



Monthly Insights

23 September 2020

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Highlights

Global macro: Developed market central banks recommitted to their ultra-loose monetary policies at their September meetings. While activity is improving, growth risks remain weighted to the downside, and the greater likelihood is for more monetary stimulus this year rather than less.

GCC macro: The normalisation of relations between the UAE and Israel opens the way for increased co-operation across a range of sectors including financial technology, food and water security, energy and transport and logistics.

MENA macro: The Moroccan central bank, the Bank al-Maghrib (BAM), opted to keep its benchmark interest rate on hold at 1.5% at its September 22 meeting, despite acknowledging that the economic outlook for the country had deteriorated. Given that the economy will only see a marked improvement once the coronavirus pandemic eases and demand is unshackled once more, we expect no further cuts from the current all-time low.

India macro: We maintain our expectation for one further rate cut in India this year, given the need to support growth. However, stubbornly high inflation has tempered our view.

Currencies: Dollar weakness remains entrenched although the pace of decline has begun to ebb. Sterling remains prone to political risks sending it lower.

Financial Markets: Benchmark bond markets have drifted sideways over the last few months as central banks have largely refrained from any new stimulus measures and investors wait for new fiscal support packages.

Commodities: Oil markets will focus on waning demand over the coming months as coronavirus cases increase.

Sector report: The UAE's food security agenda has taken on a new priority following the start of the Covid-19 crisis, given the pandemic's impact on global food supply chains.

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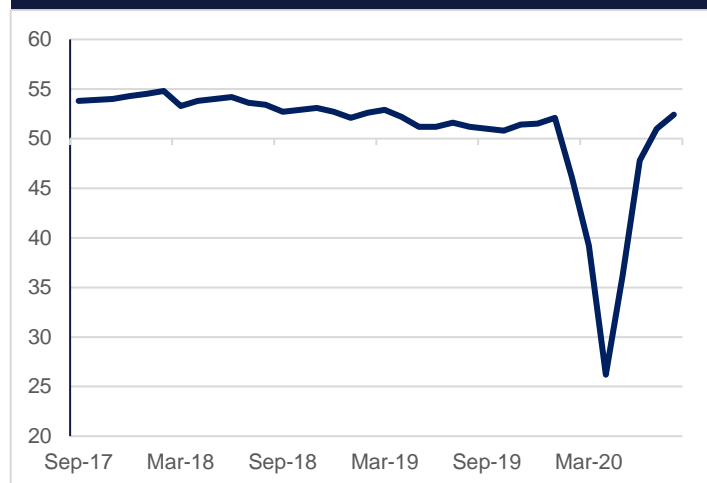
Global Macro

The major developed market central banks – the ECB, Federal Reserve, BoE and BoJ – held their monetary policy meetings over September 10 to 17. Accounting for some 55% of global GDP in their domestic markets – and even more when you take into account those economies such as those of the GCC or West Africa whose dollar/euro pegs mean they also follow US or Eurozone monetary policy – the decisions made by these institutions have tangible implications for global economics and markets. While there were no major changes to policy announced at these meetings, it is nevertheless worthwhile parsing the various statements for a sense of where policymakers feel their economies are, and the likely paths ahead.

Growth risks remain

Seven months on since the equity market slump which began on February 20 as the severity of the coronavirus pandemic began to become apparent, there has been some recovery in global economic activity. The JP Morgan Global Composite PMI survey has now recorded two consecutive months of positive 50.0-plus readings over July-August, and this has been borne out in the developed markets. While activity for the most part remains ‘well below [its level] at the beginning of the year’, according to the Fed, and an accelerating rise in cases in markets such as the UK and France poses a risk to the global recovery, governments are doing all they can to avoid blanket lockdowns. For the time being it remains unlikely that we will see such draconian limits on activity again.

Global composite PMI improving



Source: Bloomberg, Emirates NBD Research

The central bank policy makers had been pleasantly surprised by the economic trajectory over the period preceding their meetings. The BoE noted that ‘economic data have been a little stronger than the Committee expected at the time of the August report’, while Fed Chair Jerome Powell noted in the FOMC press conference that board member forecasts had been revised up since June. Christine Lagarde cited strong data points which ‘point to a strong rebound in growth in the third quarter’ in the ECB’s Q&A. Nevertheless, sizeable economic contractions in the range of -5.0% to -10.0%

remain the likely scenario this year, and the outlook remains highly uncertain as long as the virus continues to spread. The total global number of confirmed cases has now hit 30.9mn, and as the BoE noted, ‘the path of growth and inflation will depend on the evolution of the pandemic and measures taken to protect public health.’

A jobless recovery

It is not only government measures in terms of healthcare that will be a crucial determinant of the strength of the recovery, but also the provision, or lack, of further fiscal support. Jerome Powell cautioned in the press conference that there were downside risks if there was no further fiscal support forthcoming, given the end to the USD 600/week at the close of July, and the ongoing impasse in Congress with regards to any extension to this. In the UK, furlough schemes are set to end in October, and their expiration could see a significant jump in unemployment.

Global bond yields will remain low



Source: Bloomberg, Emirates NBD Research

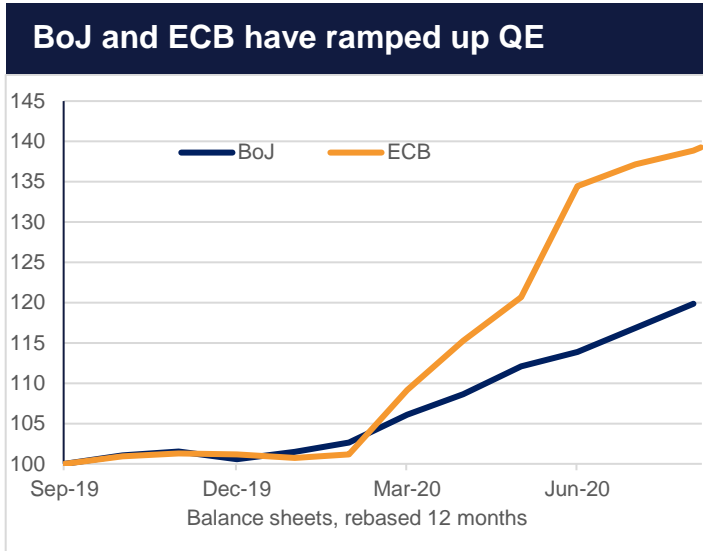
Employment will likely prove to be a major challenge over the coming months, as the recovery we have seen to now has largely been a jobless one, and as fiscal support wanes, there will be significant tail risks to consumption levels. In the US, while the headline unemployed figure is falling, the number of new claimants each week continues to exceed 1mn, and it is now more permanent jobs that are being shed. Meanwhile, indices such as the ISM manufacturing survey show that firms remain reluctant to hire. The BoE cited the ‘risk of a more persistent period of elevated unemployment’, while the Fed acknowledged that ‘It will take a while to get back to the levels of economic activity and employment that prevailed at the beginning of this year.’

Inflation outlook weak

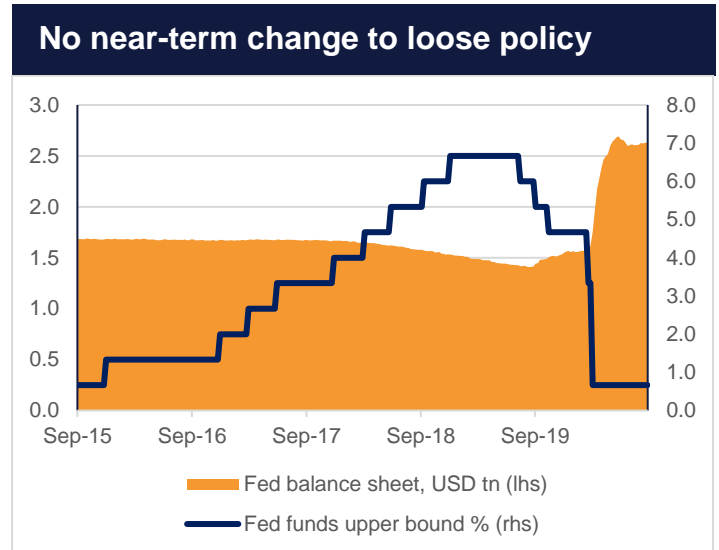
Inflation has been especially weak in recent months, as lower oil prices, diminished demand, and a range of government incentives such as VAT breaks or the UK’s ‘eat out to help out’ scheme which encouraged diners to return to restaurants through subsidising meals weighed on CPI. In the UK, price growth fell to a five-year low

of 0.2% y/y in August, while in the same month, Eurozone inflation dipped into negative territory (-0.2%) for the first time since April 2016. Price growth in Japan also turned negative again, as the CPI index fell -0.4% y/y. US inflation by contrast strengthened to 1.3% in August, but in all of these markets, inflation levels remain some distance from the professed central bank target of 2.0%, and looks set to remain so for the time being given the weak outlook for growth and employment.

banks would implement greater stimulus rather than withdrawing what is already on the table, and the possibility of the BoE adopting negative rates is a case in point. As such, the key interest rates are set to remain very low for some time to come, with the Fed Funds rate likely to remain at its current levels through to 2023 or beyond.



Source: Bloomberg, Emirates NBD Research



Source: Bloomberg, Emirates NBD Research

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Ultra-loose monetary policy here to stay

In this environment, all four of the central banks remained vocally committed to the ultra-loose monetary policy they had adopted this year, although there remain some differences in terms of strategy. Japan decided almost unanimously (8-1) to continue on its yield-curve control, for instance buying an unlimited amount (if necessary) of government bonds in order to ensure that the 10-year yields remain around 0%. While there had been speculation earlier in the year that the Fed would adopt such a strategy, this was later confounded when Powell announced instead that the bank would pursue an average inflation rate strategy, and would allow employment to accelerate before necessarily acting to dampen spirits. He elaborated on this in his post-FOMC meeting press conference, claiming that average inflation targeting would help anchor long-term inflation expectations.

Powell's greater clarification on the new policy was perhaps the most notable thing to come out of these meetings, as for the most part the central banks remained in a holding pattern, with a sense that they had done all they could for now, and that fiscal policy had to play its part. All are still committed to the asset-purchases they ramped up earlier in the year, and there was no extension to these – although they did indicate that more would be done if necessary, as per the Fed's 'at least at the current pace.' With the aforementioned challenges to the economic recovery, and the longstanding structural issues which have kept inflation low in developed markets over the past decade, the prospect of monetary policy being tightened is a remote one. The greater likelihood is that

Key Economic Forecasts – Global

US	2015	2016	2017	2018	2019	2020f	2021f
Real GDP %	2.9	1.6	2.4	2.9	2.3	-4.5	3.7
Current A/C % GDP	-2.2	-2.1	-1.9	-2.2	-2.2	-2.3	-2.5
Budget Balance % GDP	-2.6	-3.1	-3.4	-4.2	-4.7	-17.0	-10.0
CPI %	0.1	1.3	2.1	2.5	1.8	1.1	1.9
Eurozone							
Real GDP %	2.1	1.9	2.5	1.9	1.3	-8.1	5.5
Current A/C % GDP	2.8	3.3	3.2	3.1	2.7	2.4	2.6
Budget Balance % GDP	-2.0	-1.4	-0.9	-0.5	-0.6	-9.6	-5.0
CPI %	0.2	0.2	1.5	1.8	1.2	0.4	1.0
UK							
Real GDP %	2.4	1.9	1.9	1.3	1.5	-10.0	6.4
Current A/C % GDP	-4.9	-5.2	-3.5	-3.9	-4.3	-3.4	-3.7
Budget Balance % GDP	-4.5	-3.3	-2.5	-2.2	-2.1	-13.3	-7.0
CPI %	0.0	0.7	2.7	2.5	1.8	0.8	1.5
Japan							
Real GDP %	1.3	0.5	2.2	0.3	0.7	-5.6	2.5
Current A/C % GDP	3.1	4.0	4.1	3.5	3.5	2.8	3.1
Budget Balance % GDP	-3.6	-3.5	-2.9	-2.3	-2.6	-11.0	-7.5
CPI %	0.8	-0.1	0.5	1.0	0.5	0.0	0.2
China							
Real GDP %	7.0	6.8	6.9	6.7	6.1	2.1	8.0
Current A/C % GDP	2.8	1.8	1.6	0.4	1.2	1.3	0.8
Budget Balance % GDP	-3.4	-3.8	-3.7	-4.1	-4.9	-6.7	-5.8
CPI %	1.4	2.0	1.6	2.1	2.9	2.7	2.2
India*							
Real GDP %	7.4	8.0	8.3	7.0	6.1	4.2	-5.8
Current A/C % GDP	-1.1	-0.6	-1.5	-2.4	-0.9	-1.0	0.4
Budget Balance % GDP	-3.5	-3.6	-3.9	-3.6	-3.5	-4.6	-7.0
CPI %	4.9	5.0	3.3	4.0	3.7	4.8	5.1

Source: Bloomberg, Emirates NBD Research

*For India the data refers to fiscal year (April – March)

GCC Macro

UAE normalises relations with Israel

Arguably the main event in the region over the last month has been the normalization of relations between two GCC states – the UAE and Bahrain – and Israel. UAE officials have indicated that business deals worth USD 300mn to USD 550mn could be signed between the two countries, with the potential value of trade between the two nations estimated at another USD 500mn. In this piece, we look at opportunities for the UAE following the lifting of sanctions on Israel, and identify some of the sectors most likely to benefit from the new relationship.

The UAE has historically been an exporter of capital, investing its current account surpluses abroad. Domestic growth has slowed in recent years as the government has implemented fiscal adjustment: curbing spending growth and introducing new taxes such as VAT in 2018. At the same time there has been a shift in government policy to boost growth in higher value added sectors, using technology to develop financial services, medicine & healthcare, food security, defense and other areas.

attracted 5.1% of global investment in fintechs last year, around USD 1.8bn. The UAE's fintech sector is currently much smaller than Israel's but is also growing rapidly. Moreover, the UAE has capital that can be deployed to fund further growth in the sector both domestically and in Israel.

Water and agriculture

One of the areas of increased co-operation between the two countries is likely to be water and food security. The disruption to global supply chains caused by the coronavirus highlighted the UAE's reliance on imported food to meet 90% of the country's consumption.

Food security has become a greater priority in recent years and the UAE has invested in vertical farms, aquaculture and hydroponics to try and reduce its reliance on imported food. Moreover, almost all of Dubai's water supply comes from desalination plants. Israel is a global leader in developing new technologies for desalination of water and water conservation, and also in drip-irrigation and dry-land agriculture.

Energy

Clean energy is another area where both countries have made tremendous progress in recent years and where there is scope for further co-operation. The UAE aims to increase the contribution of clean energy to 50% of the total energy mix by 2050, as well as increasing the consumption efficiency of households and corporates. Israeli startups with innovative products and services in energy storage and smart grids would find a new market in the UAE.

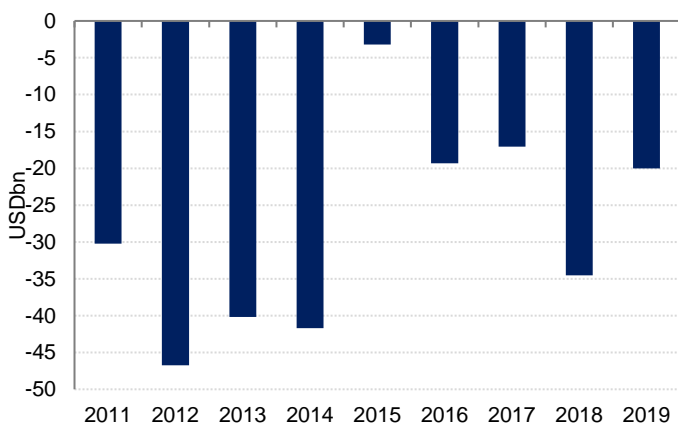
Even in the traditional energy industries, there is potential for Israel to start purchasing crude produced by the UAE, instead of importing crude from Russia and other oil producing countries.

Transport & logistics

The UAE will also benefit in other ways from the opening up of borders. The transport & logistics sector is likely to be a key beneficiary from growth in both passenger traffic and the flow of goods. Most air-travel from Israel to the wider MENA region and Asia was via Jordan and Turkey. According to website anna.aero, 70,000 passengers flew from Tel Aviv to the wider Middle East via Jordan and Turkey last year, with 13,000 of those passengers flying to Dubai. Significantly, 1.9mn people flew from Tel Aviv to East and Southern Africa, Asia and Australasia, with more than 1mn of these passengers flying indirectly. As GCC airspace has been opened for flights to and from Israel, the cost of flying and travel time between Israel and Asia, parts of Africa and Australia are likely to be much lower. UAE carriers Emirates and Etihad are well placed to capture a significant portion of this traffic.

The UAE is thus likely to benefit from increased direct travel between the two countries for both business and tourism, as well as for connections to other destinations in Asia, Australia and Africa.

UAE: financial account of the balance of payments shows net outflow of capital



Source: Haver Analytics, Emirates NBD Research

These are all areas where Israel has a competitive advantage in the region. Despite its relatively small population of around 10mn people, similar to the UAE, Israel ranks highly for innovation and technology globally. Around 20% of the benchmark Tel Aviv stock exchange index is information technology firms, with a further 13% in the healthcare field. Israel's exports are mainly high-value added goods including electrical and medical equipment, machinery and pharmaceutical products. It seems a natural fit for the UAE to invest in Israeli firms in exchange for skills and technology transfers that can then drive faster growth in the UAE's economy.

Fintech

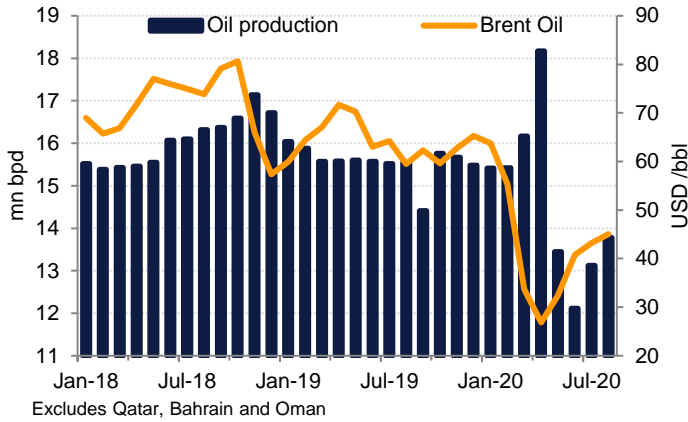
Israel is a leader in the fintech space with over 500 fintech startups in various niches including insurance, trading and investing, payments and transfers, compliance and lending. The country

This is by no means an exhaustive look at areas of potential cooperation and investment between the two countries. Some memoranda of understanding have already been signed indicating a willingness to co-operate, and it is now possible to transfer funds directly from Israel to the UAE and vice-versa via SWIFT. However it is likely to take some time for the two countries to establish a working relationship and for many of these potential benefits to be realized. Neither country has established diplomatic posts in the other yet, and direct scheduled flights may not start before next year.

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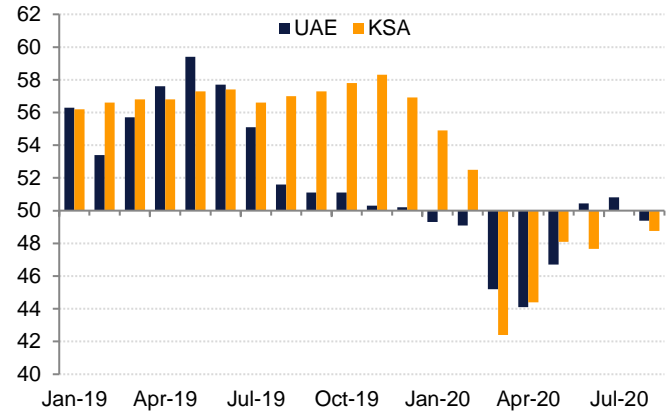
GCC in Pictures

GCC Oil Production and Oil Price



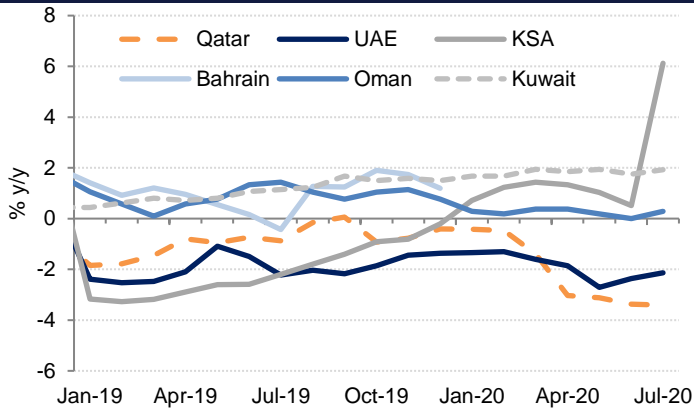
Source: Bloomberg, Emirates NBD Research

Purchasing Managers' Index



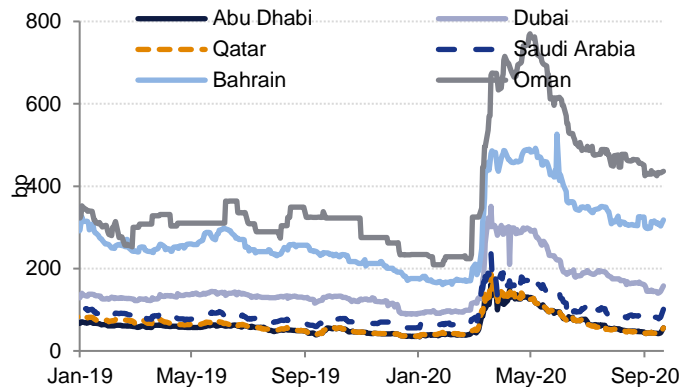
Source: IHS Markit, Emirates NBD Research

Inflation



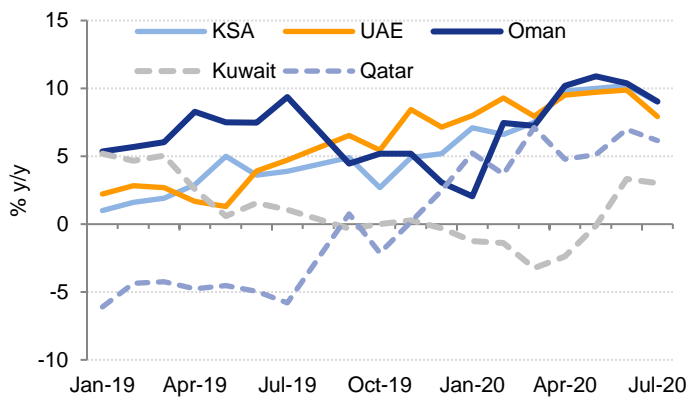
Source: Haver Analytics, Emirates NBD Research

CDS Spreads



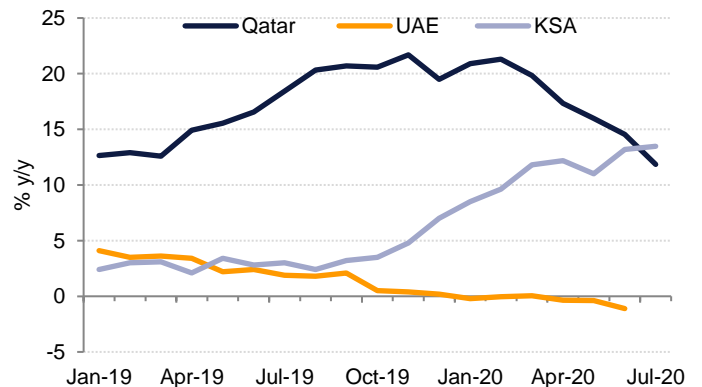
Source: Bloomberg

Money supply (ex government. deposits)



Source: Haver Analytics, Emirates NBD Research

Private sector credit*



*Qatar data is bank loan growth to private sector, not total private sector credit. Source: Haver Analytics, Emirates NBD Research

Key Economic Forecasts - GCC

United Arab Emirates	2017	2018	2019e	2020f	2021f
Nominal GDP \$bn	385.9	422.5	421.4	366.6	385.6
Real GDP %	2.4	1.2	1.7	-5.5	1.2
Current A/C % GDP	7.1	9.6	7.0	1.4	4.2
Budget Balance % GDP	-0.2	5.8	5.5	-6.8	-4.8
CPI %	2.0	3.1	-1.9	-2.0	0.0
Saudi Arabia					
Nominal GDP \$bn	688.6	786.5	793.0	693.6	748.0
Real GDP %	-0.7	2.4	0.3	-4.2	2.6
Current A/C % GDP	1.5	9.0	6.3	-3.7	-1.4
Budget Balance % GDP	-9.2	-5.9	-4.5	-13.7	-9.0
CPI %	-0.8	2.5	-1.2	1.8	2.0
Qatar					
Nominal GDP \$bn	166.9	191.4	183.5	148.1	177.5
Real GDP %	1.6	1.5	-0.2	-4.0	2.6
Current A/C % GDP	3.8	8.7	2.3	-5.1	-1.0
Budget Balance % GDP	-6.6	2.2	0.9	-10.5	-5.1
CPI %	0.4	0.3	-0.9	-1.5	1.0
Kuwait					
Nominal GDP \$bn	120.7	140.6	134.6	108.1	116.8
Real GDP %	-4.7	1.2	0.4	-6.6	2.0
Current A/C % GDP	8.0	14.1	16.4	-7.3	-1.9
Budget Balance % GDP	-8.9	-3.0	-14.9	-22.5	-15.8
CPI %	1.6	0.6	1.1	1.5	1.5
Oman					
Nominal GDP \$bn	70.5	79.2	76.0	67.2	70.7
Real GDP %	0.3	1.8	1.1	-4.4	1.4
Current A/C % GDP	-15.6	-5.5	-6.9	-18.7	-8.0
Budget Balance % GDP	-13.9	-8.7	-9.1	-15.4	-11.7
CPI %	1.6	0.9	0.1	0.0	1.0
Bahrain					
Nominal GDP \$bn	35.5	37.7	38.6	36.4	38.0
Real GDP %	4.3	1.8	1.8	-3.7	1.0
Current A/C % GDP	-4.1	-6.5	-2.1	-4.2	-1.6
Budget Balance % GDP	-10.0	-6.3	-4.8	-10.4	-7.7
CPI %	1.4	2.1	1.0	-2.0	1.0
GCC (Nominal GDP weighted avg)					
Nominal GDP \$bn	458	519	525	461	494
Real GDP %	0.2	1.9	0.7	-4.7	2.1
Current A/C % GDP	8.2	16.4	11.9	-2.6	2.7
Budget Balance % GDP	-6.8	-1.9	-2.4	-12.2	-8.1
CPI %	0.1	2.4	-0.5	1.3	1.9

Source: Haver Analytics, National sources, Emirates NBD Research

MENA Macro: Bank al-Maghrib will keep rates on hold

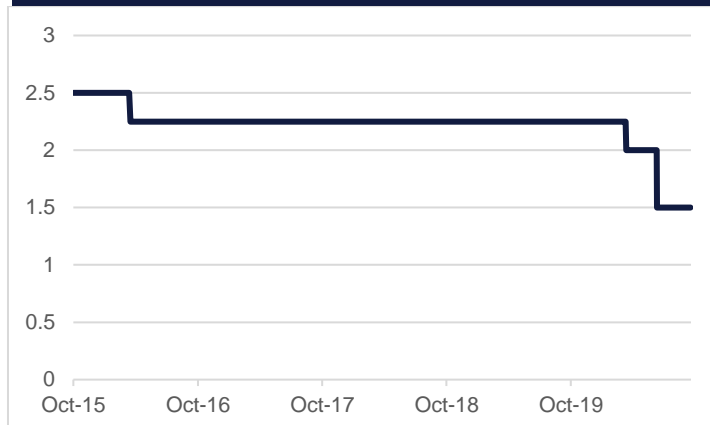
The Moroccan central bank, the Bank al-Maghrib (BAM), opted to keep its benchmark interest rate on hold at 1.5% at its September 22 meeting, despite acknowledging that the economic outlook for the country had deteriorated. Given that the economy will only see a marked improvement once the coronavirus pandemic eases and demand is unshackled once more, we expect no further cuts from the current all-time low. Equally, despite an uptick in inflation in the August print released on the same day, we do not expect any tightening of policy, and the likelihood is that rates will remain at their current levels through next year also.

Economy to contract in 2020

Morocco has been hard-hit by the coronavirus pandemic, which has not only weighed on domestic demand, but also brought the important tourism sector to a standstill. The country's economic troubles led it to draw on its pre-existing IMF Precautionary and Liquidity Line (PLL) for the first time in April, having had the instrument on standby since 2012. Morocco underwent a comparatively extended lockdown period, closing down on March 10 and only starting to ease three months later on June 10 – although with capacity restrictions in place in cafes and other hospitality outlets, and with limited lockdowns in certain cities as cases rise once more. Meanwhile, the country has remained closed for tourists to now, with flights only resuming in September for visitors from a limited number of countries. Tourism is a major employer and accounts for some 20% of GDP, so the news is welcome for the industry. However, the uptick in new cases in key visitor origin countries such as France in recent weeks is more bad news.

its previously bullish -5.2% to -6.3% seems more appropriate. Our projection currently stands at a contraction of -5.8% with risks to the downside when we come to revise our outlook when Q2 growth figures are released later this month.

Benchmark interest rate, %



Source: Haver Analytics, Emirates NBD Research

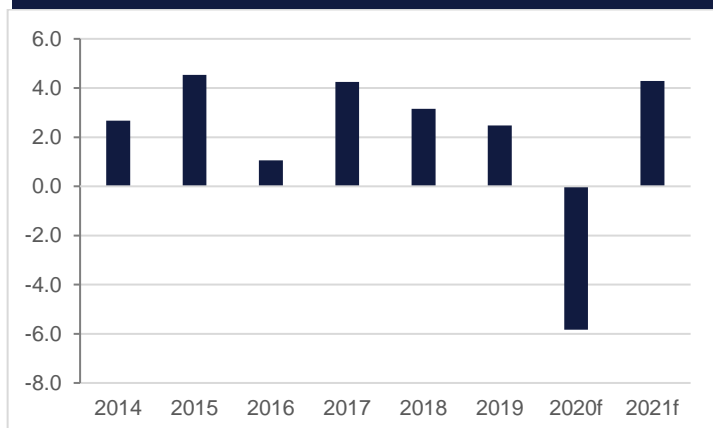
Trend inflation remains low

Despite the scale of these challenges, the fact that they are largely driven by externalities means that any further rate cuts for the time being are unlikely. The bank has already implemented two cuts of a cumulative 75 basis points since the pandemic crisis began, taking the rate to its current record low, and reduced the reserve requirement to zero. Until all restrictions are eased, tourists return, or rains improve, any further cuts are unlikely to have any material impact on improving growth.

On the other hand, we also see little chance of a rate hike in the near future, despite the acceleration in inflation recorded in August. CPI inflation hit 1.4% m/m (a nine-year high), compared to -0.3% the previous month. On an annual basis, price growth also turned positive, hitting 0.9% y/y. Food and education were the key drivers of the acceleration. However, the trend in recent years has been for far slower price growth, and this is expected to remain the case, especially given the 'weak demand pressures' noted by the BAM.

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Real GDP growth, % y/y



Source: Haver Analytics, Emirates NBD Research

Aside from the hospitality sector, sectors such as food processing have also been especially hard hit, as canneries and fruit processing plants have been affected by a number of concerted outbreaks. Meanwhile, the agricultural sector is contending with poor rains which are expected to result in a particularly meagre harvest this year – according to the BAM, four-fifths of the jobs losses which have pushed the unemployment rate up from 8.1% to 12.3% are in the industry. In this environment, the BAM's growth downgrade from

Key Economic Forecasts – Non-GCC Oil Importers

Egypt*	2017	2018	2019	2020f	2021f
Nominal GDP \$bn	225.8	241.5	291.7	342.6	372.8
Real GDP %	4.1	5.3	5.6	3.8	2.8
Current A/C % GDP	-6.4	-2.5	-3.7	-4.7	-4.1
Budget Balance % GDP	-10.8	-9.8	-8.6	-8.8	-10.6
CPI %	29.6	14.4	9.4	5.0	5.9
Jordan	332.4	225.8	241.6	299.2	368.4
Nominal GDP \$bn	40.7	42.3	43.7	43.7	46.5
Real GDP %	2.1	2.0	2.1	-3.9	2.9
Current A/C % GDP	-10.8	-7.0	-2.8	-7.3	-5.8
Budget Balance % GDP	-2.7	-2.6	-2.2	-6.9	-4.2
CPI %	3.3	4.5	0.3	2.4	3.0
Lebanon					
Nominal GDP \$bn	52.1	62.3	65.9	54.4	58.3
Real GDP %	0.6	0.2	-0.3	-27.2	1.9
Current A/C % GDP	-23.3	-21.4	-17.5	-19.7	-15.9
Budget Balance % GDP	-7.0	-10.8	-9.5	-12.2	-11.7
CPI %	4.5	6.1	10.1	90.0	20.0
Morocco					
Nominal GDP \$bn	109.6	118.1	119.7	115.5	122.5
Real GDP %	4.2	3.1	2.5	-5.8	4.3
Current A/C % GDP	-3.4	-5.3	-4.1	-6.1	-5.0
Budget Balance % GDP	-3.4	-3.7	-4.1	-7.1	-6.8
CPI %	0.8	1.8	0.3	1.0	0.8
Tunisia					
Nominal GDP \$bn	40.1	35.7	33.4	32.2	33.8
Real GDP %	2.0	2.6	0.9	-6.2	5.0
Current A/C % GDP	-10.2	-12.5	-10.6	-11.4	-9.8
Budget Balance % GDP	-6.2	-5.4	-4.2	-8.3	-7.8
CPI %	5.3	7.4	6.7	6.0	5.8
Oil Importers (GDP weighted avg)					
Nominal GDP \$bn	147.3	158.5	192.6	232.2	253.5
Real GDP %	3.4	3.7	3.6	-2.1	3.2
Current A/C % GDP	-8.3	-6.6	-5.8	-6.9	-5.8
Budget Balance % GDP	-7.6	-7.6	-7.0	-8.6	-9.3
CPI %	15.7	9.1	6.6	11.9	6.0

Source: Haver Analytics, National sources, Emirates NBD Research

*Egypt data refers to fiscal year (July-June)

Key Economic Forecasts – Non-GCC Oil Exporters

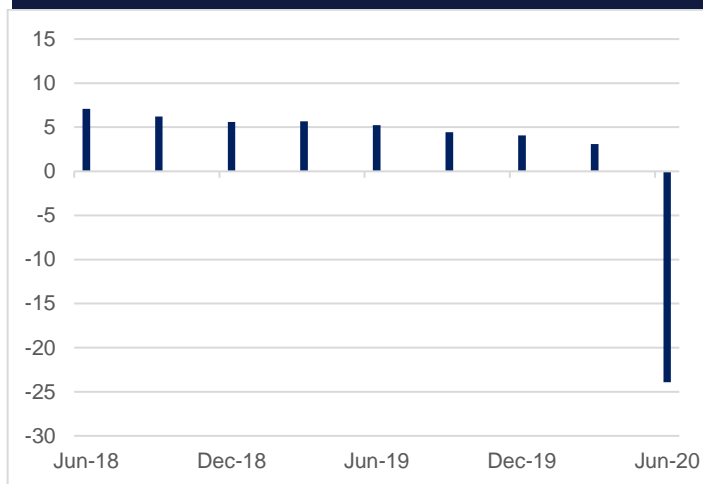
	2016	2017	2018e	2019f	2020f
Algeria					
Nominal GDP \$bn	167.6	165.5	163.2	141.3	136.9
Real GDP %	0.4	1.6	1.0	-7.1	6.2
Current A/C % GDP	-13.3	-10.4	-8.7	-10.2	-10.0
Budget Balance % GDP	-6.5	-9.2	-9.5	-16.0	-14.1
CPI %	6.0	3.5	2.3	2.5	3.2
Iran					
Nominal GDP \$bn	446.9	422.4	528.6	627.1	735.8
Real GDP %	3.3	-4.2	-8.7	-6.0	1.7
Current A/C % GDP	3.5	3.7	-0.2	-2.2	-2.2
Budget Balance % GDP	-5.1	-4.2	-4.3	-6.0	-5.6
CPI %	10.0	21.0	38.7	27.5	20.0
Iraq					
Nominal GDP \$bn	166.2	215.5	243.3	223.3	245.8
Real GDP %	1.0	0.3	4.2	-9.0	5.9
Current A/C % GDP	9.0	15.9	6.5	-5.2	-3.4
Budget Balance % GDP	-1.8	8.3	-1.1	-19.7	-17.1
CPI %	0.7	0.4	-0.2	0.9	1.0
Libya					
Nominal GDP \$bn	35.4	34.1	35.3	40.9	44.4
Real GDP %	30.3	0.9	2.7	-1.7	-14.9
Current A/C % GDP	-17.0	-4.6	-6.5	-6.7	-6.2
Budget Balance % GDP	-26.8	-15.8	-15.6	-13.8	-12.5
CPI %	25.0	11.5	10.0	8.5	7.0
Oil Exporters (GDP weighted avg)					
Nominal GDP \$bn	314.5	302.5	377.4	446.8	530.1
Real GDP %	4.1	-1.4	-3.5	-5.3	1.8
Current A/C % GDP	0.4	3.5	-1.0	-4.3	-3.5
Budget Balance % GDP	-7.4	-3.2	-4.2	-9.7	-8.8
CPI %	7.6	12.4	22.3	17.4	13.2

India Macro

India's GDP contraction in the first quarter was greater than anticipated, and with confirmed Covid-19 cases having continued to trend upwards in the meantime, the outlook for the current fiscal year has deteriorated. Bloomberg consensus projections now predict a GDP contraction of -5.3% in 2020/21, but the risks are weighted to the downside, and the Asian Development Bank forecasts a -9.0% contraction this year.

average. Beneficial monsoon rains are also expected this year, which will help boost harvests, and the bullish outlook has reportedly been reflected in tractor sales and fertiliser production. However, as coronavirus cases start to become entrenched in the countryside, the risk to the sector grows. India has struggled to contain the virus so far, and new cases have risen from a daily average of 22,419 over the first week of July to 84,179 over the first week of September.

Real GDP growth plummets in Q1 (% y/y)



Source: Bloomberg, Emirates NBD Research

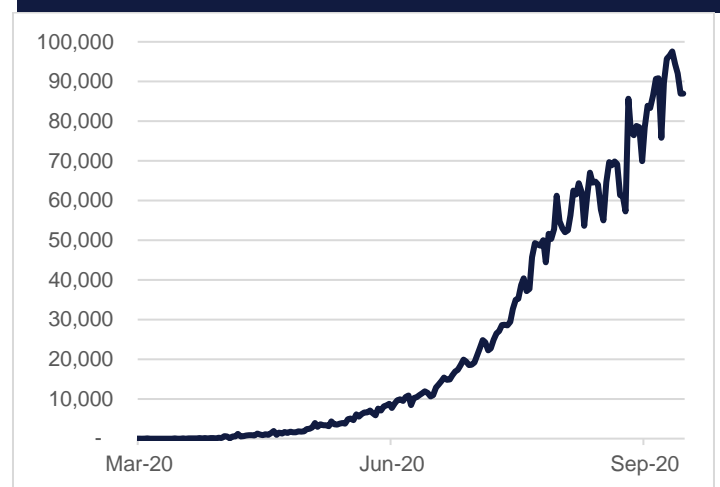
Given its commitment to bolstering growth, in this environment we still see scope for further rate cuts by the RBI, but persistently high inflation is tempering this view. We now envisage a 25 basis points (bps) cut this year, compared to our previous expectation of a further 50bps by year-end. Any move is now likely to come at the tail end of the year, when we expect price growth to have softened, but a more protracted slowdown in inflation would push any further rate cuts out to Q1 2021.

Growth outlook deteriorating

India reported negative real GDP growth of -23.9% y/y in Q1 (April-June), missing consensus estimates of an -18.0% contraction. The ministry of statistics press release cautioned that difficulties related to data gathering could see revisions to the figure, but it seems certain that the quarter saw one of the largest contractions on record for the Indian economy. Lockdown measures introduced in a bid to curb the spread of Covid-19 were responsible for the contraction, with construction (-50.3%) and manufacturing (-39.3%) among the biggest losers. The period was especially challenging for most economies around the world, with the majority of major developed and emerging markets experiencing double-digit contractions. Nevertheless, the India reading was one of the sharpest contractions seen among the large economies, and the risks remain to the forefront.

Agriculture was the one primary sector which managed to post an expansion in Q1, gaining 3.4% y/y, and there is a modicum of optimism around the sector over the coming quarters. According to the minutes from the RBI's August meeting, the area under summer crops was up 13.9% y/y as of July, and 5.9% over the five-year

New Covid-19 cases, daily

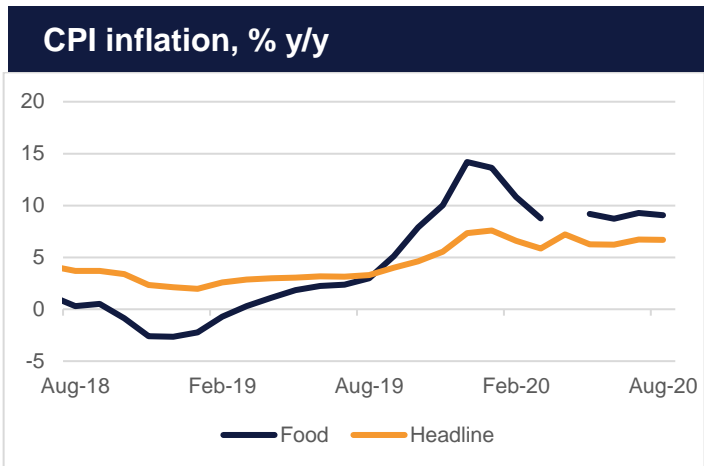


Source: Bloomberg, Emirates NBD Research

The accelerating rise in cases is reflected in India's PMI survey data. Where manufacturing returned to positive 50.0-plus territory at 52.0 in August – compared to a contractionary 46.0 in July, and a nadir of 27.4 in April – services have continued to lag. The services component remained negative at 41.8 in August, and is coming back from a much sharper (5.4) April fall than manufacturing. Respondents reported a further decline in demand, and firms reported job shedding for the sixth month in a row. Any renewed lockdown measures imposed to try and curb the virus' spread could have an adverse impact on any nascent recovery, and the rise in cases, alongside the worse-than-expected Q1 figures, have seen a spate of downgrades from ratings agencies.

Rate cut in question

Given the challenges to the growth outlook, we maintain our view that the RBI will still cut rates by year-end, but we have revised this to a 25bps cut to 3.75%, most likely at the final (December) meeting of the year. The bank has maintained in its communiqués that 'the stance of monetary policy remains accommodative as long as it is necessary to revive growth and mitigate the impact of Covid-19 on the economy.' As the virus continues to impinge on economic activity, an accommodative stance from the bank will become ever more critical. This is especially the case as the government has limited means to boost growth through fiscal stimulus.



Source: Haver Analytics, Emirates NBD Research

That being said, stubbornly high inflation has raised the level of uncertainty around this, and we have adjusted our expectations accordingly. Inflation has averaged 6.6% over January-August, coming in at 6.7% at the most recent print. This is partly driven by lockdown-related impediments to movement and resultant supply-chain bottlenecks, which have seen food prices in particular head higher – 9.1% y/y in August. As these ease, we anticipate that inflation should slow, but with coronavirus cases continuing to rise, the risk is that this is a more drawn-out process.

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Currencies

Dollar weakness holds

At the end of July the dollar's DXY index fell below the 94 handle, a level not seen since 2018. The USD has since failed to establish any major movement in either direction, locked in a range between 92 – 94. This deadlock is representative of market conditions in the US as macroeconomic data out of the US has been both positive and negative in equal measure. Uncertainty following ongoing tensions between the US and China, along with an upcoming presidential election, are weighing on the greenback however. The psychological barrier of 93.500 has rarely been breached since the middle of August and maintaining a position above this level remains as the first major hurdle, with the 50-day moving average of 93.585 being the next one.

The Fed's announcement of a major policy shift regarding inflation and employment only added fuel to the fire, resulting in a decline to lows of 91.746 at the start of September. These losses were quickly reversed in the following days however and the FOMC statement for September offered little in the way of major changes. Jerome Powell reiterated the Fed's satisfaction with current policy measures and even upgraded the economic outlook for the US, providing a boost for the currency more recently. We expect the USD to continue operating in a soft position within this range, and possibly fall even further as we head into 2021.



Source: Bloomberg, Emirates NBD Research.

Sterling at risk as Brexit deadlines loom

Sterling has experienced a major hike since mid-July, advancing by almost 3% to reach 1.2920. The currency held firm above the 1.3 handle for all of August, at one point reaching a high of 1.3482, but has slipped below this level in recent sessions. Brexit concerns continue to weigh heavily on the pound, especially after it was reported that British PM Boris Johnson was prepared to walk away from discussions rather than compromise on key issues. This has caused the GBP to decline by over -3.30% since the beginning of September. Disagreements over fisheries has been one of the most hotly contested points in negotiations over the past few months, with both sides unable to reach a compromise. Recently it was reported that the UK has offered tentative concessions to the EU. Market

sentiment is heavily influenced by Brexit, with any sort of news whether it be early reports or definitive statements, leading to dramatic movements. The October 15th deadline set by Johnson is rapidly approaching and all eyes will be fixed on the proposed Internal Market Bill that would allow his government to override parts of the Withdrawal Agreement.

The Bank of England's Monetary Policy Committee has left rates and its quantitative easing program unchanged following the September meeting. Notably however they did signal that negative interest rates were an option under consideration, sending the GBP down. Public health measures in the UK are also being tightened as fears of a second wave of Covid-19 are being realised, which will only serve to heighten Britain's precarious situation. So long as there is no meaningful breakthrough in negotiations, the uncertainty surrounding the UK's future relationship with the EU will continue to weigh on Sterling.



Source: Bloomberg, Emirates NBD Research.

Euro keeps an eye on Covid-19 cases

The EUR has been the biggest beneficiary of broad-based USD weakness in recent times. The single currency has surged well beyond the 1.15 handle established in mid-July and has mainly operated within a range of 1.17 – 1.19 since then. Covid-19 issues are at the forefront of European policy decisions. The ECB recently announced a fourth round of regulatory relief to lenders, freeing up as much as EUR 73bn and whilst this will provide some positivity, looming concerns over a second wave of infections is growing daily. New restrictions are being put in place in Europe to curb a rise in virus cases across the continent. Parts of Madrid, one of the worst-hit regions, have been subjected to new lockdown rules and France recently recorded its highest number of new confirmed daily cases since the pandemic began.

Like the USD, the EUR is operating tentatively. The currency has tested a break below the 1.17 handle on only two occasions since August began and both times the losses were quickly reversed. Inversely there has been a test of 1.20 just once at the beginning of September, prompting members of the ECB to note their concerns

over the currency's strength, which in turn prompted a sell-off. As market conditions continue to favour the EUR, we expect the currency to remain strong for the rest of the year and to slowly appreciate throughout 2021 against the USD.

USDJPY trends lower

USDJPY has slowly declined in the past few months. The pairing has fallen by over -2.65% since mid-July and is hovering around 104.50, comfortably below the 38.2% one-year Fibonacci retracement of 105.41, and its lowest level since the massive plunge it experienced in early March. Japanese PM Shinzo Abe's resignation provided a momentary shock for the pairing but offered little impact overall, especially after his successor Yoshihide Suga boosted sentiment by pledging for deregulation and structural reform. Positioning against the USD has largely favoured the EUR this year, but an upcoming presidential election could place the JPY in a more favourable light. The pairing fell by -1.10% in the past week and remains bearish overall.

AUD and NZD pushing higher

The AUD has been in remarkable form since mid-July, rallying by over 4.50% to reach a level around 0.7300. The announcement that Australia had entered its first recession in nearly 30 years in Q2 had little to no impact on the currency. The RBA has not signalled any intent to change the historically low cash rate of 0.25% and the AUD looks likely to continue its bullish form for the foreseeable future.

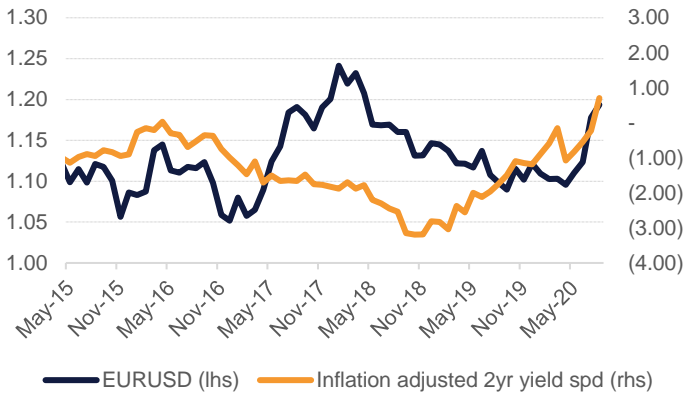
The NZD has had a much more volatile time compared to its Australian counterpart, but still recorded an increase of 3.49% to reach 0.6760. The RBNZ's refusal to rule out negative interest rates has been particularly influential on the currency, resulting in regular whipsaws. The NZD recently climbed to a 14-month high against the USD after New Zealand's Finance Minister Grant Robertson said that the economy is rebounding strongly.

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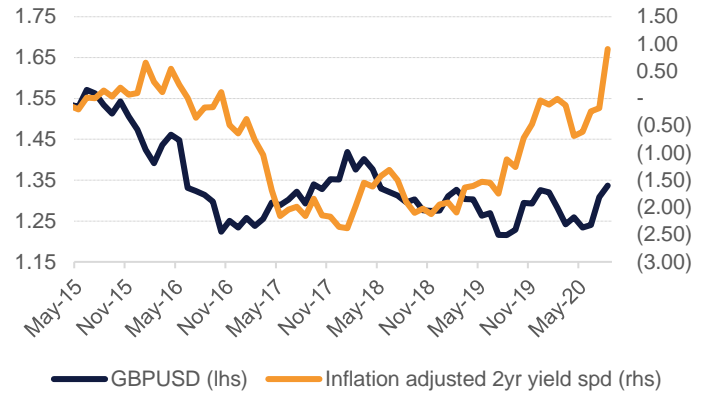
FX—Major Currency Pairs & Real Interest Rates

Interest Rate Differentials—EUR



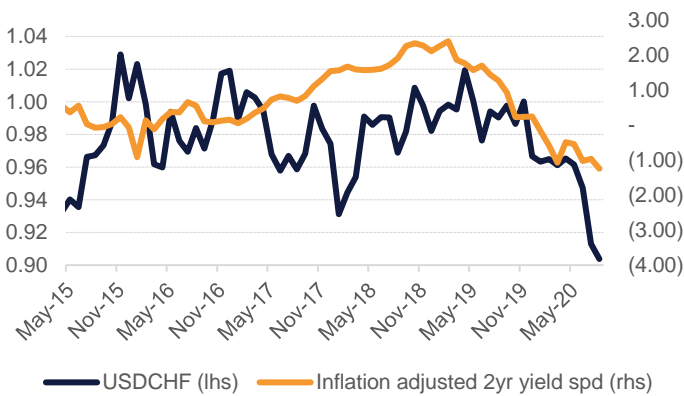
Source: Bloomberg, Emirates NBD Research

Interest Rate Differentials-GBP



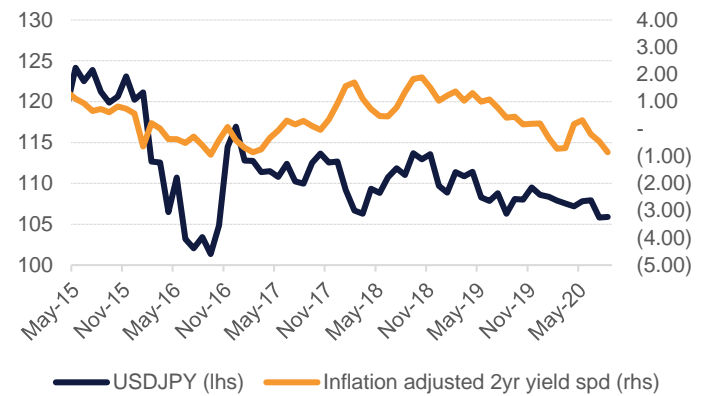
Source: Bloomberg, Emirates NBD Research

Interest Rate Differentials-CHF



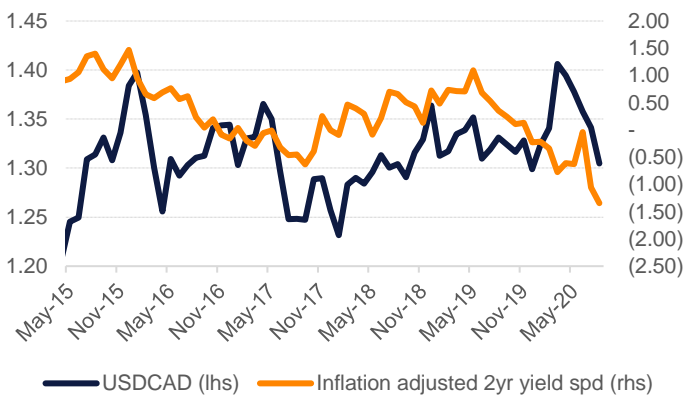
Source: Bloomberg, Emirates NBD Research

Interest Rate Differentials-JPY



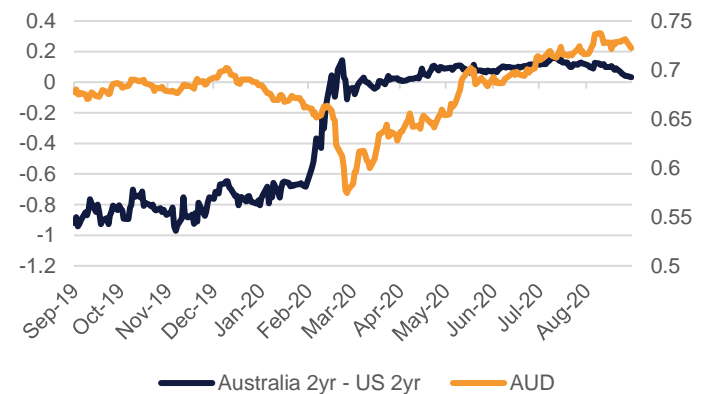
Source: Bloomberg, Emirates NBD Research

Interest Rate Differentials-CAD



Source: Bloomberg, Emirates NBD Research

Interest Rate Differentials-AUD



Source: Bloomberg, Emirates NBD Research

FX Forecasts

FX Forecasts - Major						Forwards		
	22-Sept	Q3 2020	Q4 2020	Q1 2021	Q2 2021	3m	6m	12m
EUR/USD	1.1746	1.1700	1.1800	1.2000	1.2000	1.1794	1.1820	1.1870
USD/JPY	104.51	105.00	105.00	105.00	105.00	104.53	104.35	104.06
USD/CHF	0.9156	0.9500	0.9400	0.9400	0.9700	0.9121	0.9093	0.9044
GBP/USD	1.2804	1.3000	1.3000	1.3200	1.3200	1.2823	1.2833	1.2846
AUD/USD	0.7222	0.7000	0.7200	0.7200	0.7400	0.7226	0.7228	0.7229
NZD/USD	0.6674	0.6500	0.6500	0.6500	0.6750	0.6667	0.6666	0.6671
USD/CAD	1.3305	1.3300	1.3500	1.3500	1.3300	1.3304	1.3300	1.3302
EUR/GBP	0.9174	0.9000	0.9077	0.9091	0.9091	0.9198	0.9212	0.9241
EUR/JPY	122.76	122.85	123.90	126.00	126.00	123.19	123.19	123.19
EUR/CHF	1.0755	1.1115	1.1092	1.1280	1.1640	1.0744	1.0736	1.0720

FX Forecasts - Emerging						Forwards		
	22-Sept	Q3 2020	Q4 2020	Q1 2021	Q2 2021	3m	6m	12m
USD/SAR*	3.7507	3.7500	3.7500	3.7500	3.7500	3.7521	3.7537	3.7575
USD/AED*	3.6730	3.6730	3.6730	3.6730	3.6730	3.6736	3.6743	3.6764
USD/KWD	0.3057	0.3020	0.3020	0.3020	0.3020	0.3065	0.3072	0.3083
USD/OMR*	0.3848	0.3850	0.3850	0.3850	0.3850	0.3862	0.3875	0.3906
USD/BHD*	0.3771	0.3770	0.3770	0.3770	0.3770	0.3760	0.3760	0.3785
USD/QAR*	3.6737	3.6400	3.6400	3.6400	3.6400	3.6797	3.6773	3.6752
USD/EGP	15.7411	15.7500	15.7500	15.7500	15.7000	16.1750	16.6075	17.5250
USD/INR	73.5862	73.0000	72.0000	71.0000	70.0000	74.3900	75.1100	76.8000
USD/CNY	6.8052	6.900	7.0000	7.0000	7.0000	6.8190	6.8585	6.9365
USD/SGD	1.3622	1.4000	1.4000	1.3800	1.3500	1.3615	1.3611	1.3605

FX Forecasts - MENA					
	22-Sept	Q3 2020	Q4 2020	Q1 2021	Q2 2021
USD/MAD	9.2557	9.3000	9.6000	9.7000	9.7000
USD/TND	2.7699	2.8000	2.8000	3.0000	3.0000
USD/TRY	7.6648	7.6500	7.6000	7.5000	7.3000

Data as of 22 September 2020

Source: Bloomberg, Emirates NBD Research

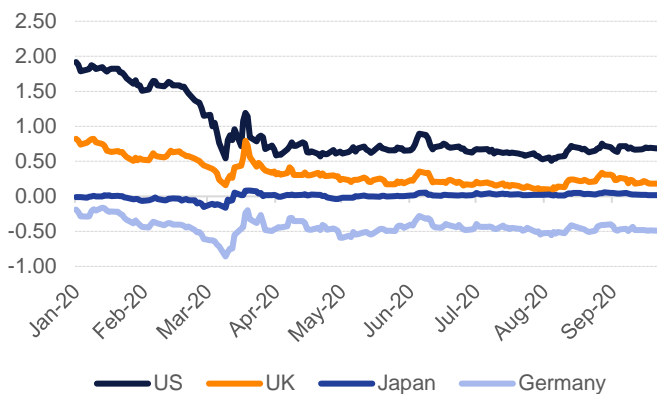
Financial Markets

Developed economy bond markets have been relatively muted over the last few weeks as central bank policies have either been held steady or failed to impress investors that they will actually be able to push inflation higher. US 10yr treasury yields have held in a range of around 12bps over the past month, moving from a low of slightly below 0.63% to a peak of 0.75% while the range of movement in gilts, JGBs and bunds has been roughly similar. The lull is largely down to central banks keeping policy on hold and continuing to defer to fiscal policy colleagues to set a fire under economic activity.

In the US, political divisions are hardening and threaten the chance of a new fiscal support package being agreed upon. Political debate will switch to the Supreme Court where President Trump has the chance to nominate another conservative justice following the death of associate justice Ruth Bader Ginsburg. A protracted political debate surrounding the Supreme Court bodes ill for a new fiscal deal to be reached.

Market performance in the final quarter of 2020 is thus likely to be determined more by political developments, rather economic policy. The US presidential election is little more than a month away and as of yet there is still no clear front runner. But regardless of the outcome, the reelection of President Trump or victory for former vice president Joe Biden, we expect to see yields push higher. A Trump victory would likely mean efforts to cut down on tax rates and lean heavier on borrowing to finance spending, a combination that in the long run should push yields up. By contrast we would expect a Biden victory to result in large scale infrastructure spending, perhaps laying the base for inflation that should also push yields higher over the medium to long term.

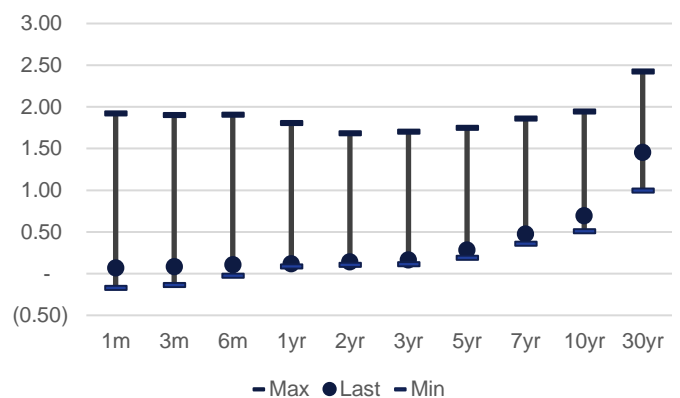
10yr bond markets go quiet



Source: Bloomberg, Emirates NBD.

The relative absence of market volatility is all the more surprising given that the Federal Reserve in the US has adopted a new approach toward inflation, targeting average inflation over a period rather than a single one-off target. As the Fed has ruled out using negative rates or yield curve control, we would expect additional QE or stronger forward guidance to be the main tools it will use to achieve higher prices, both of which should act as a drag on yields. However, at its September meeting the Fed held off on implementing either and yields continue to hold slightly above our Q3 target range.

US yield curve last 1 year



Source: Bloomberg, Emirates NBD.

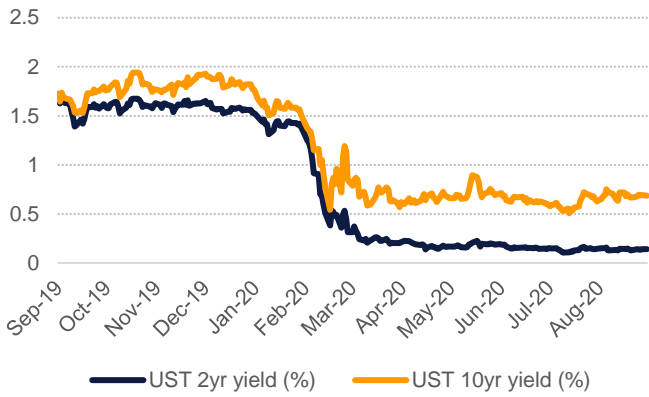
Markets are looking for a catalyst outside of monetary policy to set the next trajectory for benchmark yields. Central bank officials globally have all repeatedly called on politicians to extend further fiscal policy to support growth, and lay the groundwork for more inflation, but so far no major new stimulus packages have been released. Perhaps the best chance may come from Japan where new prime minister Yoshihide Suga will maintain the expansionary policies of his predecessor Shinzo Abe. But in any market, new government spending will likely serve to offset damage caused by the coronavirus pandemic, rather than serve as any stimulatory boost. Indeed, as furlough programmes wind down over coming months in many markets unemployment is likely to push higher and government support will again be needed just to get consumers back to neutral levels of income.

Anxiety over Brexit will also hang over markets as the UK approaches the end of its transition period for leaving the EU. The UK government has acknowledged its Internal Market Bill, which seeks to normalize conditions across the constituent nations of the UK, will break international law and violate parts of the Brexit withdrawal agreement. A crash into a no-deal Brexit could threaten to push inflation—and yields—in the UK higher into 2021.

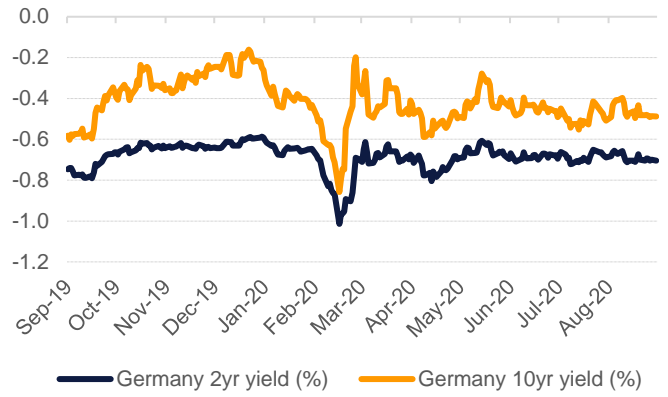
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Financial markets

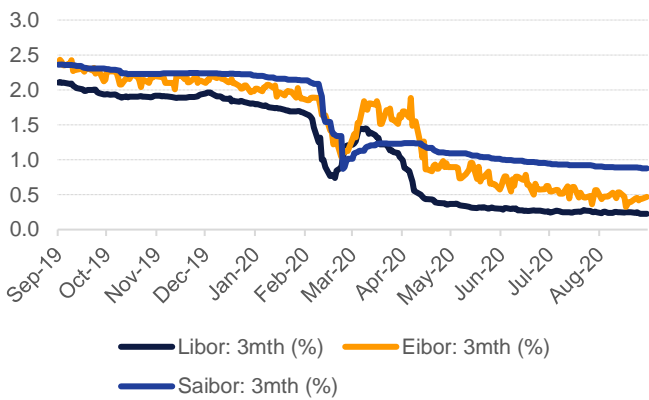
US Treasuries: 1yr



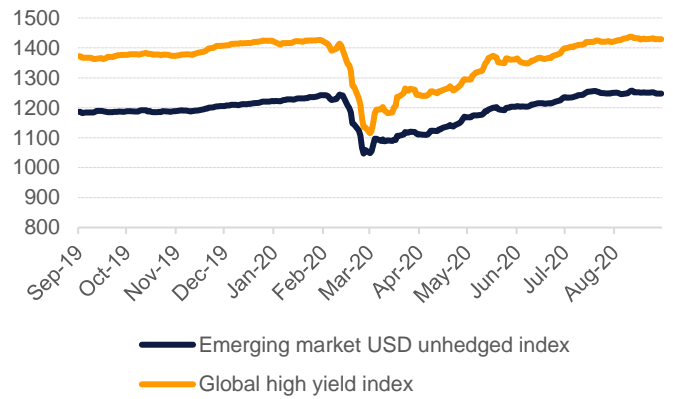
Germany Bunds: 1yr



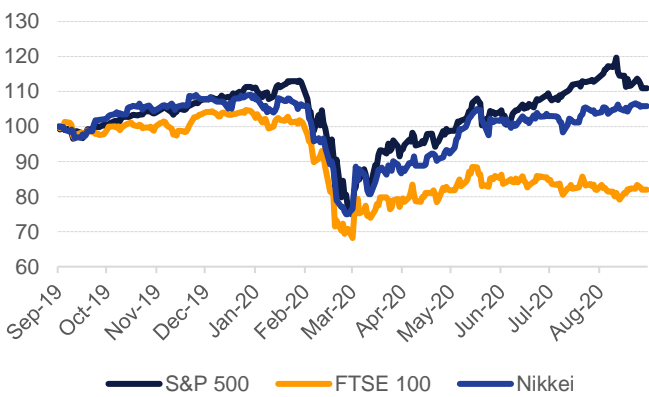
Funding markets



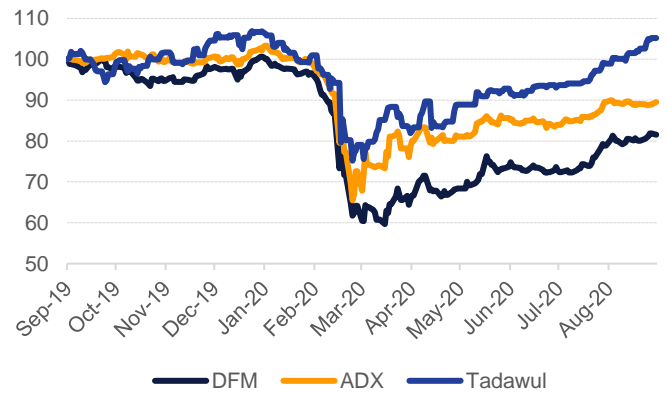
Bond markets



Equities 1yr performance



MENA equities 1yr performance



Source: Bloomberg, Emriates NBD Research. Note: rebased 1yr equity market performance.

Interest Rate Forecasts

US Treasuries Forecasts					
	Current	Q3 2020	Q4 2020	Q1 2021	Q2 2021
2y	0.14	0.12 – 0.18	0.18 – 0.25	0.20 – 0.30	0.25 – 0.35
10y	0.67	0.50 – 0.60	0.50 – 0.65	0.60 – 0.75	0.70 – 0.85
3M Libor					
3m	0.22	0.25	0.28	0.3	0.35
3M Eibor					
3m	0.52	0.65	0.68	0.7	0.75
Rates forecasts					
	Current %	Q3 2020	Q4 2020	Q1 2021	Q2 2021
FED (Upper Band)	0.25	0.25	0.25	0.25	0.25
ECB (deposit rate)	-0.50	-0.50	-0.50	-0.50	-0.50
BoE	0.10	0.05	0.05	0.05	0.05
BoJ	-0.10	-0.10	-0.10	-0.10	-0.10
SNB	-0.75	-0.75	-0.75	-0.75	-0.75
RBA	0.25	0.25	0.25	0.25	0.25
RBI (repo)	4.00	4.00	3.75	3.75	3.50
SAMA (reverse repo)	0.50	0.50	0.50	0.50	0.50
UAE (Repo rate)	0.75	0.75	0.75	0.75	0.75
CBK (o/n repo rate)	1.00	1.00	1.00	1.00	1.00
CBB (o/n depo)	0.75	0.75	0.75	0.75	0.75
CBO (o/n repo)	0.50	0.50	0.50	0.50	0.50
CBE (o/n depo)	9.25	9.25	9.25	9.25	9.25

Source: Bloomberg, Emirates NBD Research
As of 22 September 2020

Commodities

Saudi Arabia's energy minister, Prince Abdulaziz bin Salman, has singled out short-sellers as being the primary antagonist to efforts by OPEC+ countries to balance oil markets. Telling short-sellers he wanted them "ouching like hell," the minister's comments helped to stem a sell-off in oil prices that had been in place since the start of September. However, OPEC's opponents are not traders mashing the sell button but the hazy outlook for demand caused by the Covid-19 pandemic. All major forecasting agencies have tempered their forecasts for demand in recent outlooks while a return of more stringent virus control measures looks likely in several countries.

Oil markets have held in a tight range for most of the past few months as demand has recovered from its troughs of March-April and OPEC+ supply adjustments have helped to draw down on crude stocks. Since the start of July Brent futures have held to trading in a range of around USD 6/b and at an average of USD 43.51/b qtd are not far off our Q3 forecast of USD 42/b. But while current Brent prices are more than 100% above their bottom of USD 19.33/b hit in April, they have struggled to move meaningfully above USD 45/b, a level that is hardly welcome for most OPEC+ economies.

Hence the need among OPEC+ officials to find a scapegoat and target short-sellers. But if anything, investors have generally been too long on oil in our view over the last few months, rather than positioning for downsides. Selling pressure on oil has only started to increase over the last few weeks as investors had piled into relatively 'cheap' long positions from April and into much of July and likely took profit as prices had come close to doubling in some cases. Even now as prices have declined in September, downside positions are still relatively modest: put premiums are hardly close to where they were even prior to when the full ravages of the Covid-19 pandemic took hold.

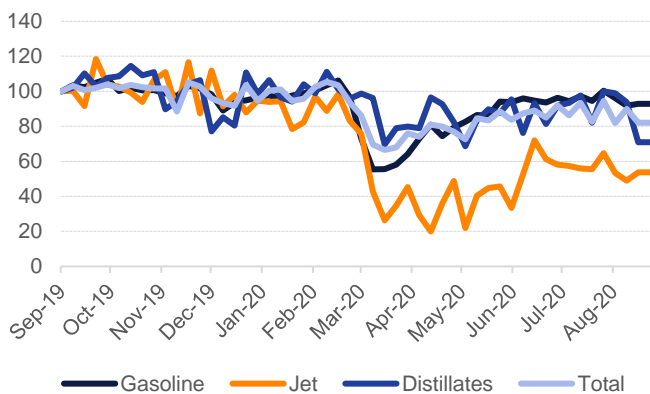
of mid-September but with enormous disparity across fuels: gasoline is almost back to 'normal' levels while jet fuel demand is still roughly 50% lower than a year ago.

In India, where there has been no noticeable flattening in the number of Covid-19 cases, oil demand has collapsed. After falling by as much as 49% y/y for total product demand in April when the country was under strict lockdowns, demand has 'recovered' to only being down 16% y/y as of August. India's economy faces a tough growth outlook (see India section above) and a return to pre-pandemic levels of demand appears unlikely.

With a demand outlook facing more downside than upside risks in the near term the pressure remains high on OPEC+ producers to stick to the terms of their production cut deal. So far compliance has been reasonably good on aggregate with average compliance from May-August of around 94%. This year's deal has also seen more participation from the OPEC+ partner countries such as Russia, Kazakhstan and others. Average compliance there has been on par with the core OPEC countries whereas it had lagged in previous rounds of cooperation.

Nevertheless, individual country compliance has not been perfect. Unlike previous rounds of production cut deals, OPEC+ countries are volunteering (or being instructed) to make up for failing to hit targets with deeper cuts and the OPEC+ joint market monitoring committee extended the timeline for compensatory cuts until the end of 2020. OPEC+ production is meant to increase by more than 2mn b/d at the start of January, coinciding with what may be a seasonal dip in demand along with protracted low baseline levels due to renewed Covid-19 restrictions. Ensuring that 'over'-production is under control will be vital to prevent OPEC+ overwhelming a still tentative recovery in demand.

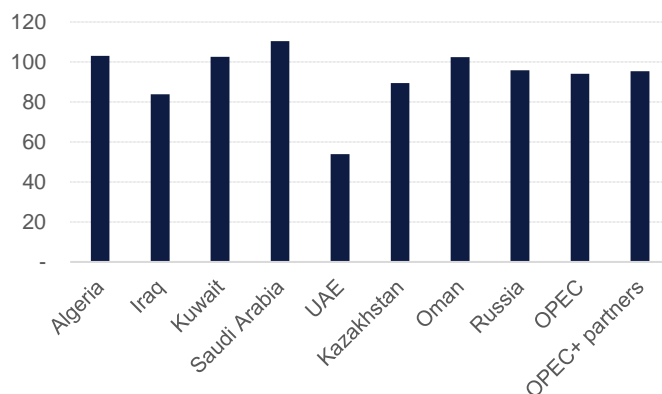
US demand falls short of pre-Covid levels



Source: EIA, Emirates NBD Research. Note: Product supplied normalized to 1yr ago.

But the risks to the downside are real. Demand has recovered but has fallen short of hitting pre-pandemic levels. Total product supplied in the US is running around 18% below year-ago levels as

Average OPEC+ compliance May - August

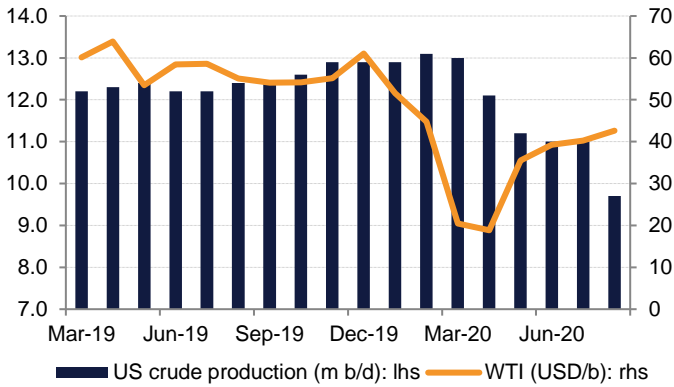


Source: IEA, Emirates NBD Research.

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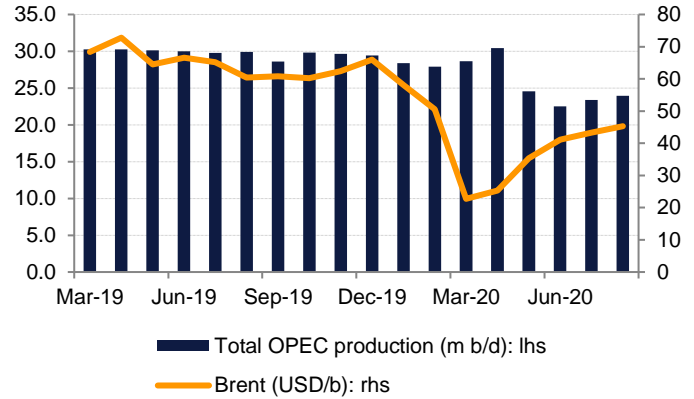
Major Commodities Markets

US oil production and price



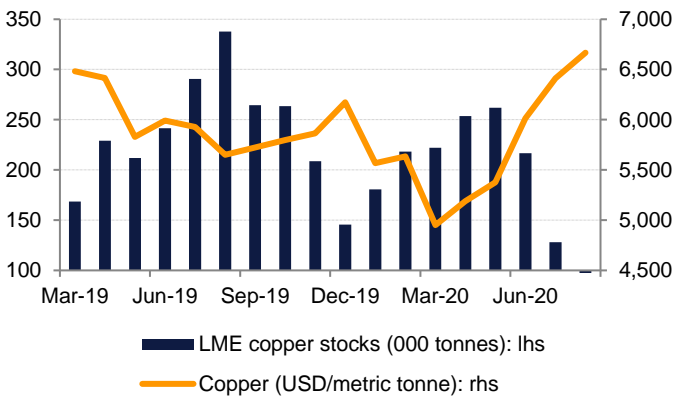
Source: Bloomberg, Emirates NBD Research

International oil production and price



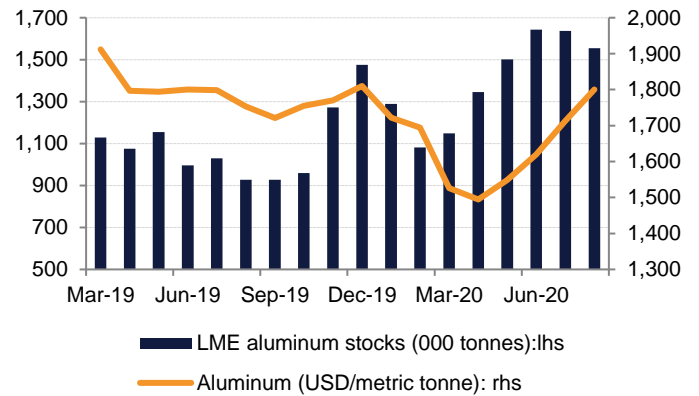
Source: Bloomberg, Emirates NBD Research

Copper stocks and price



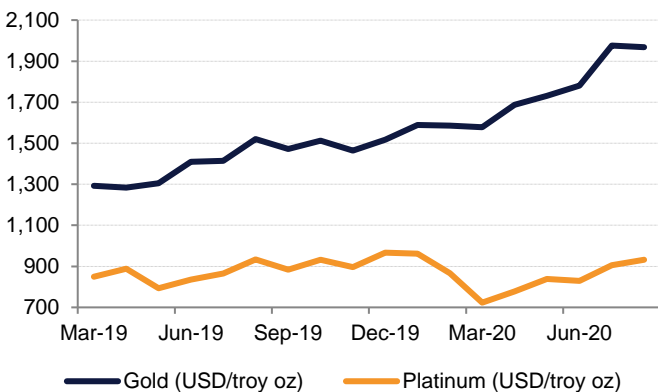
Source: Bloomberg, Emirates NBD Research

Aluminum stocks and price



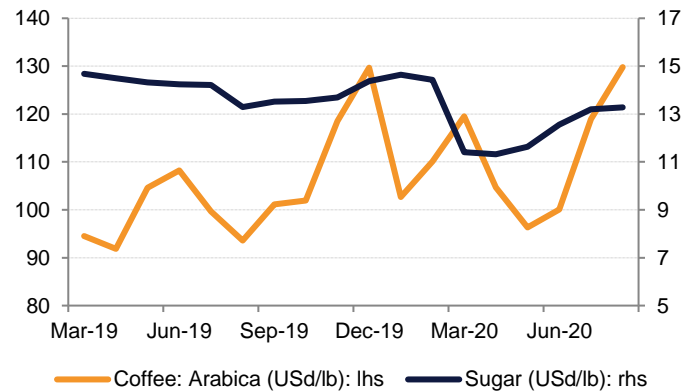
Source: Bloomberg, Emirates NBD Research

Precious metals prices



Source: Bloomberg, Emirates NBD Research

Agriculture prices



Source: Bloomberg, Emirates NBD Research

Commodity Forecasts

Global commodity prices							
	Last	2020Q3	Q4	2021Q1	2021Q2	2020	2021
Energy							
WTI	39.94	37.00	40.00	42.50	47.50	37.70	46.88
Brent	41.83	42.00	44.00	47.50	50.00	42.55	50.00
Precious metals							
Gold	1,907.99	1,790.00	1,790.00	1,750.00	1,700.00	1,718.90	1,675.00
Silver	24.35	17.11	17.11	16.73	16.25	16.88	16.02
Platinum	894.90	800.00	900.00	1,000.00	900.00	849.22	912.50
Palladium	2,117.32	1,900.00	1,800.00	1,800.00	1,750.00	1,995.90	1,750.00
Base metals							
Aluminum	1,779.50	1,550.00	1,600.00	1,600.00	1,650.00	1,598.60	1,650.00
Copper	6,691.50	6,000.00	6,250.00	6,300.00	6,400.00	5,822.73	6,462.50
Lead	1,888.50	1,750.00	1,786.46	1,793.60	1,807.84	1,766.89	1,816.64
Nickel	14,541.00	13,000.00	13,500.00	14,000.00	14,000.00	12,895.88	14,187.50
Tin	18,100.00	16,950.00	17,000.00	17,000.00	17,250.00	16,466.29	17,312.50
Zinc	2,458.50	2,000.00	2,083.33	2,100.00	2,133.33	2,046.45	2,154.17

Prices as of 22 September 2020. Note: prices are average of time period unless indicated otherwise.

Source: EIKON, Emirates NBD Research

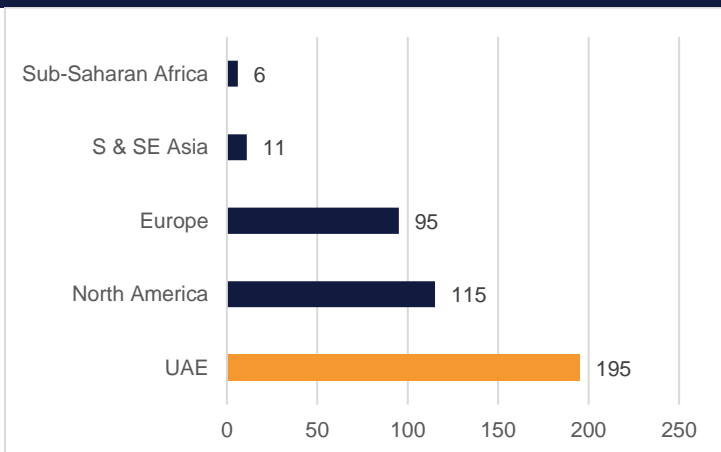
Sector Report

Food Security

The UAE's food security agenda has taken on a new importance following the start of the Covid-19 crisis, given the pandemic's impact on global food supply chains. The pandemic put into work the Emirates Council for Food Security, a federal entity, given responsibility of ensuring year-round food supply for the nation, especially in the case of a high impact low probability event, such as Covid-19. The council started the National Food Security Strategy 2051 in 2018 with ambitious aims of placing the UAE among the top 10 countries for food security in the Global Food Security Index by 2021, and making it the world's best by 2051. The most recent update to the index (December 2019) showed that the UAE had jumped 10 places to 21st position, with the National Food Security Strategy proving its impact in just over a year.

Covid-19 triggered the early warning systems, with active monitoring of strategic food items both inside and outside the UAE, and the council engaging with UAE foodstuff traders on identifying alternative markets in the case of restrictions. More importantly the council worked with its diplomatic missions to support in the case of certain countries placing restrictions. The UAE approved the National System for Sustainable Agriculture on the 28th of June, which seeks to increase self-sufficiency in targeted agricultural crops, raise average farm income by 10% pa, boost the workforce in the sector by 5% pa and target a 15% pa reduction in water used for irrigation of a production unit.

Per Capita waste of food by consumers (Kg)



Source: UN FAO, Emirates NBD Research

High Tech Farming

With a steadily increasing world population already placing concerns over food supplies and mounting concerns over a global food shortage crisis especially in light of Covid-19, the UAE has been looking at new farming solutions to address food demand in a sustainable manner. According to the UN Food and Agriculture Organization (FAO), vertical farming consumes 75% less raw material than traditional farming and just 60 watts of power

daily to grow 150kg of vegetables in a month. The technology uses just 12l to produce 1kg of vegetables against 300-400l with traditional farming. Vertical farms also bump up yield and the ability to cultivate commercial varieties of crops in a controlled environment which otherwise would be unsuitable to local climatic conditions. These farms also use artificial light as an alternative to sunlight needed for plant growth.

High-tech farming methods such as hydroponics, aeroponics and aquaponics are critical vertical farming technologies being explored in the UAE. There are a number of other technologies that are being looked at on a parallel level and those include precision agriculture, which focuses on growing conditions for plants using hyperbaric chambers and nanotechnology-based organic nutrition. Photo bio-reactors, which can cultivate food-grade algae such as spirulina. And smart farms, which create harvest plans based on real-time data on food demand and consumption within communities. The UAE has been actively exploring all those technologies that fall under the wider agritech umbrella to enable it to meet its National Food Strategy goals.

Supermarket chain Carrefour has launched a number of in-store hydroponic farms in the UAE. The latest being one in the Carrefour Al-Wasl store that spans 54 sq. meters and can accommodate up to 16 varieties of leafy greens, including lettuce, arugula, and kale, and herbs such as basil, dill, and sorrel. It joins two other farms in Carrefour locations at Yas Mall and My City Centre Masdar. The farm uses 90% less water and less space than traditional farms to deliver approximately 10kg of fresh herbs and microgreens per day. This equates to the yield of about one acre of farmland.

Emirates Group is gearing up to launch the largest vertical farm in the world as a joint venture between Emirates Flight Catering and US-based Crop One at the cost of USD 40mn (Dh146mn). Once complete, the facility will cover 12000 sq. meters and have a production output equivalent to 900 acres of farmland. At full capacity, the farm will produce 2.7 tons of high-quality, herbicide-free, and pesticide-free leafy greens a day using 99% less water than outdoor fields.

In the UAE, Sharjah Research Technology and Innovation Park (SRTIP) has built Merlin Agrotunnel, an aquaponics farm with an area of around 150 sq. meters that can produce one ton of organic vegetables and fruit per month. The water that is used to irrigate the fruit and vegetables is seawater, desalinated through solar energy, creating a more sustainable and environmentally friendly production cycle. The company has been conducting research over the past two years with a team of botanists, agriculturists and engineers from Merlin International to develop a soil-free vertical cultivation technology that is the ideal way to produce sustainable food.

Salt water rice paddies

Chinese scientists at Qingdao Saline-Alkali Tolerant Rice Research and Development Center, have developed a species of rice that can thrive in the saline and alkaline land. In the deserts of the UAE for example, where the soil's salt content is high, water absorption of rice plantations will be limited and high alkalinity would cause membranes to form around their roots, effectively suffocating those plantations. Normal rice cannot grow in water containing more than 0.3% salt. Those Chinese scientists have developed a best-performing strain of saltwater rice can grow in water with double that salinity, and that has yielded 9.3 tons per hectare in China.

The challenge of desert farming is particularly daunting. Temperatures in the desert can change drastically from day to night, with a difference of as many as 30 degrees. Sand storms happen often and the nutrient-poor soil is too sandy. This is further aggravated by salty seawater just seven to eight meters below the soil. The Chinese scientists at the center have in 2018 manage to successfully grow and harvest rice in the challenging deserts of Dubai, setting up plantations in the desert of the emirate that yield an impressive 7.5 tons per hectare – double the global average. **There are now plans to further expand this experimental plot, with the eventual goal of covering 10% of the United Arab Emirates in paddy fields.**

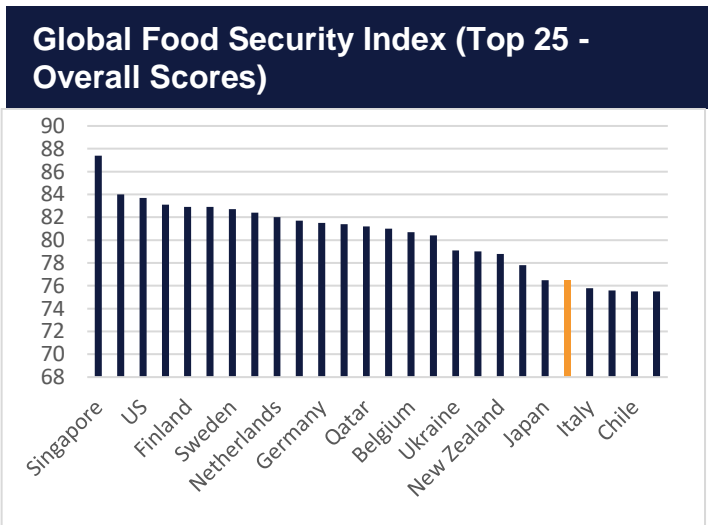
sustainable food production practices to provide seafood meeting 52% of global demand for fish. A challenge the UAE faces is the growing national gap between production and demand. Statistics show that the UAE consumes 220,000 tons of fish a year, 75% of which is imported, while aquaculture provides only 2% of the fish consumed locally. Per capita, UAE residents eat an average of 25 kg of seafood a year, a fifth higher than the global average.

In June this year the UAE Minister of State for Food Security Mariam Al Mheiri said the closure of international borders and interruption of food supply chains due to Covid-19 highlighted the importance of developing the aquaculture sector, adding that it is one of the most efficient food sectors in the UAE, representing an efficient way to grow high-value protein without using large amounts of fresh water, a precious resource in the UAE.

Attracting private sector investments into Aquaculture is key, with the Food Security minister expecting the Aquaculture sector to become one of the country's "breakout industries". Aquaculture currently accounts for about half of the world's fish consumption, and has become the world's fastest growing food producing sector. To date the UAE government has invested more than AED 200mn in hatcheries and fish farms.

The UAE has set up a number of hatcheries that produce fish fingerlings (juvenile fish) from various species. Those hatcheries support aquaculture, promote the sector, and boost national food security. The first type of hatcheries are those within aquafarms. These small hatcheries provide fish fingerlings to advanced, modern aquafarms and are usually considered part of the amenities with Aquafarms. The second is specialized hatcheries, these are larger hatcheries that supply fish fingerlings for environmental and commercial purposes. The hatcheries, which produce nearly 35mn fingerlings per year in total, with the Sheikh Khalifa Marine Research Center in Umm Al Quwain having an annual production of 30mn fingerlings, while Aquaculture and Marine Studies Center at Abu Al Abyad island in Abu Dhabi produces 5mn fingerlings.

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Source: The Economist Group, Emirates NBD Research

Aquaculture

Aquaculture, which is the breeding, rearing, and harvesting of fish and other marine life in all forms of water environments is a central pillar of the UAE's National Food Security Strategy. The strategy identifies fish as one of its 18 strategic food items. Launched in November 2018, the National Food Security Strategy was developed to enhance the UAE's food security.

Fish is one of the key sources of protein the UAE focuses on, and the country has invested heavily in aquaculture projects and infrastructure. Aquaculture is considered as one of the most

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