product / Service	Overview of actions permitted by a Licensed entity	License category A	B	C
Foreign Currency Exchange	• Buy/sell foreign currencies and traveler's cheques. • Open hedge accounts with a regulated financial institution inside or outside UAE as part of mitigating the risk of exchange rate fluctuations.	✓	✓	✓
Remittance Operation	• Execute remittance transactions in local/foreign currencies on behalf of its customers. • Enter into necessary arrangements with banks, licensed financial institutions or money service providers to execute remittances.		✓	✓
Payment of Wages using WPS	• Execute wage payments through the WPS on behalf of legal entities that operate in the UAE. • Issue payroll cards for employees of its clients, which shall not be reloaded with any value or money other than the salary/wage per the WPS.			✓
Special Products or Services	• The Licensed entities must obtain a No Objection letter from the CBUAE if they intend to sell/offer any products/ services. • Import/export foreign currencies banknotes from/to entities subject to obtaining a Letter of No Objection from the CBUAE.		✓*	✓*

* Subject to No Objection Letter from the CBUAE.

BOX: Hawala Providers in the UAE

Hawala that are known as informal money transfer networks outside of the formal financial sector, were first recognised in the UAE through the Abu Dhabi Declaration on Hawala in 2002, particularly for persons who may not have access to the formal financial sector.

The CBUAE issued the Registered Hawala Providers Regulation in 2019, which is in compliance with the Financial Action Task Force recommendations to license or register money and value transfer services. The regulation introduced a mandatory registration framework for Hawala providers and confers additional compliance obligations. The framework reflects the CBUAE's continuous efforts to safeguard the UAE financial system.

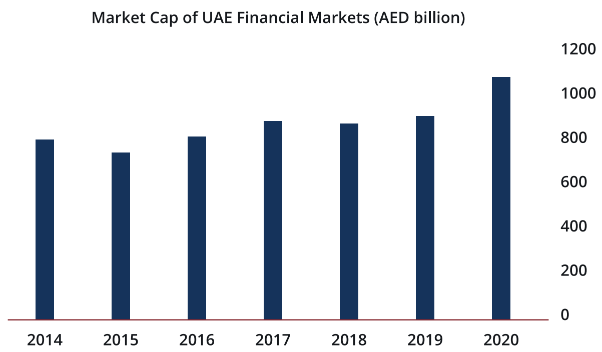
The mandatory registration process introduced by the CBUAE formally recognises registered Hawala providers to operate alongside other formal channels of remittances, including exchange houses. The CBUAE issued certificates to six registered Hawala providers as of Q1 2021. Hawala providers are subject to pre-registration inspections as well as ongoing risk-based examinations by the CBUAE to ensure compliance with regulatory obligations.

3.4 UAE CAPITAL MARKET

(Contributed by the Securities and Commodities Authority)

The Securities and Commodities Authority (SCA) is responsible for monitoring and regulating the UAE's financial markets including the DFM and the ADX. SCA has set-up a legislative framework necessary for the development of UAE capital markets to safeguard the rights of financial market investors with best corporate governance practices. During the COVID-19 pandemic, the SCA has introduced effective measures to enhance the investors' confidence in the market. The total market capitalisation of the Abu Dhabi and Dubai Stock markets combined reached AED 1,082.7 billion, an increase of 19% from 2019.

CHART 3.4.1: MARKET CAP OF UAE FINANCIAL MARKETS



Source: SCA

OVERVIEW OF THE UAE STOCK MARKETS DURING 2020

The year 2020 was a year of upheavals as the outbreak of COVID-19 pandemic affected all economies and business activities. The speed at which the pandemic spread resulted in complete lockdowns and border controls in most of the countries around the world.

The ADX and the DFM experienced a turbulent 2020. As COVID-19 resulted in lockdowns in the UAE and economic sectors such as hospitality, tourism, transport, airlines and retail were the most affected. This had a negative impact on the stock markets, resulting in a decrease in market indices by 0.6% and 9.9% for ADX and DFM respectively. Foreign investors' investment in ADX has declined whereby total net foreign investments has recorded an outflow of AED 2.1 billion, whereas DFM recorded AED 0.7 billion of inflows during 2020 compared to AED 2.9 billion in 2019.

TABLE 3.4.1: PERFORMANCE OF THE ADX

Abu Dhabi Securities Exchange (ADX)	2020	2019	Change %
Index (point)	5045.31	5,075.8	-0.6%
Traded value (AED billion)	72.8	56.8	28.1%
Traded volume (Billion shares)	21.8	15.5	40.6%
Trades	513,080	387,693	32.3%
Market Cap (AED billion)	742.6	531.1	39.8%
Net Foreign Investment (AED billion)	(2.1)	9.7	-
Net Institutional investors (AED billion)	2.9	9.8	-70.4%

Source: SCA

TABLE 3.4.2: PERFORMANCE OF THE DFM

Dubai Financial Market (DFM)	2020	2019	Change %
Index (point)	2,492.0	2,764.9	-9.9%
Traded value (AED billion)	65.6	53.1	23.6%
Traded volume (Billion shares)	65.5	40.0	63.5%
Trades	977,526	656,674	48.9%
Market Cap (AED billion)	340.1	374.3	-9.1%
Net Foreign Investment (AED billion)	0.7	2.8	-76.6%
Net Institutional investors (AED billion)	(1.0)	1.3	-

Source: SCA

REVIEW AND ANALYSIS OF RISKS DURING 2020

Performance of financial markets

The COVID-19 pandemic resulted in a similar fallout as the aftermath of the global financial crisis more than a decade ago, with a slowdown in major drivers of growth. Despite the sharp declines in March and April experienced by most of the stock markets around the world, many stock markets succeeded to rebound by the end of the year 2020. The MSCI World Index, which tracks stocks across the developed world, gained 16.5% in 2020.

The economic sectors such as hospitality, tourism, transport, airlines and retail have been hit hard due to lockdowns in the UAE. The general market sentiment remains cautious as the likelihood of governance and control issues along with higher financial impairments in listed companies remain in the news during 2020.

The SCA has developed different scenarios for potential impact of future developments and how to deal with them given different market situations. These scenarios have been converted into initiatives that SCA can undertake considering the challenges ahead. A number of scenarios with internal and external challenges have been identified.

The SCA has published several warnings to the public about unlicensed providers of financial products and services, as well as referred serious violations to the competent judicial authorities, which resulted in increased deterrence and reduced number of violations.

In the context of the SCA's efforts to create an attractive investment climate by reducing the number of violations in the financial markets, the SCA has intensified its inspections on the licensed entities and analysis of listed companies' financials to ensure conformity with the regulatory requirements to reduce violations.

Additionally, the SCA also started publishing the names of the violators on the SCA website.

OPPORTUNITIES AND CHALLENGES

The emergence of new and innovative financial products and services such as Blockchain/ Distributed Ledger Technology, AI and Tokenised Assets Ledger represent both opportunities and challenges for regulators in terms of keeping pace with these new developments, assessing the impact on the industry and markets, and providing conducive regulatory regime for the development of such services. The SCA is focused to support development and promotion of innovative financial products and services for individuals and institutions to help them reduce costs and raise efficiency.

However, such technological innovations are not free of risks, the most important of which are regulatory and legal risks due to the uncertainty in the classification, licensing and control of such companies and services, the difficulty of monitoring cross-border transactions, the operational risks of enterprises adopting such technologies the risks of cyber security, data privacy and protection.

New unregulated products and services continue to emerge in the markets and are promoted by unlicensed companies through the Internet, which pose a challenge to all regulators to protect investors and maintain the integrity in financial. One of the most important challenges is that many of these products use sophisticated models and require continuous training and upgrading of competencies and knowledge of the regulatory bodies and its employees, especially in the field of oversight.

REVIEW OF RECENT REGULATORY DEVELOPMENTS AND OTHER INITIATIVES DURING 2020

The SCA has taken several measures to mitigate the impact of the COVID-19 pandemic on financial markets, including:

- Amending the limit down[46] on stock prices, where stocks would have a limit down cap of 5% as of March 18, 2020 until further notice. The markets had the flexibility to increase the limit to 7% for a number of selected stocks based on criteria determined by the markets and approved by SCA.
- A mechanism to facilitate share buybacks for listed companies that aims to promote investor and support the stability of financial markets. Accordingly, a company shall not buyback its own shares till certain period after the disclosure of its financial statements or any other material information that may affect the share price, driving it upwards or downwards.
- Extension of the disclosure period for filing 2019 annual financial statements and the postponement of the disclosure of the interim financial statements, ending March 31, 2020.
- Extending the deadline for joint-stock companies to convene their annual general meeting to June 30, 2020 to avoid risks that may result from failure to hold their general meeting within the legally specified period, scheduled to expire on April 30, 2020.

UAE Financial authorities including SCA have jointly published the UAE's first set of guiding principles on sustainable finance. These guiding principles will serve as a gateway to the increased implementation and integration of sustainable practices among the UAE's financial entities and will secure the UAE's goal towards a more sustainable and circular economy.

The SCA issued number of new regulations in 2020:

Decision No. (03/Chairman) of 2020 approving the guide to the governance of public joint-stock companies.

Decision No. (05/Chairman) of 2020 concerning the fit and proper criteria.

Decision No. (04/Chairman) of 2020 amending the Decision No. (157/Chairman) of 2005 concerning the regulations on listing and trading commodities and commodity contracts.

An amendment to the Decision No. (20/Chairman) of 2018 on issuing and offering Islamic securities. The aim of these amendments is to improve the legislative system and implement the highest standards in issuing and offering Islamic securities to ensure their compliance with the Shariah.

Decision No. (23/Chairman) of 2020 paving way for regulation of the crypto asset activities in the securities and commodities markets.

An amendment to the Decision No. (11/R.M) of 2016 on the regulations for issuing and offering shares of public joint stock companies. The aim of these amendments is to allow free zone companies to issue and list their shares on the local markets.

The SCA also adopted an initiative to introduce standardised disclosure forms for the use of listed companies. The initiative aims to raise the efficiency and transparency of disclosures to make sure that no material information is left out and that no major discrepancies exist between the disclosures made by companies listed on the UAE stock markets.

With the support and approval of SCA, DFM launched the UAE Index for Environment, Social and Governance (ESG), as the first index of its kind from the financial markets in the UAE and the region, aiming to measure listed companies embracing ESG best practices. The Index was developed in cooperation with S&P Dow Jones Indices.

The SCA's decision to allocate a separate trading screen for companies suspended from trading entered into force early July 2020. These companies will be placed on the watch list to assess the extent of their compliance with the listing and disclosure requirements. Companies placed on the list must take the necessary actions to regularise their status and comply with the disclosure requirements.

The SCA implemented the shareholders' proxy mechanism at general meetings of shareholders. The mechanism aims primarily to safeguard the rights of minority shareholders and to help them communicate their views and voice their suggestions on corporate activity and financial performance.

The SCA coordinated with all regulatory authorities in the UAE for regulating of crowdfunding activity and jurisdictional oversight requirements. Accordingly, SCA has drawn up regulations for equity-based crowdfunding and the draft regulation has been submitted for approval by the cabinet.

[46] *Limit Down mechanism is intended to prevent trades from occurring outside a specified price bands.*

PART FOUR

PAYMENT AND SETTLEMENT SYSTEMS, FINTECH AND CYBER RISK

4.1 UAE PAYMENT AND SETTLEMENT SYSTEMS

In 2020, the CBUAE payment systems remained resilient and continued to operate smoothly without major disruption. A total of 155 million transactions amounting to AED 4.5 trillion were processed and settled through the CBUAE payment systems. A significant increase in the volume of transactions processed by the instant payment instruction system offering real-time instant domestic fund transfers has been witnessed. Moreover, and as expected within the context of the COVID-19 pandemic, digital payment instruments have been widely used while paper-cheque transactions and ATM cash withdrawals have declined.

PROMOTING CROSS-BORDER PAYMENTS

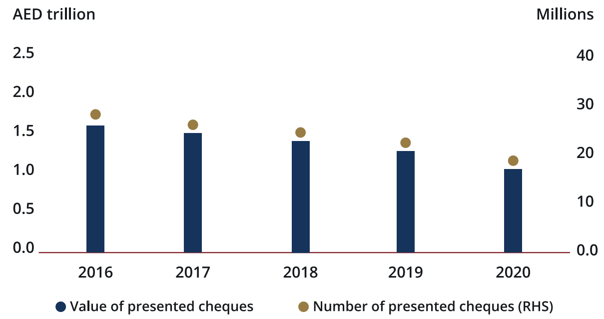
CBUAE and the Saudi Central Bank during 2020 completed a joint proof-of-concept project on wholesale Central Bank Digital Currency (CBDC). The project, called “Aber”, was successfully tested in early 2020 based on the distributed ledger technology. This project allowed participating banks in the UAE and Saudi Arabia to make domestic and cross-border CBDC transfers in real time on a 24 x 7 basis. A detailed joint study report was issued in 2020. Also, the CBUAE continued to play a key role in facilitating the hosting in the UAE of the regional institution in charge of operating the Arab Regional Payment System (ARPS), “BUNA” which constitutes a centralised multicurrency platform to enhance opportunities for financial integration and support economic and investment ties with the trading partners in Arab countries. In 2020, a hosting agreement was signed, and the United Arab Emirates Dirham has been included as the first settlement currency made available in BUNA. On December 28, 2020, the BUNA platform went live with the 1st live transaction between its participants. Similarly, CBUAE, being a key stakeholder in the Gulf Cooperation Council Real Time Gross Settlement implementation project aiming at facilitating real-time processing and settlement of cross-border payments among GCC countries, has worked actively to ensure the successful execution of the project. With the support of CBUAE, the multi-currency platform was officially launched in December 2020.

FINANCIAL MARKET INFRASTRUCTURE

On the infrastructural level, CBUAE has embarked upon a critical journey focused on the modernisation of financial market infrastructure in the UAE through the national payments systems strategy initiative. The key objectives are to develop best-in-class financial market infrastructure, provide innovative payment solutions that enhance security and customer experience, drive financial inclusion, and enable cashless transactions.

In terms of volume and value of the UAE payment systems in 2020, Image Cheque Clearing System (ICCS) processed 22.3 million cheques worth AED 1.0 Trillion (-17% and -18% compared to last year respectively).

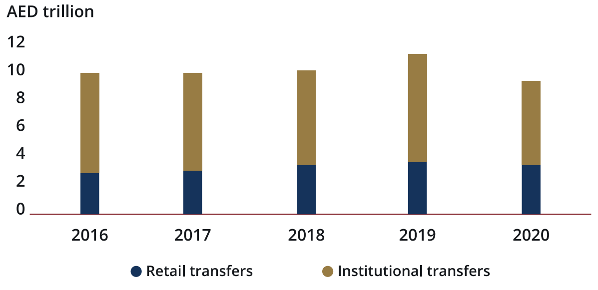
CHART 4.1.1 PRESENTED CHEQUES THROUGH ICCS



Source: CBUAE

UAE Funds Transfer System (FTS) counted 51 million transactions worth of AED 3.4 Trillion for retail transfers (+8.1% and -3.3% respectively compared to last year), while for institutional transfers performance amounted to 459,000 transfers worth of AED 5.7 Trillion (-3.9% and -23% respectively compared to last year).

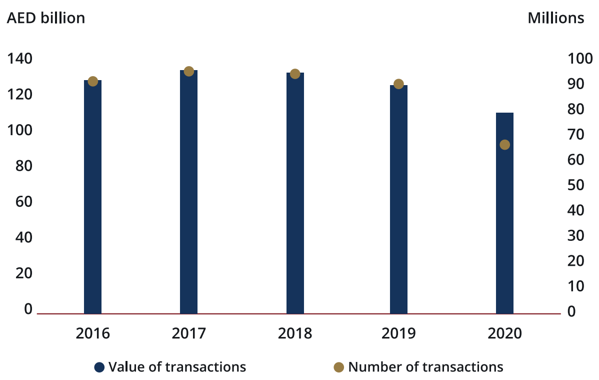
CHART 4.1.2 VALUE OF TRANSACTIONS THROUGH FTS SYSTEM



Source: CBUAE

On UAE Switch, volume and value of transaction slightly decreased to 66 million transactions worth AED 108.5 billion compared to 89 million and AED 126.6 billion last year.

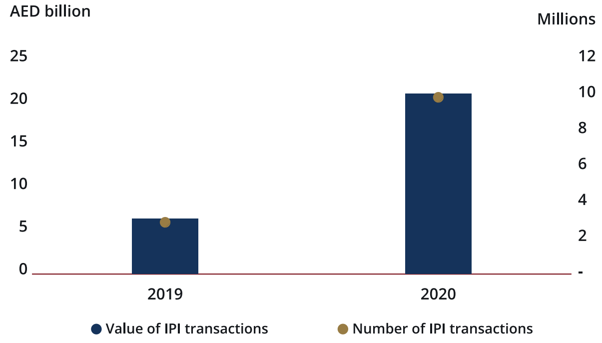
CHART 4.1.3 UAE SWTICH: VALUE AND NUMBER OF TRANSACTIONS



Source: CBUAE

The number of transactions on Instant Payment Instruction (IPI) increased noticeably to 9.5 million transactions amounting to AED 21 billion in 2020, compared to 2.4 million transactions amounting to AED 6.0 billion in 2019.

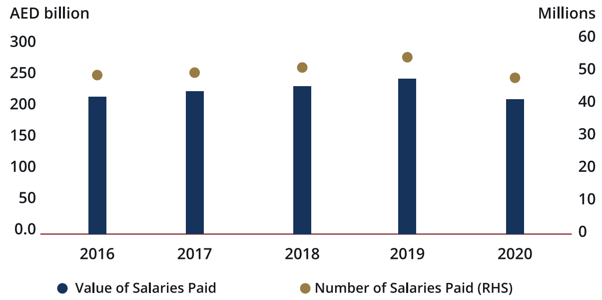
CHART 4.1.4 IPI: VALUE AND NUMBER OF TRANSACTIONS



Source: CBUAE

The average number of registered employees on UAE WPS declined to 4.1 million in 2020, compared to 2019 and the number of employers registered reduced to 220 thousand in 2020 compared to 2019. Those declines resulted in fewer payments of total salaries to AED 208 billion compared to AED 240 billion in 2019.

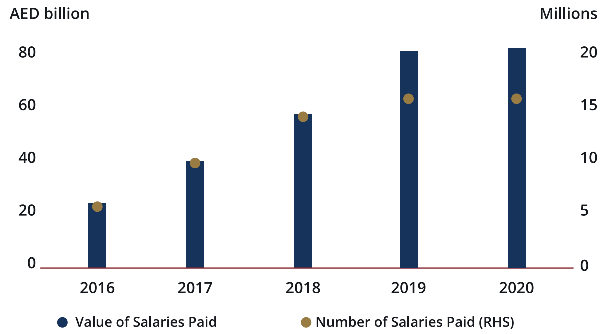
CHART 4.1.5 TRANSACTIONS THROUGH WAGE PROTECTION SYSTEM



Source: CBUAE

UAE Direct Debit System performed 15.2 million transactions worth AED 70 billion which is close to last year's volume and value.

CHART 4.1.6 PRESENTED CLAIMS THROUGH UAE DIRECT DEBT SYSTEM



Source: CBUAE

4.2 FINANCIAL TECHNOLOGY

The UAE hosts the largest Financial Technology hub in the Middle East and North Africa (MENA) region. There have been continuous developments in the FinTech sector during the last few years enabling banking services to reach out to wider population and promote financial inclusion. Since the onset of the COVID-19 pandemic, the FinTech industry has seen higher growth in digital banking, payments, remittances and ecommerce as new initiatives were rolled out by the banks and other service providers.

FINANCIAL TECHNOLOGY

FinTech is "technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services."[47]

Technology-enabled innovations in financial services have evolved rapidly in the past few years. Consumer preference with regard to convenience, speed of delivery and cost of financial services are key driving factors behind adoption of the FinTech globally. As the global economy gradually recovers from the COVID-19 pandemic, use of new technology is imperative to move forward. Businesses begin to adapt to the post COVID-19 environment as digital payment systems and services are a cost-effective way to facilitate digital financial activities and transactions in an economy. In the UAE, the FinTech sector experienced rapid growth during last few years and the ecosystem has shown resilience during the pandemic. The UAE has established itself as the largest FinTech hub for startups in the MENA region as it continued its digital transformation and the adoption of innovative technology in financial services.

FINTECH – OPPORTUNITIES & BENEFITS

FinTech offers huge potential benefits for all businesses, especially in transforming traditional institutions such as banks and finance companies by improving the way their services are offered. In the UAE, FinTech has showed a positive impact in driving the country's economic growth. Some of the key benefits that FinTech offers are below.

FINANCIAL INCLUSION

FinTech improves the ability of the financial services providers to reach out to large population especially to the consumer segment that was previously unbanked. Improved technological infrastructure and reduced service cost also enables financial institutions to reach out to lower-income segments of the population.

ENHANCED CUSTOMER EXPERIENCE

FinTech has changed the customer experience and expectations for all financial institutions. Innovations in Artificial Intelligence (AI), machine learning, and big data are allowing for a more personalised and customised experience for customers.

INCREASE IN CHOICES AND TRANSPARENCY

FinTech has broadened access to financial products by increasing transparency by providing customers with information on choices and range of available investment options.

ENHANCING SECURITY AND COMPLIANCE

FinTech has allowed companies to implement advanced security solutions and enhance regulatory compliance through increased connectivity, data security and streamlining their processes.

[47] *Magnitt - MENA Venture Investment Report 2020*

FINANCIAL STABILITY IMPLICATIONS

The growth of Fintech brings a number of benefits to all participants in the FinTech ecosystem, but at the same time, a thriving FinTech industry also has the potential to disrupt the financial system. Some of the possible risks to financial stability from FinTech include:

I. Expansion of BigTech[48] firms in financial services: such developments have generally been more rapid and broad-based in recent years and bring the following potential risks to financial stability in many jurisdictions, including issues arising from, but not limited to:
   - The scale and concentration of BigTech activities in financial services – too big to fail in some cases;
   - Heavy reliance by financial institutions on BigTech for providing internet search and services, software applications, online retail, telecoms, and infrastructure provisions (e.g. data centre, telecommunications networks, cloud computing, AI, big data analytics, etc.);
   - BigTech provision of credit to the financial market, being data driven lender rather than relationship driven it might see sharper contraction of credit during a downturn than for financial institutions; and
   - Competitive threat to traditional financial institution. BigTech firms can provide several payment services at a lower cost than traditional banks impacting their profitability.

II. Access to financial market infrastructures: many jurisdictions have allowed FinTech firms in accessing and participating in their critical financial market infrastructures such as large-value and retail payment systems. Obviously, any cyber, security and operational issues arising from these participants, which may not have the same level of security and controls as the incumbents, may cause significant disruptions to the systematically important financial market infrastructures as well as the financial system as a whole.

III. Governance and risk management: rapid growth of the FinTech market increases pressure on the incumbents to respond with speed which may lead to a departure from robust decision-making processes at the expense of safety, soundness and sound risk-management.

IV. Legal / regulatory arbitrage risks: in some jurisdictions certain FinTech activities may not be covered by existing regulations or laws and an unlevel playing field may occur. These could lead to concerns about consumer protection, data privacy, and data misuse.

V. Unstable credit: Some FinTech providers deliver credit in a simplified, larger and faster scale to the market as well as unbanked consumer population. While there may be an increase in credit inflows into the economy, the credit itself could be unstable and thus threaten the overall financial stability.

VI. Blackbox risk: The increasing use of AI, big data analytics, machine learning and modeling heighten the Blackbox risk because these models become too complex for reviewing, reasoning and assessments by regulatory authorities.

ROLES OF REGULATORY AUTHORITIES

The experiences of many jurisdictions demonstrate the positive role of regulatory authorities and official-sector policies can play in supporting innovation in financial services, and more importantly, mitigating risks of the fast developments of FinTech. These experiences also highlight the importance of applying the principle of "same risk – same regulation" with respect to FinTech firms' activities, whilst tailoring regulatory frameworks to reflect the materiality and scope of FinTech firms' activities. Regulatory authorities should continue to apply these basic principles to FinTech activities.

[48] *Big Tech is the largest and most dominant companies in the information technology industry, such as Amazon and Google.*

4.3 CYBER RISK

Accelerated transactional digitalisation and connectivity in the financial system amplify the vulnerability of key financial market infrastructure and central banks to attacks on digital technologies, potentially escalating to the point of affecting financial stability. Attempts and attacks have become more frequent and sophisticated, prompting ever-larger concerns over financial and information security with consequent investments in people and technologies focused on managing cyber risk. The CBUAE has been working on key pillars to enhance cyber resilience of the UAE banking system and of the central bank itself, which include: (1) CBUAE cybersecurity governance framework, (2) CBUAE risk management framework, (3) operational excellence, (4) learning and development, (5) process development.

INTRODUCTION

Whilst the financial sector has long been the focus of cyberattacks, new social distancing norms and lockdown measures increase society's reliance on digital financial services, making crime through digital platforms more attractive. Cybersecurity defenses and associated costs have also been on the rise to counter increased sophistication of cyber criminals and available hacking tools, in the context of greater interconnectedness and complexity of financial system.

A successful attack on a financial institution potentially allows access to an entire network enabling cybercriminals to defraud UAE society and gain access to confidential information. Cyberattacks on a systemically important financial institution or core payment systems could disrupt proper functioning of financial markets and risk severe contraction in economic activity through contagion, loss of confidence, in the system, loss of business reputational damage, tumbling investor and consumer confidence, with consequent liquidity shortages, and social disorder.

Timing and targets of cyberattacks are unpredictable, making strengthening cyber resilience of the central bank and the financial system a key priority. The CBUAE is concentrating on improving cybersecurity risk management, promoting investment in human capital and systems, and pursuing closer coordination with related UAE Government ministries and authorities.

Capacity to respond and recover from the cybersecurity incidents is a critical element of the CBUAE cybersecurity strategy. The CBUAE activity in these areas may be summarised across the following pillars:

PILLAR 1 - CBUAE CYBERSECURITY GOVERNANCE

CBUAE has worked on identifying all the laws and regulations contingent on a durable governance structure including Payment Card Industry Data Security Standard (PCI-DSS), ISO27001, Principles for Financial Market Infrastructure (PFMI), guidance from the Basel Committee and UAE Federal regulations on information assurance. The CBUAE obtained ISO 27001 certification in early 2021.

Pillar 2 – CBUAE Risk Management

CBUAE operates a maturity-based cybersecurity framework, integrated into its corporate Enterprise Risk Management framework and taxonomy, with a well-defined appetite and quantified cyber risk parameters. Cyber risk in the UAE continuously features on the agenda of CBUAE Board and Management risk committees.

The CBUAE regularly conducts security vulnerability assessments through simulated attacks on internal- and external-facing systems, including payment systems to identify and resolve any evident weakness.

PILLAR 3 – OPERATIONAL EXCELLENCE

Operational excellence is maintained by integrating cybersecurity teams in all internal systems projects and throughout the procurement life cycle. The CBUAE has adopted advanced technologies in managing its cyber risks by using the capabilities of big data from different systems to identify inherent systemic risks.

PILLAR 4 – LEARNING AND DEVELOPMENT

Continuous focus on staff awareness of cyber risk and sensitivity training is a key strategy to mitigate internal vulnerabilities through online cybersecurity awareness sessions for all staff. UAE banks are also encouraged to pursue aggressive awareness strategies.

Cybersecurity exercises and simulations are essential to not only identify systems vulnerabilities (cyber mapping) but also properly calibrate response and recovery strategies. Recent cybersecurity table-top and simulation exercises were conducted in collaboration with the UAE Banks Federation. Participating banks were exposed to real-time scenarios to assess and apply sector-level crisis management strategies. The objective of these exercises is to (1) gauge the ability to protect critical assets, (2) assess the incident response capability of technical and management teams, (3) understand the impact of a security breach, (4) discover weaknesses that can hamper remediation efforts while responding to cyber incidents, (5) build "muscle memory" across organisations to respond to future cyberattacks.

PILLAR 5 – PROCESS DEVELOPMENT

As part of continuous development to enhance its key technical measures and processes, the CBUAE monitors third-party vendors' cybersecurity capacities using cybersecurity score services to identify and monitor compliance with CBUAE policies and procedure. The CBUAE reaches out to the banking industry by conducting regular briefings on the latest cyber risk incidents and tactics.

The CBUAE also worked with different stakeholders to launch the first information-sharing solution to support the financial and banking community for sharing specific cybersecurity threats related to banks in the region.

The CBUAE requires all banks to meet the UAE Information Assurance Standards as a minimum, and specifically requires all licensed financial institutions in the UAE to raise the minimum level of information assurance and to raise the standards of surveillance and security controls' resilience under prevalent circumstances requiring remote working (Notice No:1599/2020).

ANNEX

KEY INDICATORS FOR UAE BANKING SYSTEM

	2017	2018	2019	2020
Capital Adequacy				
CET-1 capital to RWA ratio	14.6%	14.3%	14.7%	14.8%
Tier 1 capital to RWA ratio	16.6%	16.2%	16.4%	17.0%
Total capital to RWA ratio	18.1%	17.5%	17.6%	18.1%
Profitability				
ROA	1.5%	1.5%	1.6%	0.7%
Cost-to-income ratio	39.1%	35.9%	33.9%	37.0%
Liquidity and Funding				
Eligible Liquid Asset Ratio	18.3%	17.5%	18.2%	18.4%
Advances to Stable Resources	84.5%	82.3%	92.5%	78.0%
Lending Indicators				
Loan-to-deposit	97.1%	94.3%	92.5%	94.5%
Loan-to-deposit in foreign currency	69.0%	64.3%	66.6%	72.9%
Asset Quality				
Net NPL ratio	1.8%	1.8%	2.4%	3.5%
Specific provision coverage ratio	68.1%	70.0%	62.4%	58.6%
Total Provision coverage ratio	107.0%	104.7%	97.5%	86.1%

KEY INDICATORS FOR NATIONAL BANKS

	2017	2018	2019	2020
Capital Adequacy				
CET-1 capital to RWA ratio	14.0%	13.7%	14.0%	14.2%
Tier 1 capital to RWA ratio	16.6%	16.2%	16.0%	16.6%
Total capital to RWA ratio	18.1%	17.5%	17.2%	17.8%
Profitability				
ROA	1.5%	1.5%	1.5%	0.8%
Cost-to-income ratio	39.1%	35.9%	31.2%	33.8%
Liquidity and Funding				
Eligible Liquid Asset Ratio	18.3%	17.5%	16.6%	16.9%
Advances to Stable Resources	84.5%	82.3%	82.6%	80.0%
Lending Indicators				
Loan-to-deposit	97.1%	94.3%	93.3%	96.7%
Loan-to-deposit in foreign currency	69.0%	64.3%	61.7%	70.6%
Asset Quality				
Net NPL ratio	1.6%	1.6%	2.4%	3.4%
Specific provision coverage ratio	69.7%	70.1%	59.6%	55.0%
Total Provision coverage ratio	107.0%	104.7%	97.0%	85.9%

KEY INDICATORS FOR ISLAMIC BANKS

	2017	2018	2019	2020
Capital Adequacy				
CET-1 capital to RWA ratio	11.4%	12.7%	13.4%	14.6%
Tier 1 capital to RWA ratio	15.3%	16.2%	16.5%	18.9%
Total capital to RWA ratio	16.4%	17.3%	17.6%	20.1%
Profitability				
ROA	1.7%	1.8%	1.8%	0.9%
Cost-to-income ratio	37.9%	37.5%	35.4%	35.3%
Liquidity and Funding				
Eligible Liquid Asset Ratio	20.0%	19.6%	19.7%	19.6%
Advances to Stable Resources	83.1%	81.6%	80.7%	82.0%
Lending Indicators				
Loan-to-deposit	92.2%	93.0%	86.5%	95.5%
Loan-to-deposit in foreign currency	88.9%	82.5%	79.2%	107.5%
Asset Quality				
Net NPL ratio	2.0%	1.7%	2.0%	3.4%
Specific provision coverage ratio	66.5%	65.6%	59.7%	52.5%
Total Provision coverage ratio	100.1%	105.9%	97.8%	74.1%

ACRONYMS AND ABBREVIATIONS

LIST OF ABBREVIATIONS

ADCB	Abu Dhabi Commercial Bank
ADX	Abu Dhabi Securities Exchange
AED	United Arab Emirates Dirham
AI	Artificial Intelligence
ARPS	Arab Regional Payment System
ASRR	Advances to Stable Resources Ratio
Bps	Basis Points
CAR	Capital Adequacy Ratio
CBDC	Central Bank Digital Currency
CBUAE	Central Bank of the UAE
CCB	Capital Conservation Buffer
CCyB	Counter-Cyclical Buffer
CDS	Credit Default Swaps
CET-1	Common Equity Tier-1
COVID-19	Coronavirus Disease 2019
CRWA	Credit Risk Weighted Assets
DFM	Dubai Financial Market
DIB	Dubai Islamic Bank
DLD	Dubai Land Department
DSGE	Dynamic Stochastic General Equilibrium
D-SIBs	Domestic Systemically Important Banks
DSTI	Debt-Service-to-Income ratio
EBIT	Earnings Before Interest and Tax
ECB	European Central Bank
ELAR	Eligible Liquid Asset Ratio
ENBD	Emirates NBD
EWI	Early Warning Indicator
FAB	First Abu Dhabi Bank
FCSA	Federal Competitiveness and Statistics Authority
FinTech	Financial Technology
FSTI	Financial Stability Trend Index
FTS	Funds Transfer System
GRE	Government Related Entity
GDP	Gross Domestic Product
GCC	Gulf Cooperation Council

LIST OF ABBREVIATIONS

HQLA	High Quality Liquid Assets
HSA	Higher Shari'ah Authority
HNIs	High Net Worth Individuals
ICCS	Image Cheque Clearing System
IFRS 9	International Financial Reporting Standard 9
IMF	International Monetary Fund
IPI	Instant Payment Instruction
LAR	Liquid Asset Ratio
LCR	Liquidity Coverage Ratio
LTD	Loan-to-Deposit Ratio
LTV	Loan-to-Value Ratio
MENA	Middle East and North Africa
MSCI	Morgan Stanley Capital International
NBFI	Non-Bank Financial Institution
NEER	Nominal Effective Exchange Rate
NGFS	Network for Greening the Financial System
NPL	Non-performing Loans
NSFR	Net Stable Funding Ratio
OASiS	Optimizing Agents Simulated Stochastic model
PCI-DSS	Payment Card Industry Data Security Standard
PE	Price to Earnings
PFMI	Principles for Financial Market Infrastructure
ROA	Return on Assets
ROE	Return on Equity
RWA	Risk Weighted Assets
SCA	Securities and Commodities Authority
SME	Small and Medium Enterprises
TESS	Targeted Economic Support Scheme
TFCR	Task Force on Climate-related Financial Risks
UBF	UAE Banks Federation
UAE	United Arab Emirates
US	United States
USD	United States Dollar
WPS	Wage Protection System
ZCF	Zero Cost Facility