



COLUMBUS RETIREMENT FUNDS



QUARTERLY INVESTMENT REPORT – 31 MARCH 2020

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1. ECONOMIC OVERVIEW FOR THE QUARTER ENDED MARCH 2020

PAINFUL 1ST QUARTER FOR INVESTORS

No-one would have thought that a few cases of pneumonia in December 2019, linked to a previously unknown virus, would have led to the most challenging pandemic the world had ever faced since the 1918 Spanish flu. In January 2020, the COVID-19 outbreak (which originated in China) appeared to be more of a regional epidemic with a case-related fatality rate of close to 10%, very similar to the 2002–2003 SARS outbreak. Initially, many compared COVID-19 to SARS. The virus strain SARS-CoV-2, which causes the new COVID-19, is a related strain of the SARS coronavirus. Most of the cases during the SARS outbreak (7000 in total) were concentrated in China. The epidemic lasted about nine months, from November 2002 to July 2003, with the rate of spread peaking within two months, despite the absence of a cure or protective vaccine. COVID-19 appears to be as contagious as, but with a longer incubation period than, SARS. Early reports showed that on average it would be much less lethal than SARS but potentially just as fatal for patients with comorbidity (i.e. another, underlying health condition).

Figure 1: COVID-19 vs other diseases in terms of the R_0 score

COVID-19 VS OTHER DISEASES

Estimates suggest the COVID-19 coronavirus is less deadly than the related illnesses SARS or MERS, but more infectious (R_0) than seasonal influenza.

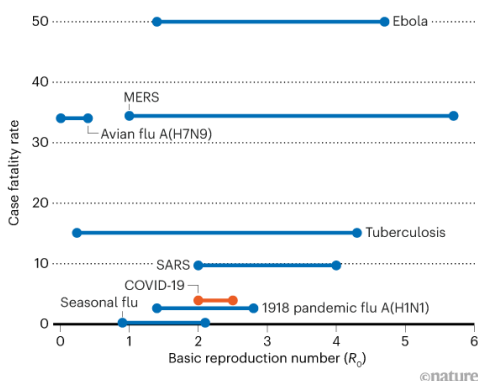


Figure 2: Epidemiological comparison of respiratory viral infections

Disease	Flu	COVID-19	SARS	MERS
Disease Causing Pathogen	Influenza virus	SARS-CoV-2	SARS-CoV	MERS-CoV
R_0 Basic Reproductive Number	1.3	2.0 - 2.5 *	3	0.3 - 0.8
CFR Case Fatality Rate	0.05 - 0.1%	~3.4% *	9.6 - 11%	34.4%
Incubation Time	1 - 4 days	4 - 14 days *	2 - 7 days	6 days
Hospitalization Rate	2%	~19% *	Most cases	Most cases
Community Attack Rate	10 - 20%	30 - 40% *	10 - 60%	4 - 13%
Annual Infected (global)	~ 1 billion	N/A (ongoing)	8098 (in 2003)	420
Annual Infected (US)	10 - 45 million	N/A (ongoing)	8 (in 2003)	2 (in 2014)
Annual Deaths (US)	10,000 - 61,000	N/A (ongoing)	None (since 2003)	None (since 2014)

Source: <https://www.nature.com/articles/d41586-020-00758-2>, Dr Akiko Iwasaki (Yale University), BioRender, March 2020

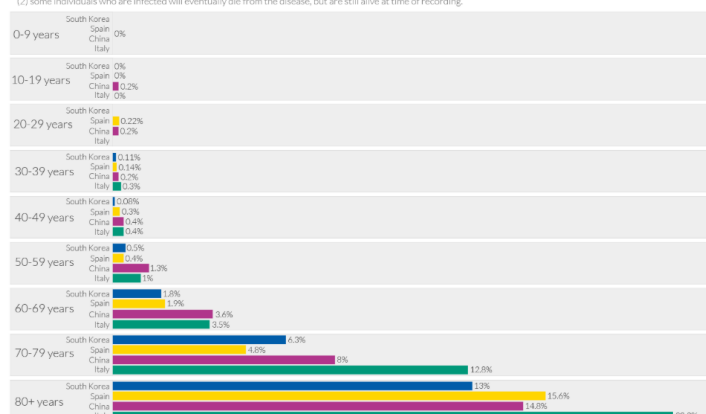
Figure 3: COVID-19 fatality rates by age group



Coronavirus: case fatality rates by age

Case fatality rate (CFR) is calculated by dividing the total number of confirmed deaths due to COVID-19 by the number of confirmed cases.

Two of the main limitations to keep in mind when interpreting the CFR:
(1) many cases within the population are unconfirmed due to a lack of testing.
(2) some individuals who are infected will eventually die from the disease, but are still alive at time of recording.



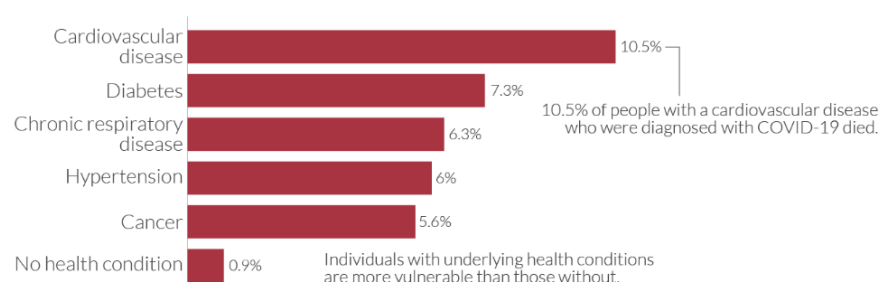
Note: Case fatality rates are based on confirmed cases and deaths from COVID-19 as of: 17th February (China); 24th March (Spain); 24th March (South Korea); 17th March (Italy).
Data sources: Chinese Center for Disease Control and Prevention (CDC); Spanish Ministry of Health; Korea Centers for Disease Control and Prevention (KCDC).
Order: G. Pezza G. Broderick S. Case-Fatality Rate and Characteristics of Patients Dying in Relation to COVID-19 in Italy. JAMA.
OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.

Source: ourworldindata.org

Figure 4: COVID-19 fatality rates in China

Coronavirus: early-stage case fatality rates by underlying health condition in China

Case fatality rate (CFR) is calculated by dividing the total number of deaths from a disease by the number of confirmed cases.
Data is based on early-stage analysis of the COVID-19 outbreak in China in the period up to February 11, 2020.



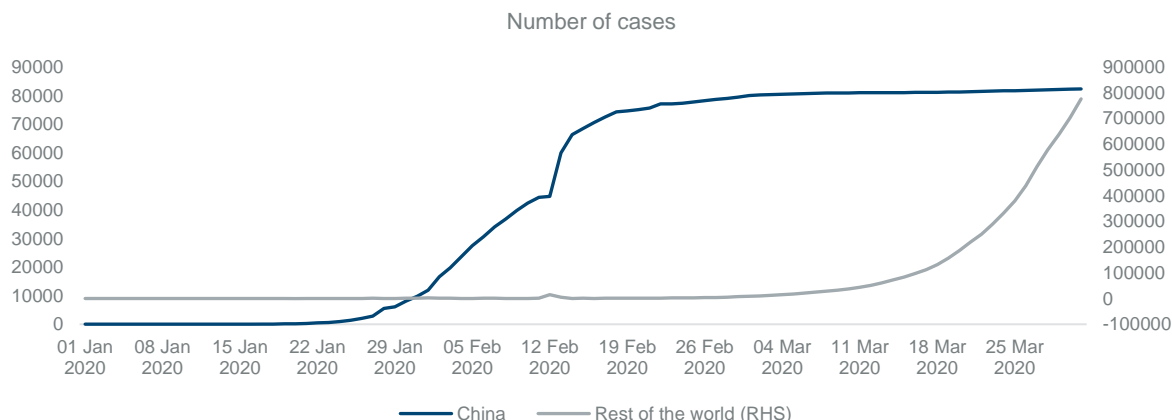
Data source: Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. Vital surveillances: the epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) - China, 2020. China CDC Weekly.
OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the authors.

Source: ourworldindata.org

By the end of February 2020, the number of confirmed COVID-19 cases in China had risen to nearly 80 000, but in the rest of the world the infection rate was still relatively contained. The strict lockdown and quarantine measures implemented in China appeared to be effective in flattening the curve (i.e. slowing the rate of spread). While analysts and companies around the world were growing increasingly concerned about the potential impact of the lockdowns in China on global supply chains, most were cautiously optimistic that the Chinese government would continue to do everything it could to contain the spread of the virus. It was even predicted that factories would resume production in March, with the worst-case scenario being that the country's GDP growth would be sacrificed in the first half of 2020. Consequently, the Shanghai Composite Index and the Hang Seng Index lagged peers in January and February.

Then came Apple's revenue warning on 18 February about the anticipated reduced global supply of iPhones and weaker Chinese demand due to the disruptions caused by COVID-19. As new cases surged in South Korea and Italy in late February and early March, fears that the coronavirus would spread worldwide intensified. Equity markets began to tumble. By 15 March, the total number of confirmed cases in the rest of the world had surpassed that of China.

Figure 5: COVID-19 cases from 1 January to 31 March 2020



Source: Bloomberg

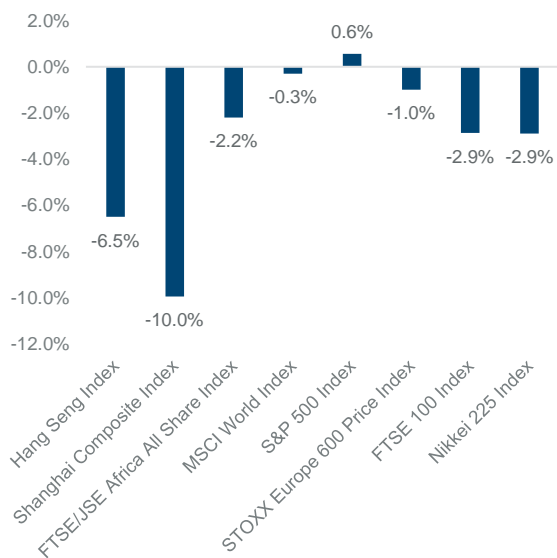
Figure 6: Projected impact of COVID-19 on China

Projected economic impact of coronavirus (2019-nCoV)

Scenario	Date by which the coronavirus outbreak comes under control within China	Probability	China's real GDP growth, 2020 (%)
Optimistic	End-February	25%	5.7
Baseline	End-March	50%	5.4
Pessimistic	End-June	20%	4.5
Nightmare	The outbreak is not contained in 2020.	5%	<4.5

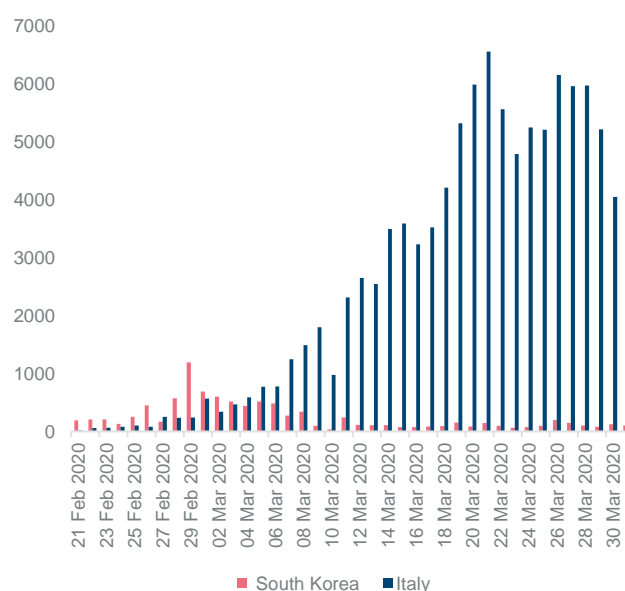
Source: The Economist Intelligence Unit, February 2020

Figure 7: Monthly price return of major equity markets for YTD as at 3 February 2020 in local currency



Source: Bloomberg

Figure 8: Daily increase in the number of COVID-19 cases



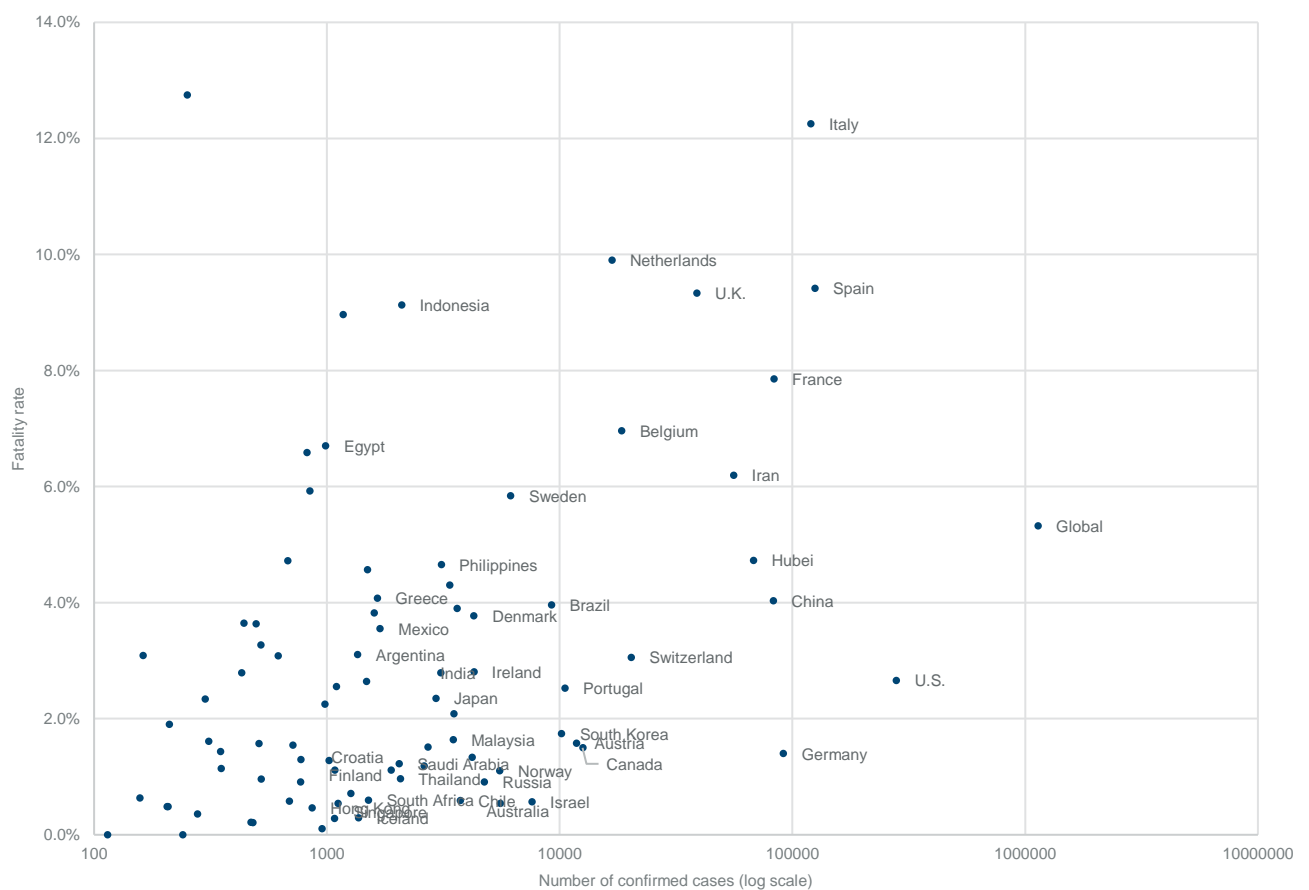
The US Federal Reserve surprised the market by cutting the benchmark interest rate by 50 basis points on 3 March as a pre-emptive strike against the potentially negative impact of COVID-19 on the US economy. Equity markets experienced a short-lived rally but then went into a tailspin as the Fed's emergency action raised the alarm among investors that the situation may have deteriorated faster than anticipated. The oil price war initiated by Saudi Arabia was the last straw that broke the camel's back. Markets were already getting jittery and struggling to determine the real economic impact of the outbreak, with the Brent crude price falling by 30%

on 8 March, the largest decline since the Gulf War. This heightened the risk of a global recession as oil at a record-low price significantly affects the government's revenue in oil-producing countries and the profitability of oil-refinery giants. Most oil-producing countries need the oil price to be at least \$40 to \$50 per barrel in order to fund their fiscal budgets.

The Brent crude oil price has since recovered to \$34 per barrel after Saudi Arabia and Russia resumed negotiations on production cuts in early April. On 11 March, the World Health Organization announced that COVID-19 was officially a pandemic. Equity market routs continued and volatility reached levels last seen during the 2008 financial crisis. The introduction of tough lockdown and social distancing measures across the globe sent liquidity shock waves through the world economy, with the potential to trigger a debt crisis. Many governments and central banks acted swiftly, announcing record fiscal stimulus packages and unlimited quantitative easing programmes. These were intended to mitigate the short-term economic impact by helping

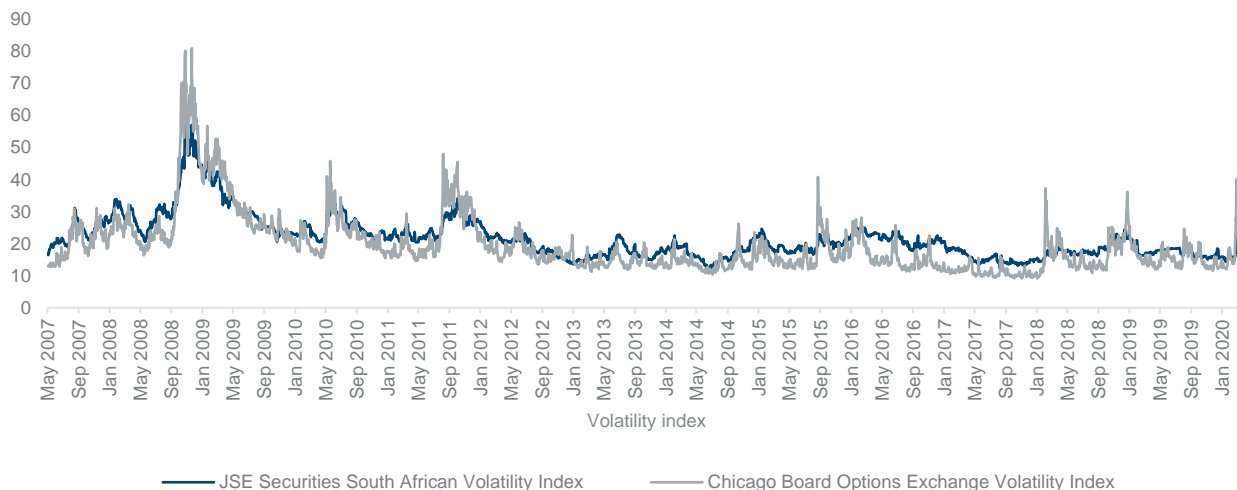
companies stay afloat, giving cash to citizens so that they could buy essential goods and stabilising the financial markets, while scrambling to find ways to slow the spread of COVID-19.

Figure 9: COVID-19 cases and death rate as at 4 April 2020



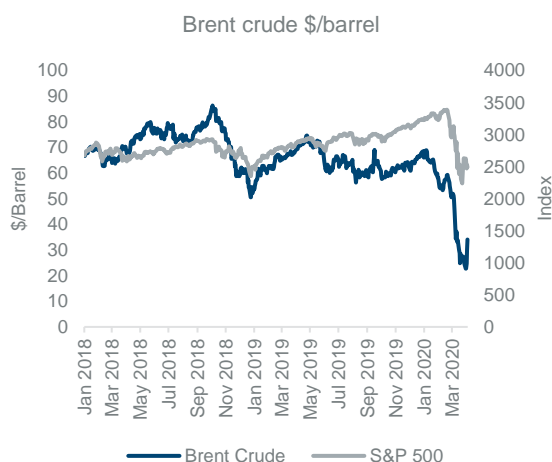
Source: Bloomberg

Figure 10: Volatility indices



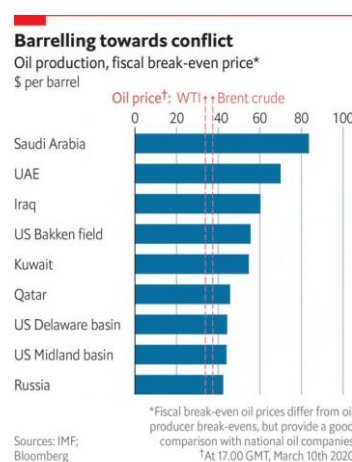
Source: Bloomberg

Figure 11: Oil price and S&P 500



Source: Bloomberg; The Economist

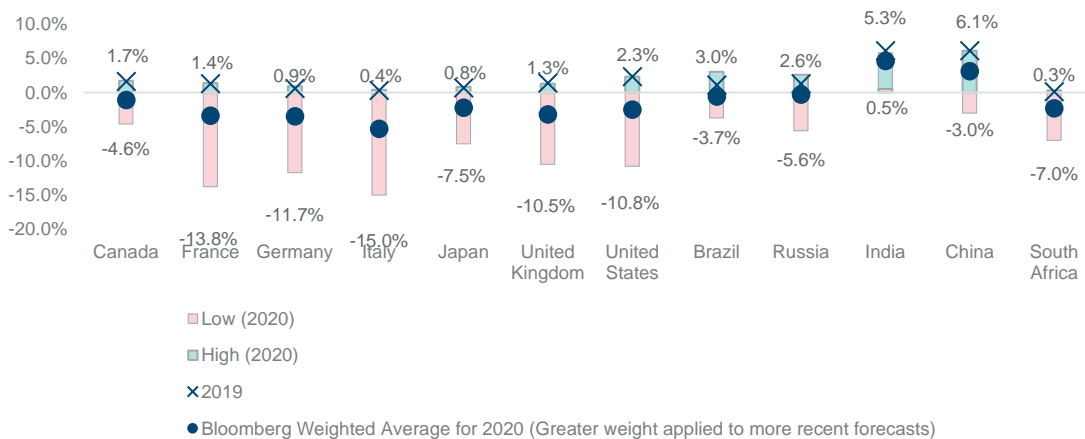
Figure 12: Oil prices to fiscal breakeven budgets



The economic indicators may not or may only partially reflect the impact of the pandemic on economies. Some economies are less vulnerable than others as they were in a better shape prior to the onset of COVID-19. The Q1 and Q2 numbers for 2020 will be gruesome and volatility will remain elevated in the coming weeks and months as uncertainty about the progression of COVID-19 persists. According to Bloomberg surveys, economists and analysts have significantly lowered the GDP growth rate for most countries in 2020. Italy, Spain and the US, which became the new epicentres of COVID-19 in March, will be deeply affected. BRICS countries seem to be faring better, in line with the much lower number of reported infections to date. We will see in the coming weeks whether emerging markets can continue to be more successful in containing the spread.

Countries that are heavily populated, such as India, and countries with insufficient medical infrastructure, such as Brazil and South Africa, remain very vulnerable. However, their having acted more quickly than some of the developed countries in implementing lockdown measures could result in a materially lower rate of new infections. Whether this means that the countries' growth prospects will take less of a beating remains to be seen. The good news is that survey numbers showed that most participants anticipated a quick recovery in the second half of 2020 and in 2021.

Figure 13: Real GDP growth in 2019 vs current forecast range for 2020



Source: Bloomberg

Figure 14: Quarterly real GDP growth forecasts

Bloomberg weighted average	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Canada	-0.9%	-6.4%	2.4%	3.2%	2.5%	2.2%	1.9%	
France	-1.4%	-4.8%	-2.0%	-1.0%	0.3%	4.2%	1.8%	2.1%
Germany	-1.4%	-4.6%	-2.0%	-1.3%	-0.2%	3.0%	1.7%	2.8%
Italy	-3.4%	-6.2%	-3.4%	-2.1%	-0.3%	4.1%	1.6%	2.0%
Japan	-4.5%	-4.1%	2.7%	2.3%	1.6%	1.2%	0.9%	1.3%
United Kingdom	-0.9%	-7.0%	-2.8%	-1.0%	0.3%	6.0%	2.9%	2.8%
United States	-4.8%	-24.6%	11.4%	8.2%	4.0%	3.4%	3.0%	5.2%
Brazil	1.1%	-3.6%	-1.1%	0.6%	1.7%	7.0%	4.3%	
Russia	1.1%	-0.2%	-0.1%	0.4%	1.1%	1.9%	2.9%	
India	3.5%	0.9%	3.3%	4.7%	6.0%	7.9%	6.9%	
China	-5.0%	2.5%	5.2%	6.0%	12.8%	7.2%	5.5%	
South Africa	0.3%	-2.3%	-2.1%	-1.3%	-0.7%			

Source: Bloomberg

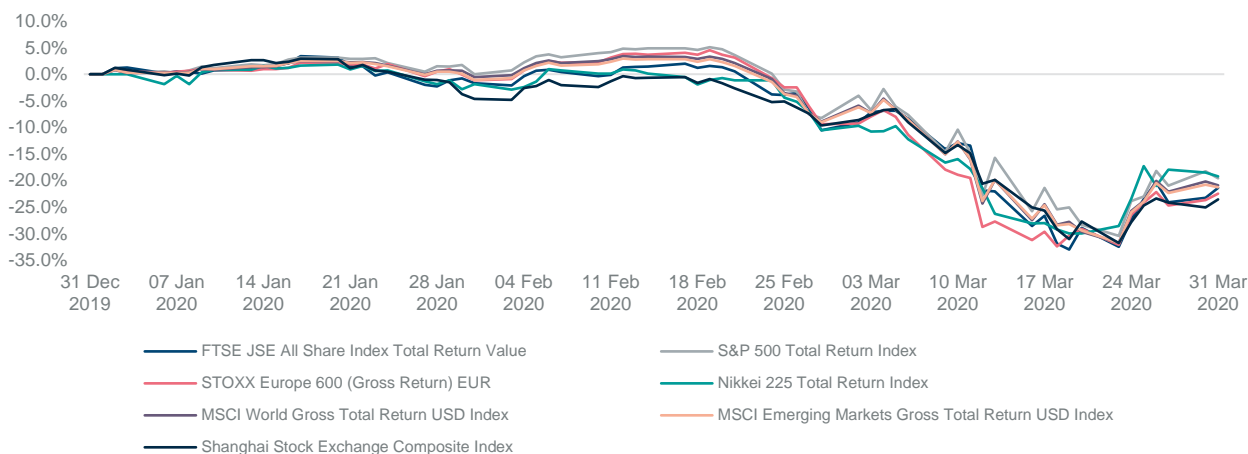
The majority of asset classes 'marched' into a sea of red in Q1 2020, while losses on offshore assets were cushioned by rand depreciation. In local currency terms, South African equity performed very much in line with other major equity indices.

Figure 15: Performance of major indices and asset classes

31 March 2020 (ZAR)	1M	3M	1-year	3-year (annualised)	5-year (annualised)	10-year (annualised)
FTSE/JSE ALSI Total Return	-12.1%	-21.4%	-18.4%	-2.1%	-0.1%	7.7%
FTSE/JSE Capped SWIX Total Return	-16.7%	-26.6%	-24.5%	-7.4%	-3.8%	
S&P 500 Total Return	-0.9%	2.4%	14.8%	15.5%	15.2%	20.9%
STOXX 600 Total Return	-3.6%	-3.6%	4.9%	7.5%	6.8%	12.4%
Nikkei 225 Total Return	2.5%	3.3%	15.7%	13.5%	12.2%	16.0%
MSCI World Total Return	-1.8%	0.7%	11.2%	12.7%	12.1%	17.2%
MSCI ACWI Total Return	-2.1%	0.3%	10.1%	12.2%	11.6%	16.4%
MSCI EM Total Return	-4.3%	-2.7%	2.0%	8.5%	8.0%	10.5%
STEFI	0.6%	1.7%	7.3%	7.3%	7.2%	6.5%
ALBI	-9.7%	-8.7%	-3.0%	5.3%	5.2%	7.4%
IGOV	-7.2%	-6.9%	-5.1%	-0.5%	1.4%	6.1%
WGBI	12.4%	29.9%	31.0%	14.6%	11.1%	11.8%
SAPY Total Return	-36.6%	-48.2%	-47.9%	-23.0%	-13.5%	2.8%
MSCI US REIT Total Return	-11.4%	-7.0%	-2.5%	6.6%	7.5%	17.5%
STOXX 600 Real Estate Total Return	-11.1%	-7.3%	0.6%	8.0%	5.1%	13.8%
Crude Oil	-49.1%	-56.1%	-59.0%	-17.0%	-9.6%	-3.9%
Aluminium	1.8%	7.4%	-1.5%	1.1%	4.6%	4.9%
Copper	-0.6%	2.1%	-5.7%	4.0%	3.7%	4.5%
Gold	-0.5%	3.9%	22.0%	8.1%	5.9%	3.5%
Platinum	-5.6%	-4.7%	5.1%	0.3%	-1.5%	0.8%
Nickel	0.0%	0.0%	-4.7%	10.2%	3.1%	-0.3%
Palladium	2.1%	54.7%	110.6%	57.8%	36.3%	28.3%
Iron Ore	13.9%	19.5%	21.3%	10.1%	16.6%	
USDZAR	13.9%	27.4%	23.0%	10.0%	8.0%	9.4%
GBPZAR	10.5%	19.4%	17.3%	9.6%	4.3%	7.2%
EURZAR	13.9%	25.4%	21.0%	11.2%	8.6%	7.2%
JPYZAR	14.5%	28.7%	26.9%	11.3%	10.4%	7.9%

Source: Bloomberg

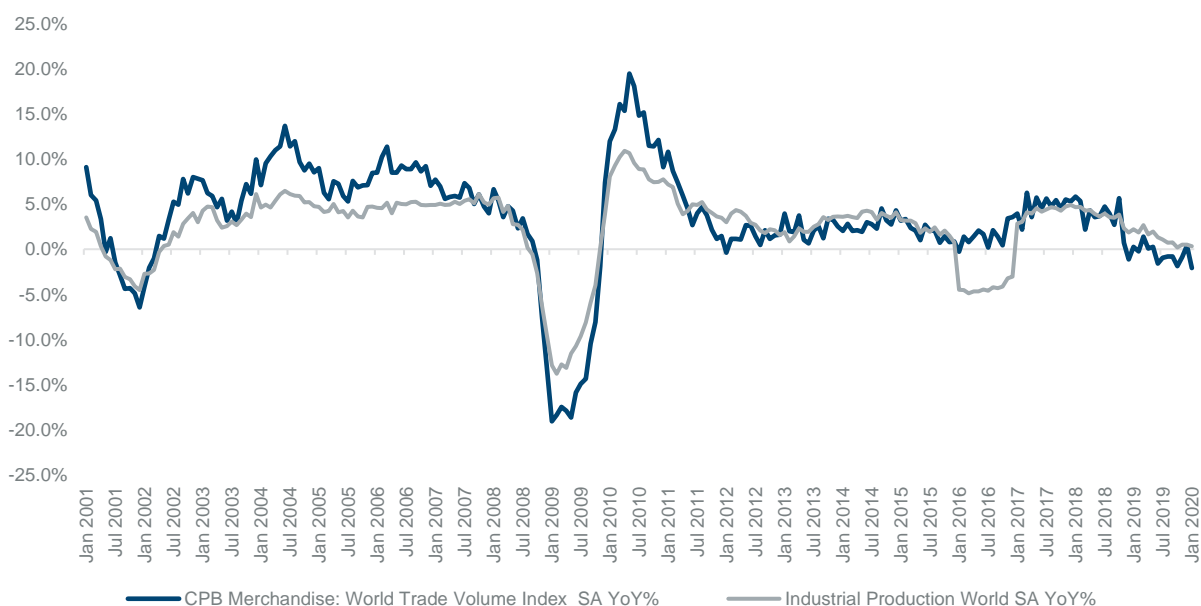
Figure 16: Cumulative total return in local currency



Source: Bloomberg

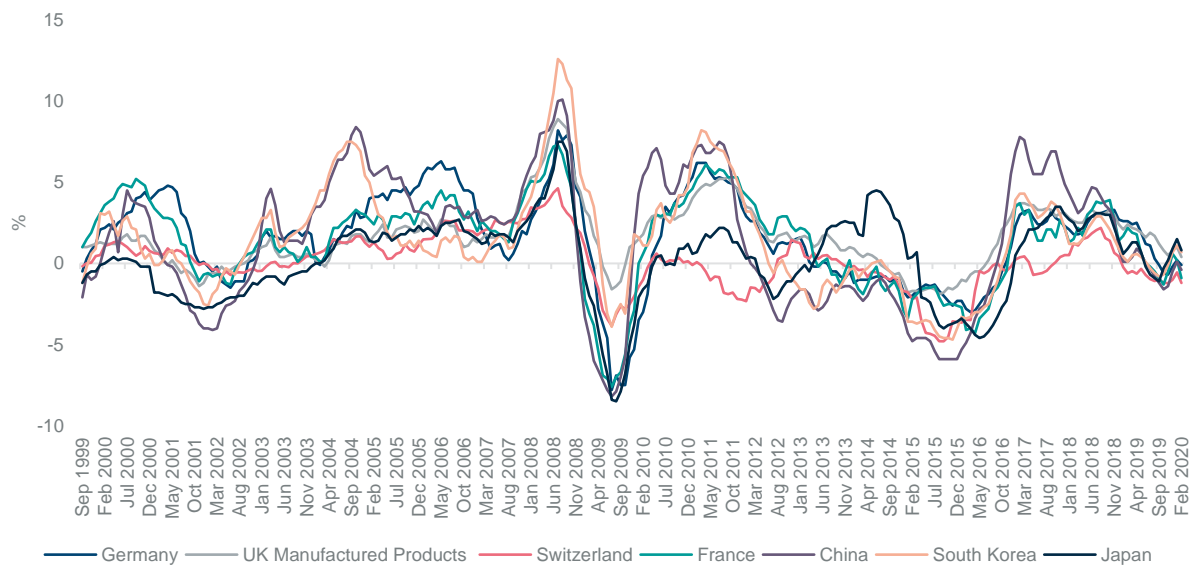
The volume of world trade and industrial production continued to slow in January 2020, with year-on-year percentage changes of -2.1% and 0.3%, respectively. Producer price indices displayed a similar weakening trend in February. Economic surprise indices deteriorated significantly in the case of China and the EU over the first quarter, as posted economic indicators so far have been much worse than expected economic data. The purchasing managers' indices (PMIs) of most countries tumbled to below the neutral level of 50 in March.

Figure 17: World trade volume and industrial production YoY%



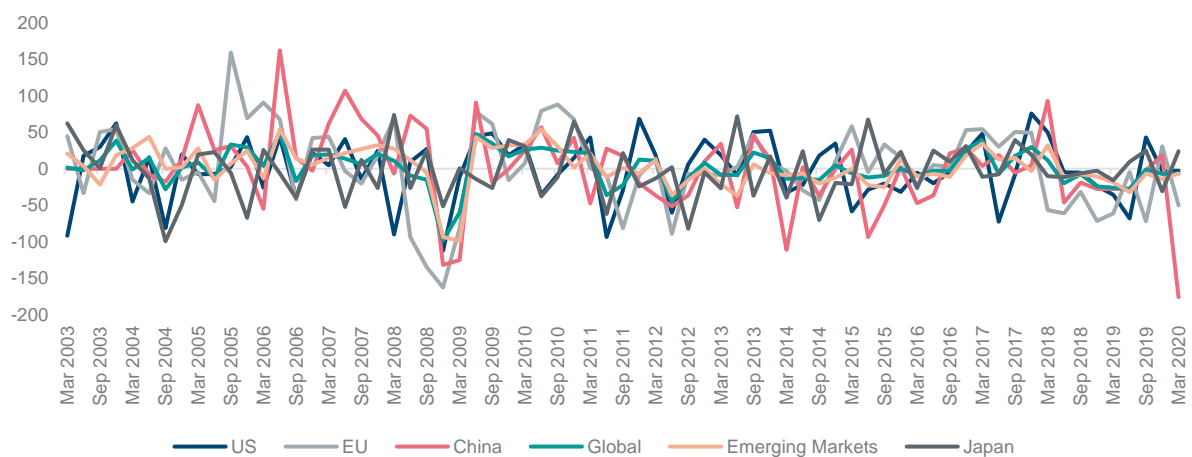
Source: Bloomberg

Figure 18: Producers' Price Index



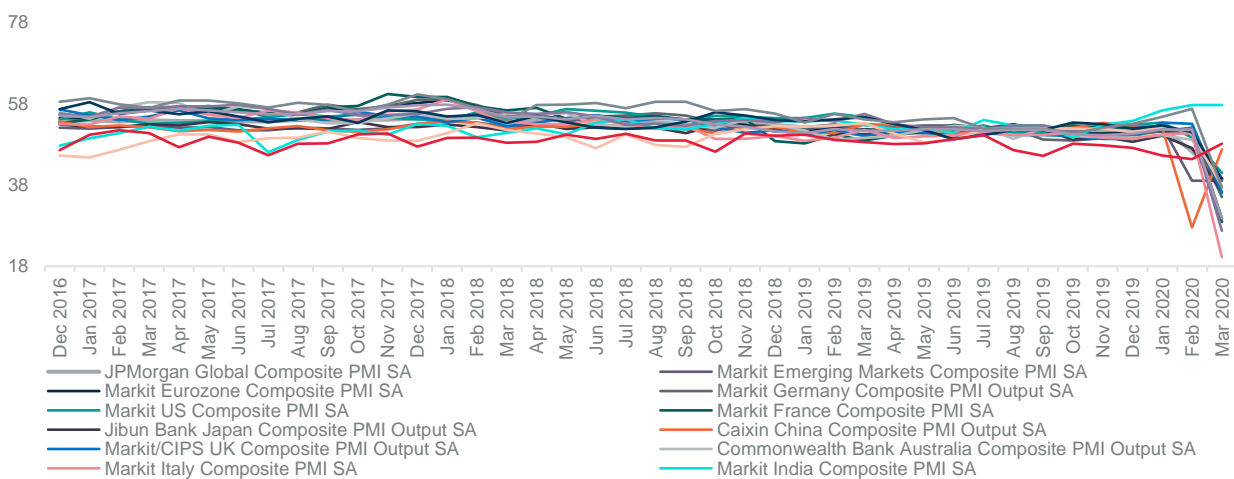
Source: Bloomberg

Figure 19: Economic Surprise Index



Source: Bloomberg

Figure 20: Global PMIs

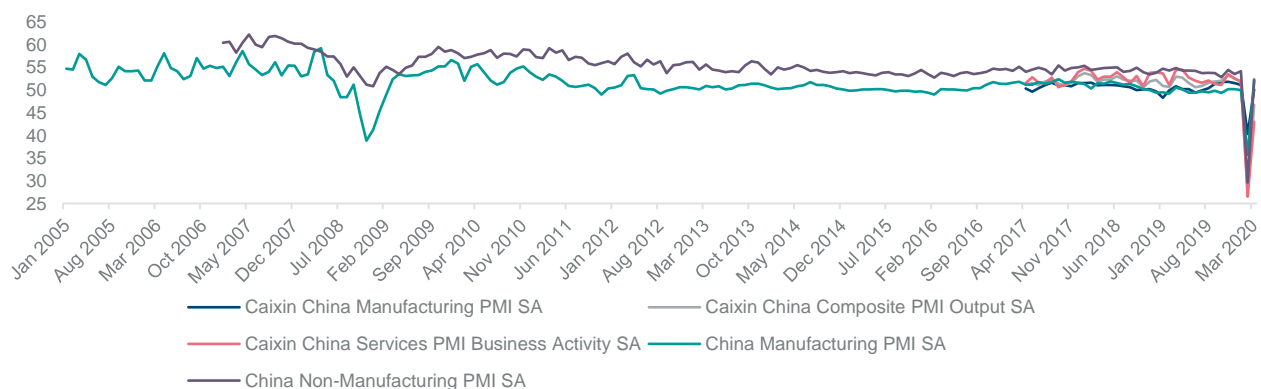


Source: Bloomberg

While the rest of world is yet to reach the so-called ‘apex’ of the COVID-19 outbreak in the coming weeks or months, most of the factories in China are back in production mode, with some swift recoveries evident in manufacturing and non-manufacturing PMIs. With retail sales and foreign direct investments having plunged in February, we expect some recovery in March and April. Yet certain sectors such as entertainment and restaurants will remain vulnerable.

The Chinese government is cautiously encouraging consumers to spend money and dine out but at the same time it is continually monitoring new local transmissions, new imported cases and asymptomatic cases. Schools have reopened or are due to reopen in early April across China. This is an indication that the outbreak risk has greatly subsided as the government would not put the younger generation at risk, especially when most parents have only one child. People may question or doubt the accuracy of China’s officially reported COVID-19 infection and fatality rates. Nevertheless, the trends do provide hope and guidance to other nations that: (1) Strict quarantine and lockdown measures can slow the spread and contain the virus. (2) Wearing face masks, practising social distancing and exercising good hygiene habits are crucial. (3) Lifting lockdown measures will take time to prevent a resurgence of infections as people resume work and other outdoor activities. (4) Some restrictive measures will remain in place until a vaccine becomes available or an effective treatment is found. (5) COVID-19 will have a lasting impact on society, people’s behaviour and business structures. (6) A full global recovery will take time and will not be even because different regions are at different phases of the outbreak. Economies are exposed to primary effects through domestic production and demand disruptions and are subject to spill-over effects from the secondary impact of trading partners being in lockdown, weakening demand and uncertain logistics – despite the resumption of domestic production. (7) Plasma taken from recovered patients contains antibodies which can be used as an emergency treatment for critically ill patients. If the number of recoveries continues to rise over time, this will help as then more donors will be available to save lives.

Figure 21: China PMIs and retail sales



Source: Bloomberg

Figure 22: China retail sales, FDI, imports and exports YoY%



Source: Bloomberg

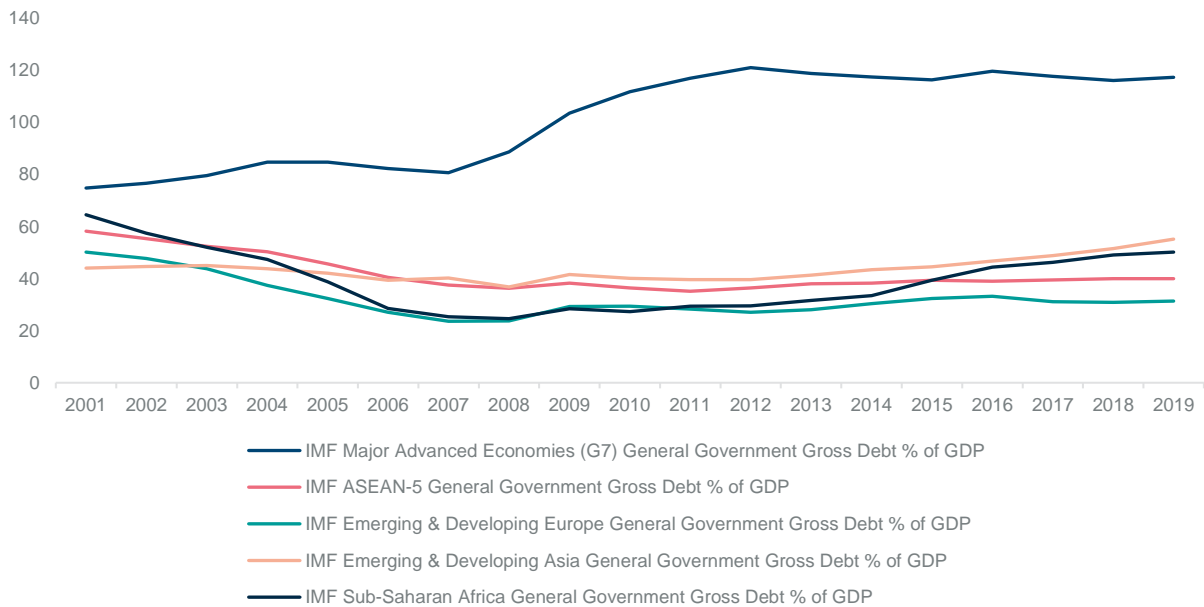
Governments across the world have rapidly deployed wide-ranging policy responses to the coronavirus crisis, promising to do “whatever it takes” to shield their economies from COVID-19 shocks. Most of these have involved a comprehensive lockdown – essentially a self-induced coma – to slow down the spread of the virus and reduce the economic costs in the long term. It should come as no surprise, therefore, that budget deficits and fiscal balances will deteriorate in 2020. According to a Bloomberg survey, the US debt-to-GDP ratio is expected to jump from 79.2% to 83.0% on average in 2020, with the most pessimistic forecast being as much as 95.0%. Current circumstances suggest that the scope and depth of the actions taken in the face of the virus could intensify further. Ever since the 2008 financial crisis, policy rates have been low in most developed markets. In early 2020, they were cut to practically zero, thus rendering any further rate changes largely ineffective in bringing relief to economies in crisis.

Figure 23: Government budget balance as % of GDP



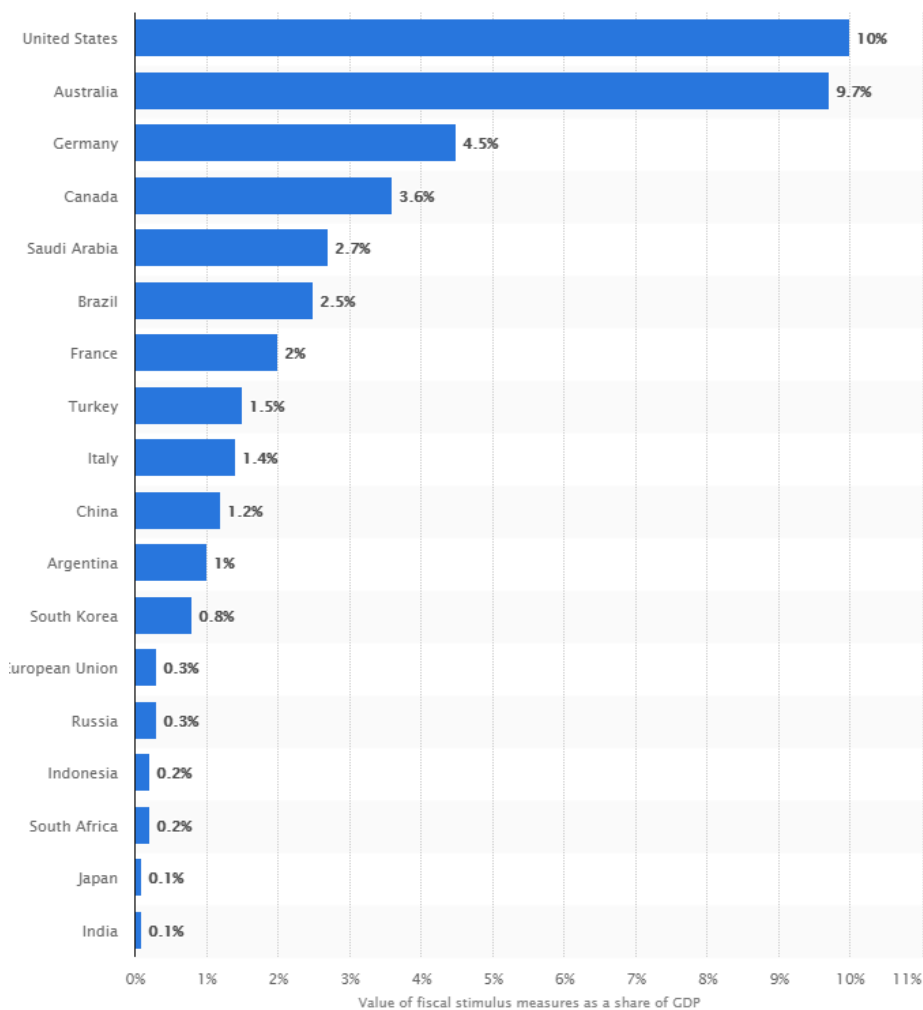
Source: Bloomberg

Figure 24: Government debt as % of GDP



Source: Bloomberg

Figure 25: G20 countries' COVID-19 fiscal stimulus packages as % GDP (as at March 2020)



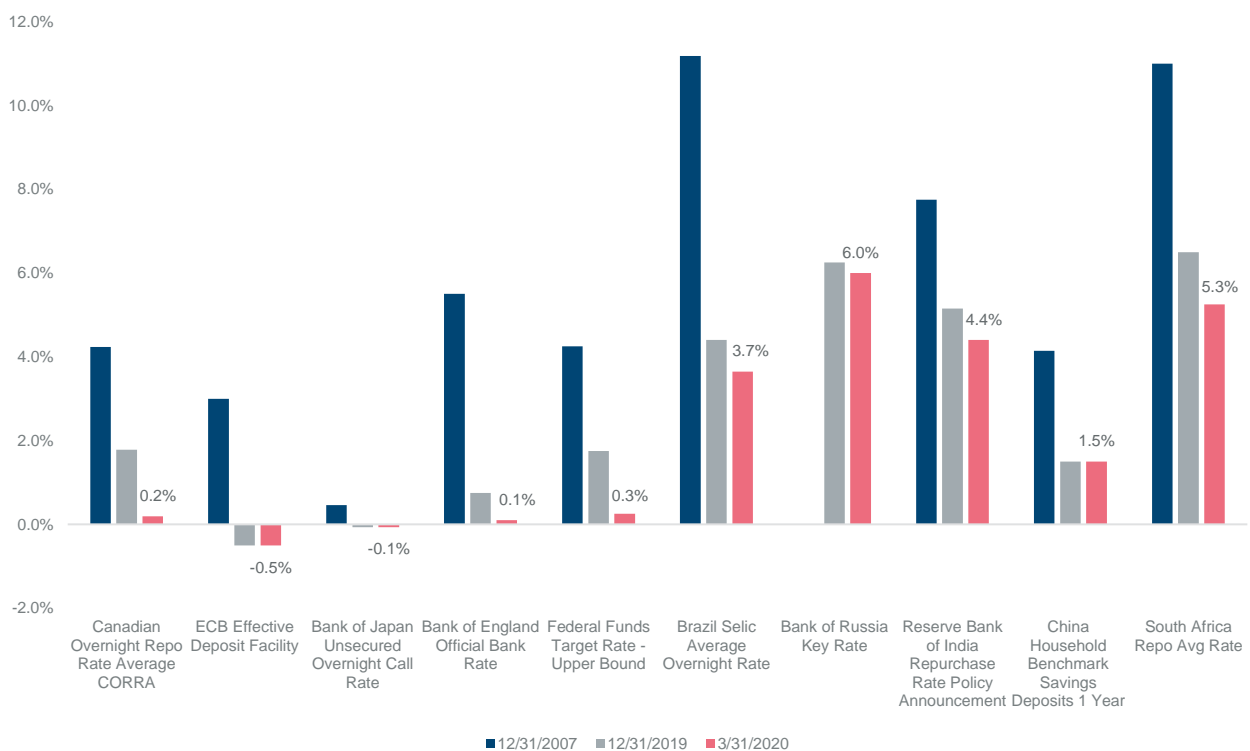
Source: Statista

Figure 26: G4 countries' balance sheet expansion plans

Country	Central Bank Balance Sheet (Current*)		Balance Sheet Expansion Plan		
	USD bn	% of 2020 GDP	USD bn	Balance Sheet Action	% of 2020 GDP
United States	5812	27%	4500	We expect the Fed to expand its balance sheet via QE by a total of ~\$4-5 trillion in the current easing cycle.	21%
Euro Area	6358	44%	1394	The announced €120 billion, the €750 Pandemic Emergency Purchase Programme (PEPP) and the normal asset purchase programme of €20 billion/month	10%
UK	898	28%	637	The announced £200bn QE, with the Term Funding Scheme (TFS) calibrated to allow for a demand-driven £200bn new lending and our expectation of £20bn via Covid Corporate Financing Facility (CCFF)	20%
Japan	5724	105%	303	We expect the BoJ to expand its balance sheet via QE by a total of ~¥28 trillion by March 2021, as well as the special funds-supplying operations to facilitate corporate financing of ~¥3.4 trillion.	6%
G4 Total	18791	41%	6834	Fed: ~\$4-5 trillion ECB: €1110 billion BoE: £420bn BoJ: ~¥31 trillion	15%

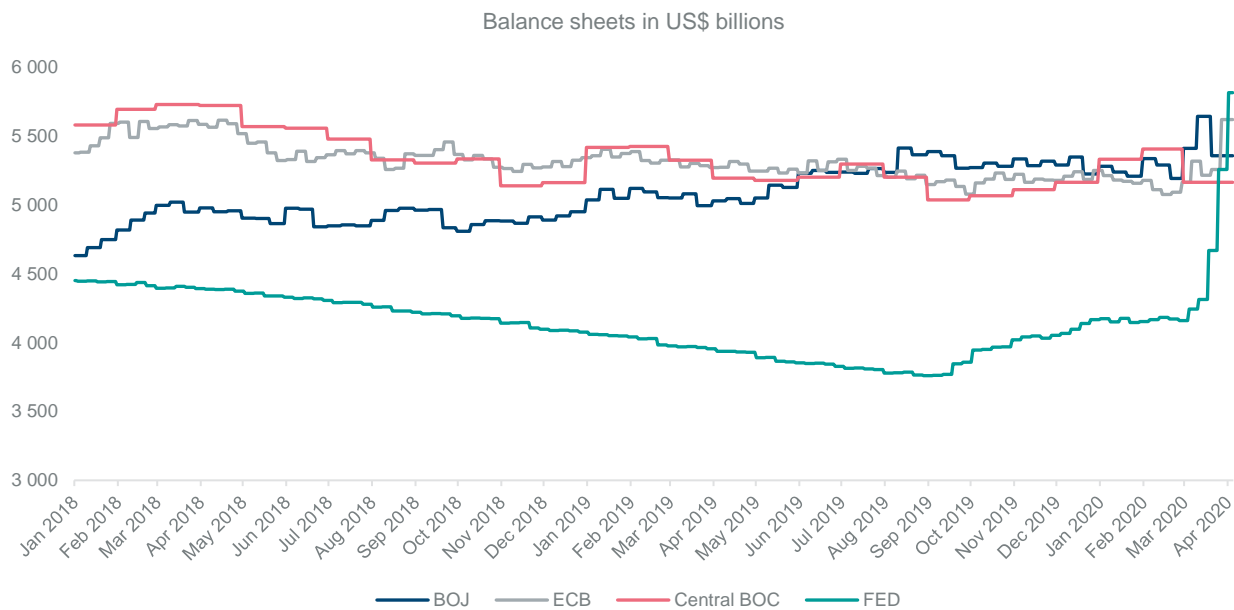
Source: RMB Morgan Stanley

Figure 27: Central bank policy rates



Source: Bloomberg

Figure 28: Central bank balance sheets



Source: Bloomberg

The Fed, ECB (European Central Bank) and Bank of Japan have respectively injected US\$1.6 trillion, US\$371 billion and US\$77 billion-worth of liquidity into the financial system so far this year. Bloomberg Economics expects that the current quantitative easing programme will exceed the combined QE programmes implemented at the time of the 2008 financial crisis.

Figure 29: US quantitative easing programme

	Dates	Total Amount (USD Bil)
QE1	Nov. 2008 - Mar. 2010	1,725
QE2	Nov. 2010 - Jun. 2011	600
QE3	Sep. 2012 - Oct. 2014	1,613
Current QE (Est.)	Mar. 2020 - Dec. 2020	3,300

Source: Bloomberg Economics

While developed economies have more medical and financial resources to fight the pandemic, most were slow to implement clear and strict lockdown measures. Developing economies moved more quickly on average to implement trade and movement restrictions since they are much more vulnerable in the face of inadequate medical and healthcare infrastructure and other resources. For all countries, the difficult trade-off between responding to the medical crisis and coping with the escalating economic crisis will continue to haunt world leaders for the foreseeable future.

As each country approaches its peak rate of infection, questions will be asked such as: Should we continue our lockdown measures? How should we lift these measures, particularly as other countries will still be experiencing high infection rates? Will a second wave of infections be precipitated via imported cases or as people return to work? How will trade relationships be affected after the pandemic ends? Will people's lifestyles be forever changed, including travelling less for business and working more from home? Will some businesses such as the FANG technology companies (Facebook, Amazon, Netflix and Alphabet's Google) grow even more powerful as a result? What about the mental health of citizens having to endure extended lockdown periods?

All of the above are real and pressing concerns relating to the pandemic that policymakers and business people alike must boldly and bravely address. Countries must coordinate and collaborate in taking hard decisions about life, death and the future of their economies, while patiently waiting for a vaccine.

UNITED STATES

UNPRECEDENTED ACTIONS TO CONVINCE THE MARKET

For the US and many other countries throughout the world, 2020 is all about breaking records – not at the Olympic Games (due to be hosted by Tokyo this year but delayed until next July) but rather through skilful and unprecedented adjustments to fiscal and monetary policies. In Q4 2019, real GDP in the US grew by 2.3% year on year. The University of Michigan Consumer Sentiment Index, the Conference Board Consumer Confidence Index and the Bloomberg US Weekly Consumer Comfort Index all declined in March, yet they remain at robust levels. This can be explained by the fact that most surveys were conducted at the beginning of March, before COVID-19 cases began to surge in the country.

Figure 30: University of Michigan Consumer Sentiment Index



Source: Bloomberg

Figure 31: Conference Board Consumer Confidence Index

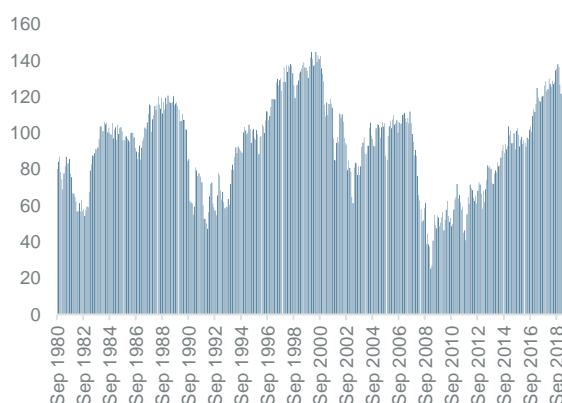
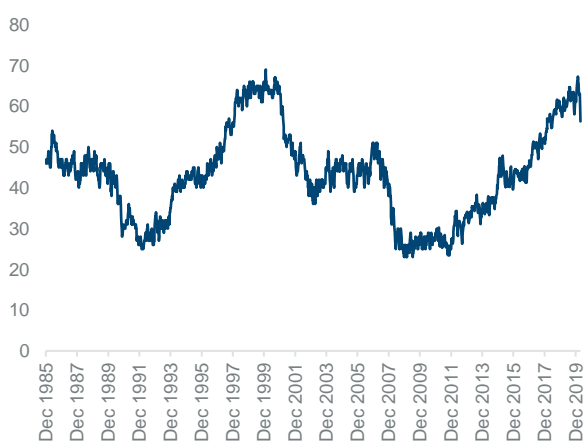
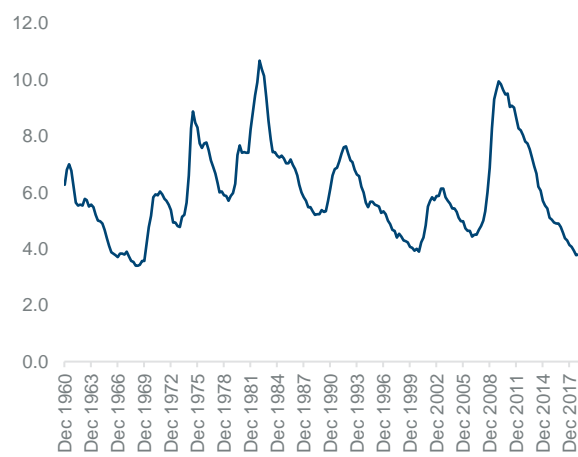


Figure 32: Bloomberg US Weekly Consumer Comfort Index



Source: Bloomberg

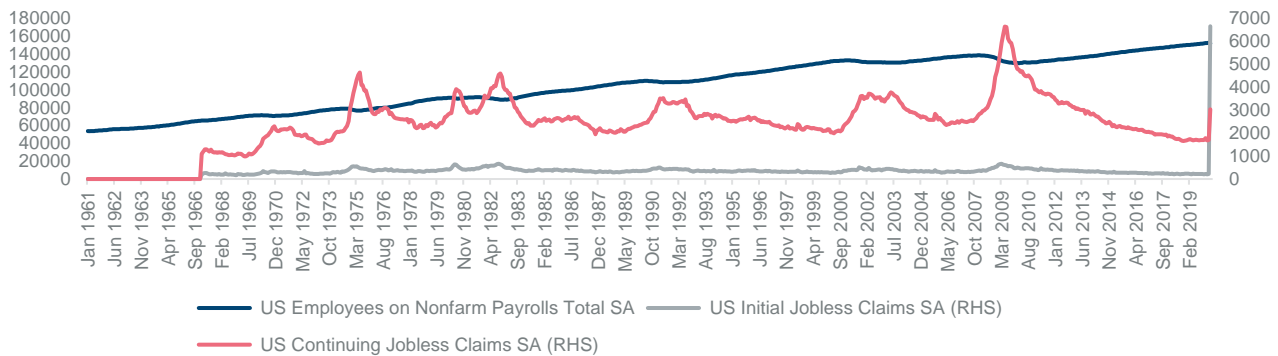
Figure 33: US unemployment rate



While the unemployment rate is yet to reflect the total number of job losses, jobless claims surged to over 6.6 million in March due to the loss of income induced by the lockdown and the increased unemployment benefits

provided by the US government. UBS and Goldman Sachs have both forecasted that unemployment will exceed 10% this year.

Figure 34: Payroll and jobless claims



Source: Bloomberg

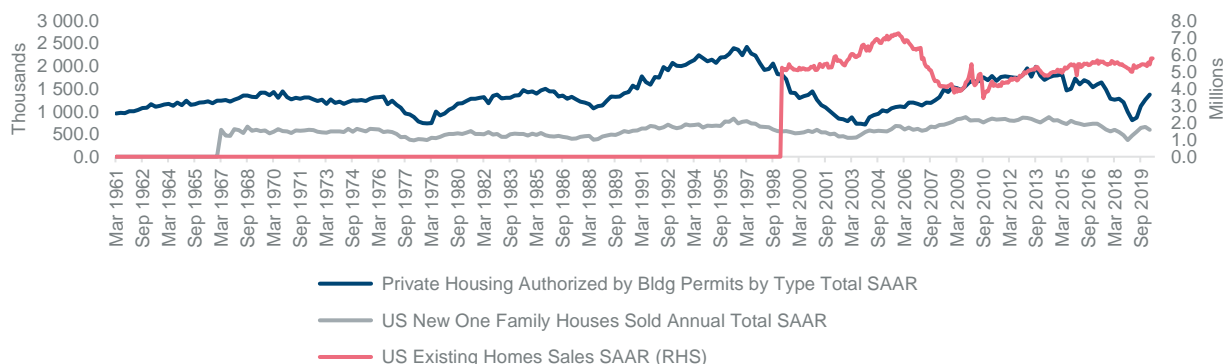
Figure 35: Retail sales less autos and gas stations seasonally adjusted YoY%



Source: Bloomberg

The year-on-year growth rate in retail sales slowed slightly to 4.3% in February. New and existing home sales, as well as private housing building permits for March, are not yet available; current data only reflects consumer sentiment prior to the outbreak.

Figure 36: US housing market



Source: Bloomberg

The OECD Business Tendency Manufacturing Confidence Index showed some nascent signs of recovery in January and February. The March number showed hardly any change due to the timing of the survey. However, the Dallas Fed Manufacturing Outlook tanked to -70, worse than during the financial crisis period.

The US non-manufacturing sector continued its expansion, but slowed as the Institute for Supply Management (ISM) Non-Manufacturing Index decreased from 57.3 in February to 52.5, with business activities and employment showing a contraction.

Figure 37: OECD Business Tendency Manufacturing Confidence Index

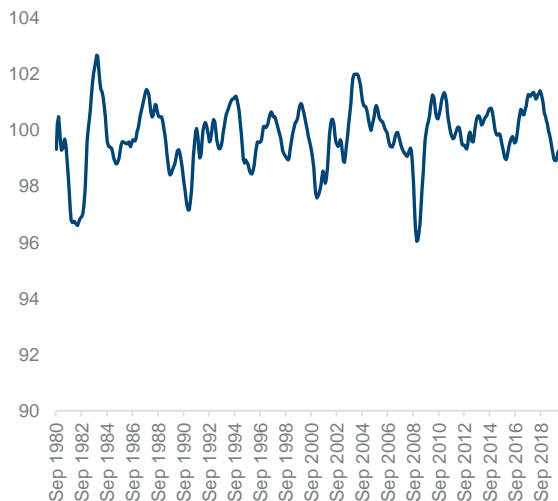
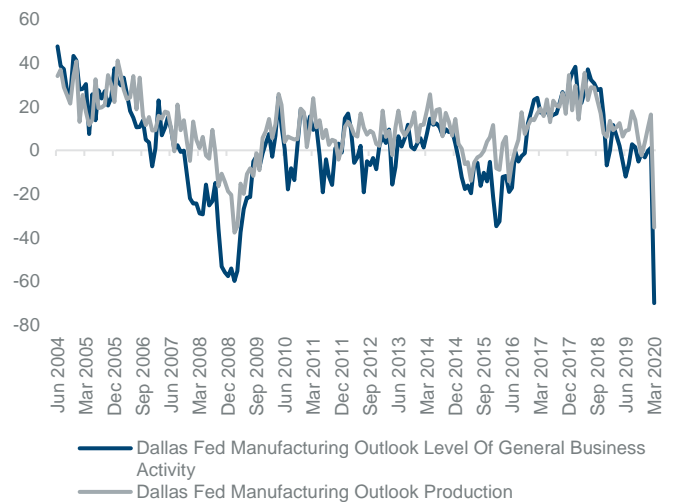
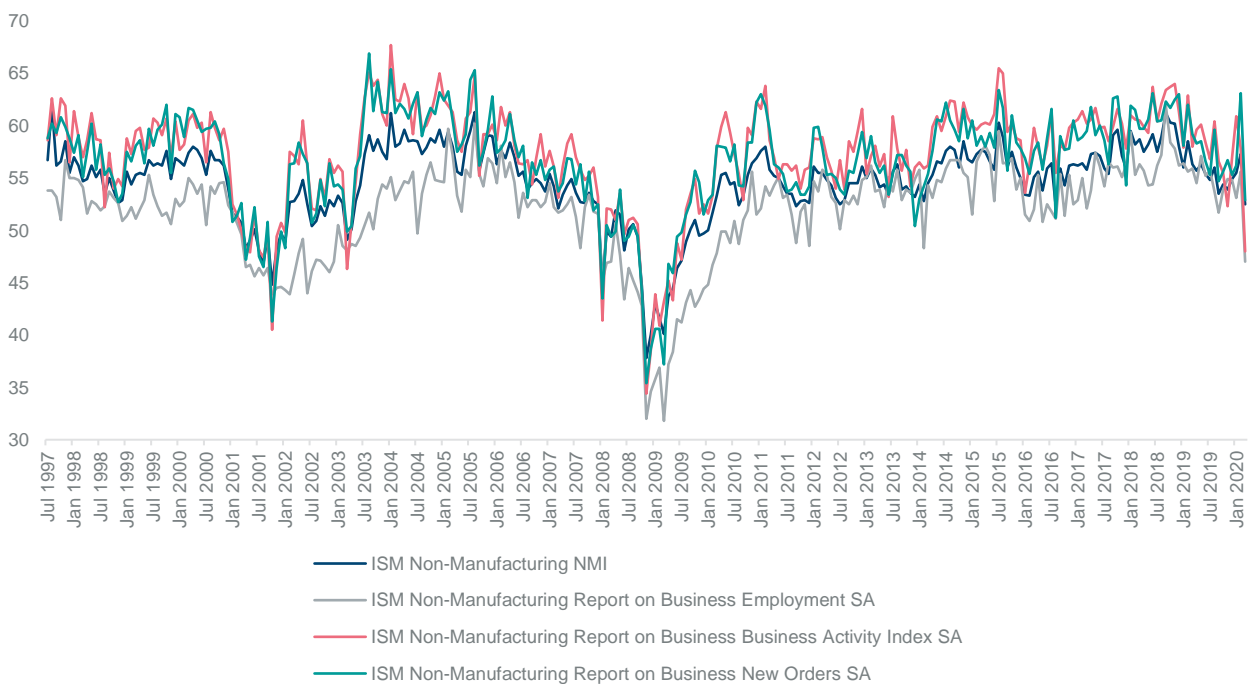


Figure 38: Dallas Fed Manufacturing Outlook



Source: Bloomberg

Figure 39: ISM Non-Manufacturing Index



Source: Bloomberg

The year-on-year growth rate in US exports to and imports from China tumbled to -19.2% and -31.3% respectively in February. The likely reasons for the decline were weakened demand from China, factory

closures and logistics problems as the country was then in full lockdown mode. Total exports and imports slowed to -0.4% and 4.7% in February, with the result that the US trade deficit narrowed to US\$39.9 billion in February. The US industrial production year-on-year growth rate stabilised to 0.04% over the same period.

Figure 40: US exports to and imports from China



Source: Bloomberg

Figure 41: US imports and exports

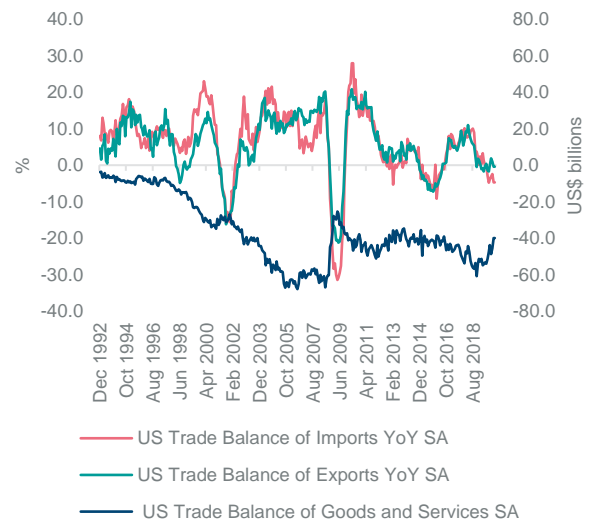
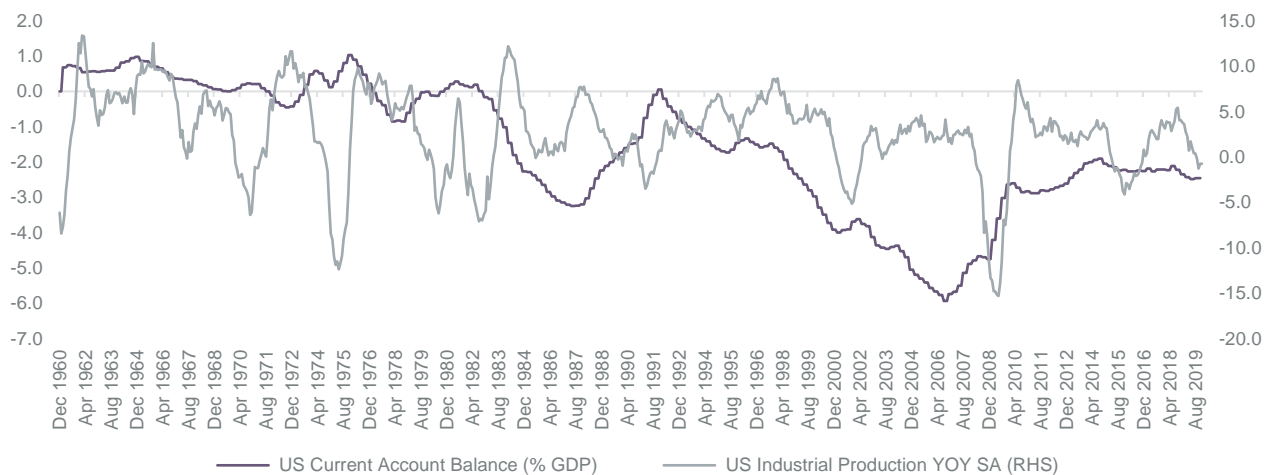


Figure 42: US current account balance and industrial production



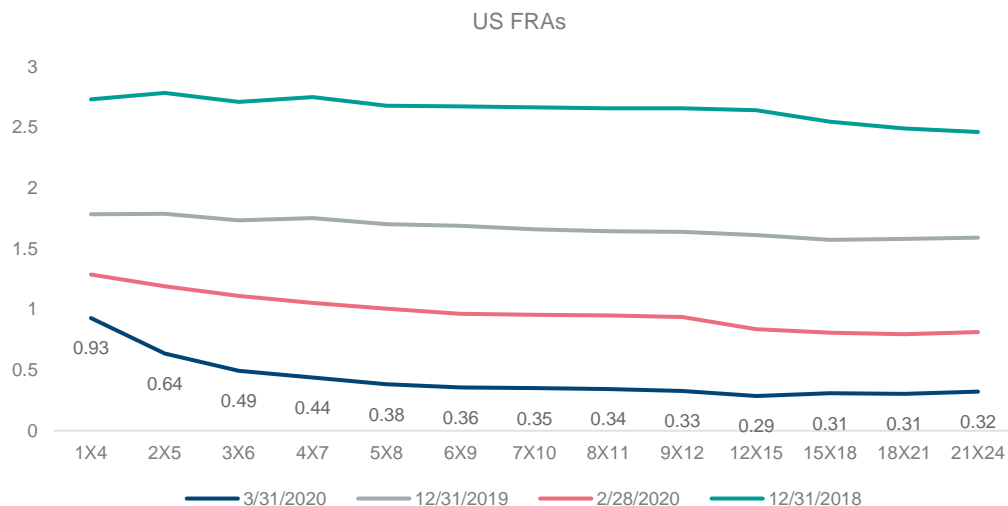
Source: Bloomberg

Thus far, jobless claims and production outlooks have to some extent reflected the shock to the system from COVID-19. We saw from the Q1 numbers that the US economy was much more resilient than other regions when moving into the first phase of the pandemic. The US government's US\$2 trillion fiscal stimulus package announced on 25 March may not be enough but it is much more than what other, poorer nations can afford. Such countries cannot implement limitless QE programmes without sacrificing their currencies, while some will have to resort to IMF emergency funding to combat or at least mitigate the effects of the pandemic.

INTEREST RATE EXPECTATION

The Federal Reserve cut the target rate by another full percentage point on 15 March after its emergency rate cut of 50bps on 3 March. We see that the current FRA rates (forward rate agreements) are pricing in a few more cuts in the coming months.

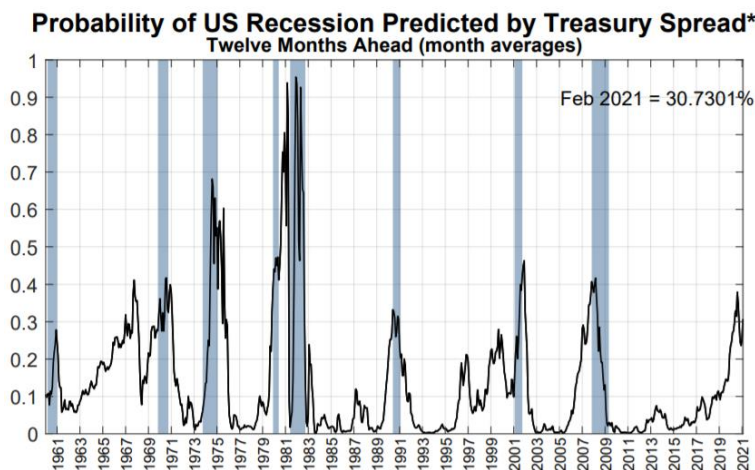
Figure 43: US FRAs



Source: Bloomberg

The probability of a US recession within the next 12 months, as predicted by the US Treasury spread, increased from 24% in December 2019 to 30.7% at the beginning of March 2020. Bloomberg data suggested a 40% probability of recession. The spread between the 10-year Treasury bond and the 3-month Treasury bill jumped to 120bps on 18 March. The spread between the 10-year and 2-year Treasury bonds stood at 37bps.

Figure 44: Probability of a US recession predicted by the Treasury spread

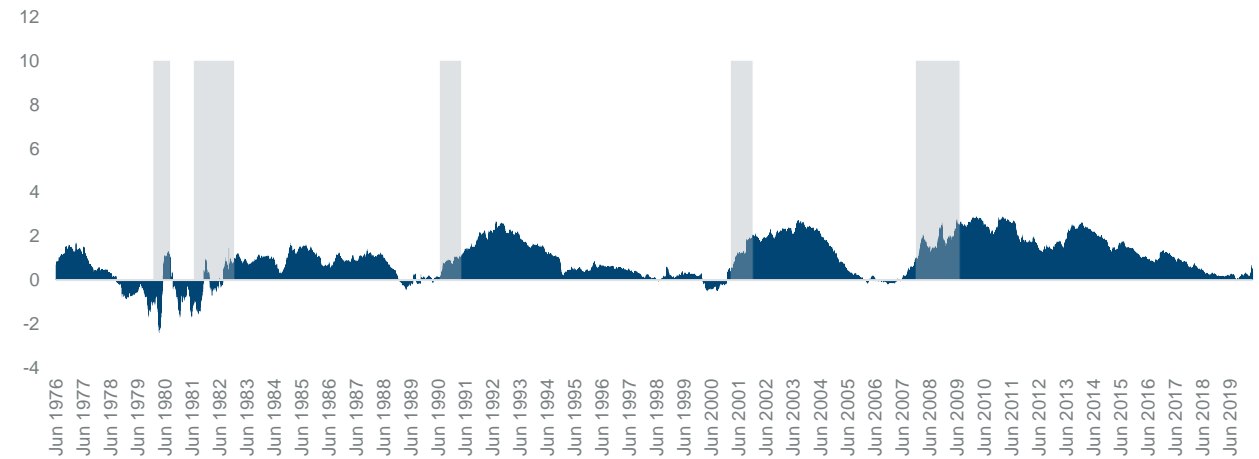


*Parameters estimated using data from January 1959 to December 2009, recession probabilities predicted using data through Feb 2020. The parameter estimates are $\alpha = -0.5333$, $\beta = -0.6330$.

Updated 03-Mar-2020

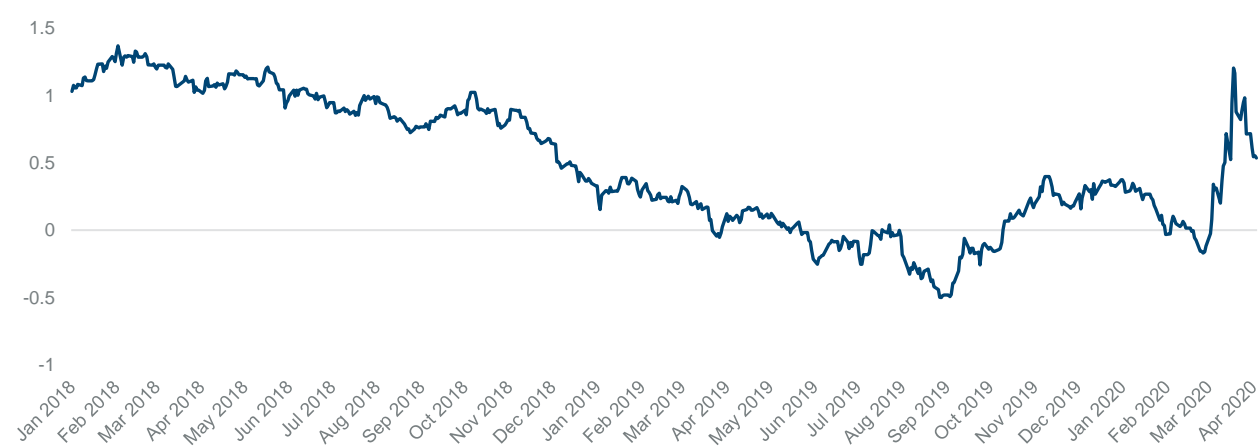
Source: https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf

Figure 45: 10-year vs 2-year US Treasury bond yield spread vs US recession



Source: Bloomberg

Figure 46: 10-year vs 3-month Treasury bond yield spread



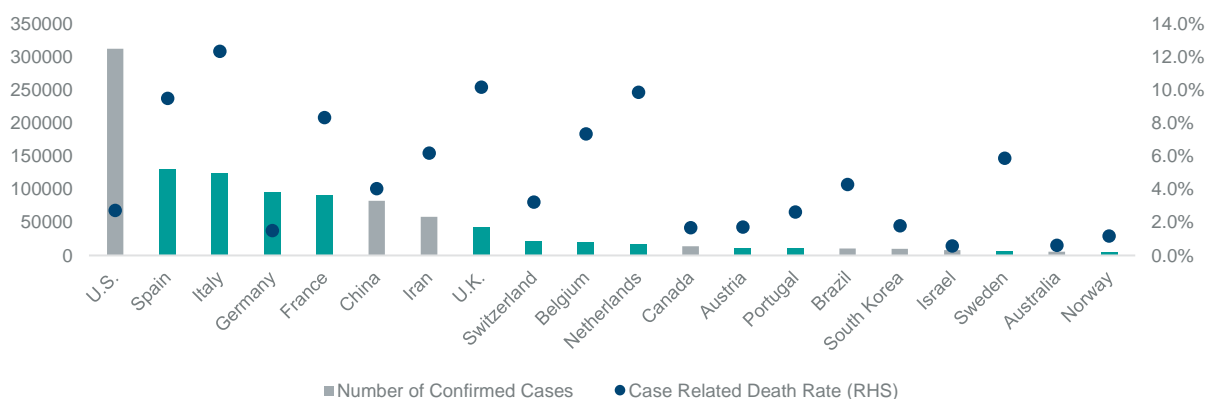
Source: Bloomberg

EUROPE

THE CONTINENT WORST HIT BY COVID-19

Seven out of the top 10 countries by number of COVID-19 infections are in Europe. While the US has surpassed other nations in terms of number of cases, the fact that Europe's COVID-related death rate is much higher than the global average makes for the heart-breaking news headlines that we have been seeing on an almost daily basis over the past few weeks.

Figure 47: Top 20 countries by number of confirmed cases and related death rates



Source: Bloomberg

Both the European Commission Consumer Confidence and Economic Sentiment Indicators for the Eurozone continued their sharp declines into Q1 and fell below their respective long-term averages. This bearish outlook for the Eurozone is expected to persist as the infection rate and death toll are yet to reach a plateau in the region.

Figure 48: European Commission Consumer Confidence Indicator

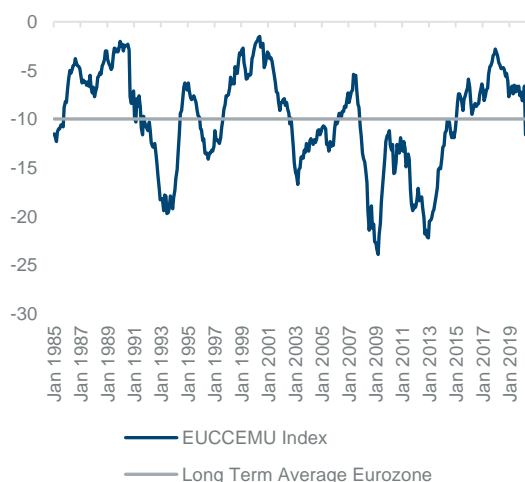
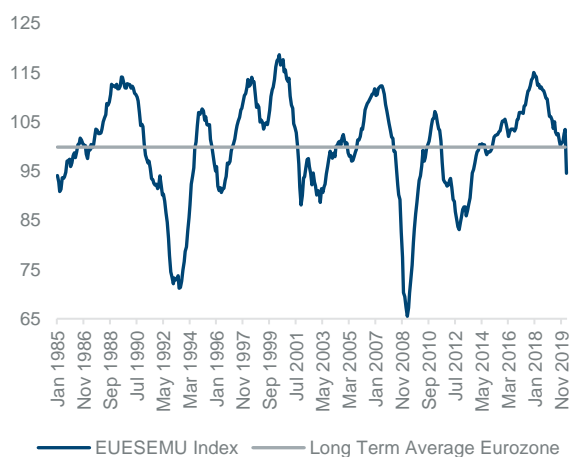


Figure 49: European Commission Economic Sentiment Indicator



Source: Bloomberg

The Euro Area Business Climate Indicator continued its decline in Q1 2020. The Eurozone capacity utilisation stabilised to 80.9% in March. Industrial production year on year was -1.1% for January, which is the latest data available, showing the region's weakening growth prior to the outbreak. Leading indicators such as the Germany Manufacturing and Services PMIs and the Eurozone Manufacturing PMI have all slumped to a level below 50, a complete reversal of the path to recovery that we saw in Q4 last year. The year-on-year growth

rate of German exports of goods and services has been moving sideways since 2018. As global trade continues to slow as COVID-19 unfolds – notably, China’s passenger car sales plunged by over 80% year on year in January – we expect this slowdown to also be visible in Germany’s export figures in the short term.

Figure 50: Business climate vs industrial production

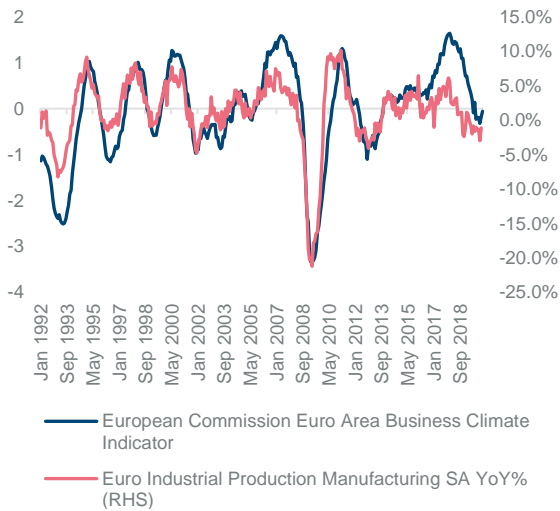
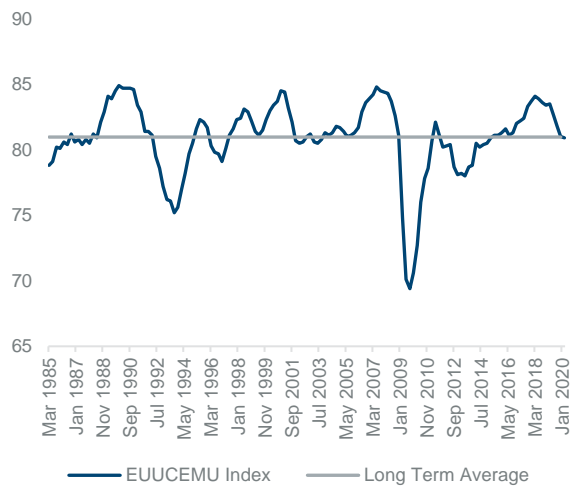
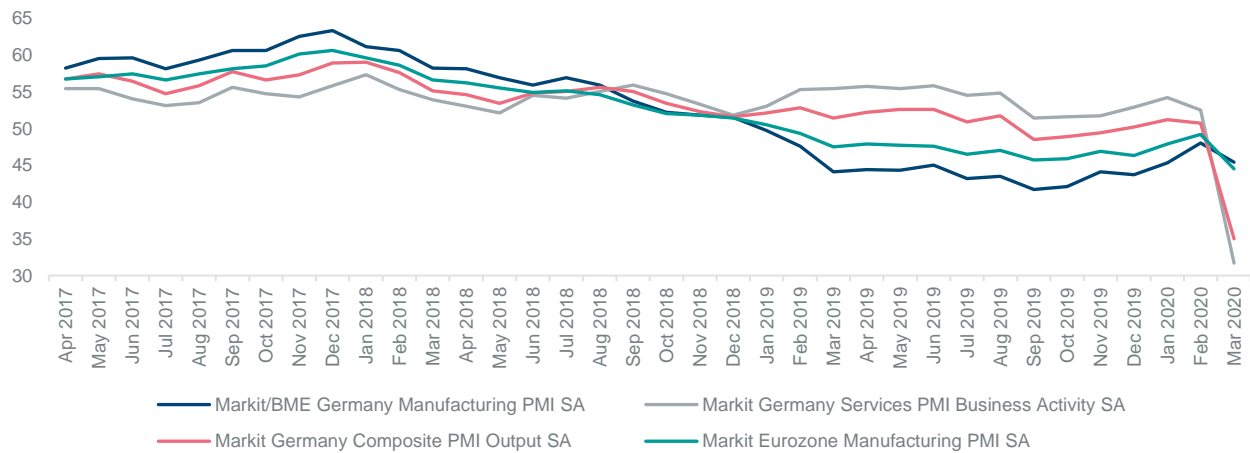


Figure 51: European Commission Eurozone capacity utilisation



Source: Bloomberg

Figure 52: Manufacturing PMI



Source: Bloomberg

Figure 53: Germany exports YoY%

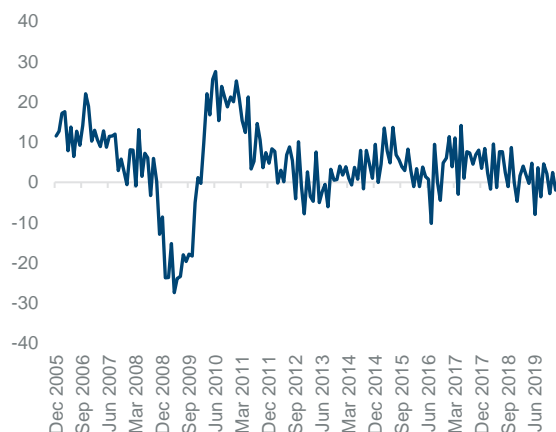
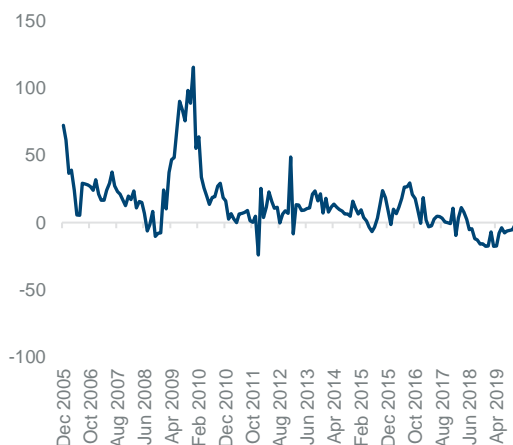


Figure 54: China car sales YoY%

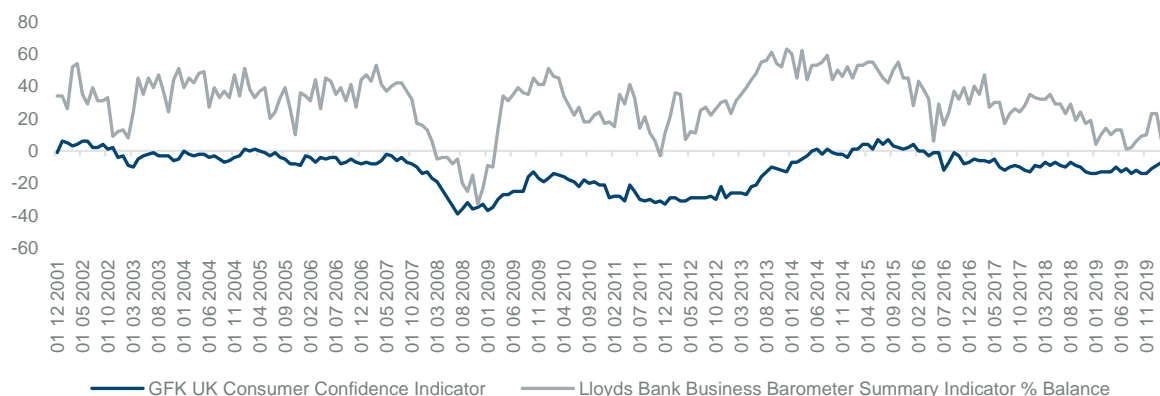


Source: Bloomberg

The COVID-19 pandemic is putting additional pressure on the UK to secure a trade deal with the EU by the end of 2020. While Downing Street has said that talks regarding the trade deal have been taking place over the phone in the face of a practically global lockdown, there is an increasing number of UK parliamentarians calling for Boris Johnson to extend the deadline in view of the extraordinary circumstances that countries have found themselves in. Both Boris Johnson and the EU's chief negotiator, Michel Barnier, have contracted the disease. Thrashing out a new trade deal is not an easy task to begin with, and the advent of COVID-19 greatly complicates the very ambitious schedule that has been set. The German MEP (member of the European Parliament), David McAlister, said: "The EU has always been open to extending the transition period – the ball is now clearly in the British court." As the virus is yet to peak in the UK, there is an increasing likelihood of an extension being negotiated, whether both parties like it and not.

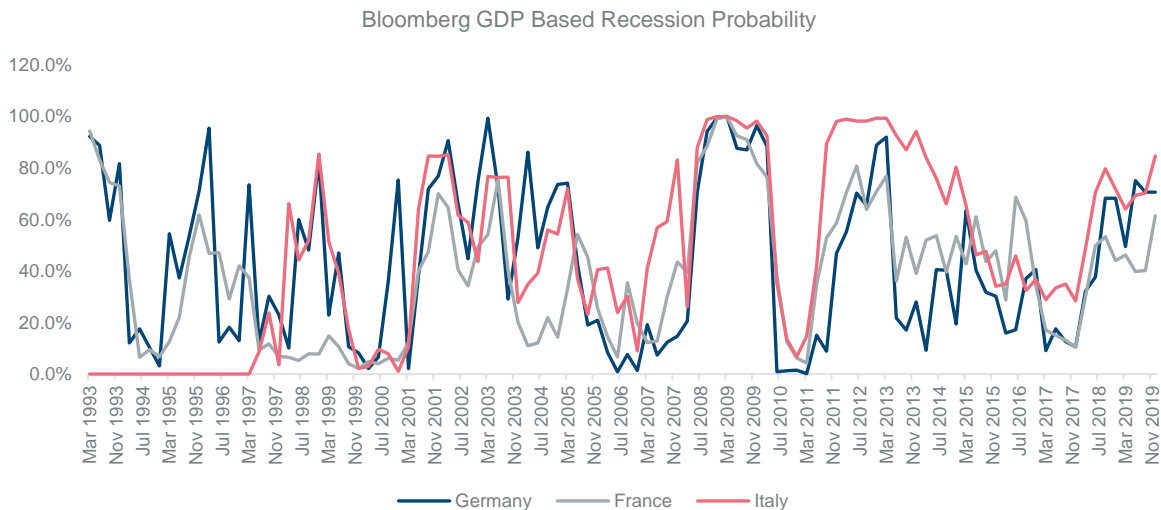
The GfK UK Consumer Confidence Indicator increased by 2 points over the quarter and the Lloyds Bank Business Barometer Summary Indicator dropped from 23 in December 2019 to 6 in February 2020. As at the end of March, the probability rate of the UK experiencing a recession over the next 12 months was 37.5%, which is much lower than that of the UK's European peers.

Figure 55: UK consumer and business sentiment



Source: Bloomberg

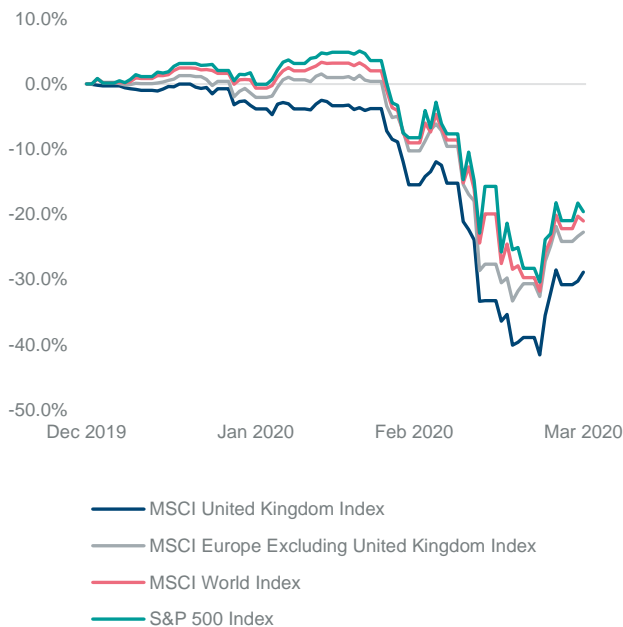
Figure 56: Probability of a recession occurring



Source: Bloomberg

This MSCI UK Index lagged other developed markets for the year to date, making it look attractive from a dividend yield perspective. The reason for this underperformance can be attributed to the MSCI UK Index's weight of 13% in the energy sector and 1.25% in the IT sector, while the S&P 500's weight in the IT sector is 25.4%, with energy accounting for only 2.6% of the total index. The MSCI ex UK also has a very low energy sector weight of 3.35%. The sell-side analysts have also started to price in much lower sales per share growth for the European market.

Figure 57: UK equity market cumulative performance vs EU ex UK, S&P 500, MSCI World in US\$



Source: Bloomberg

Figure 58: UK dividend yield vs EU ex UK, S&P 500, MSCI World

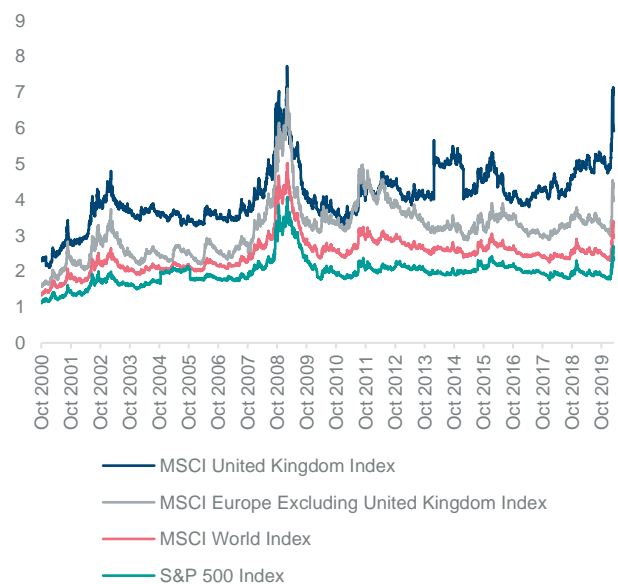
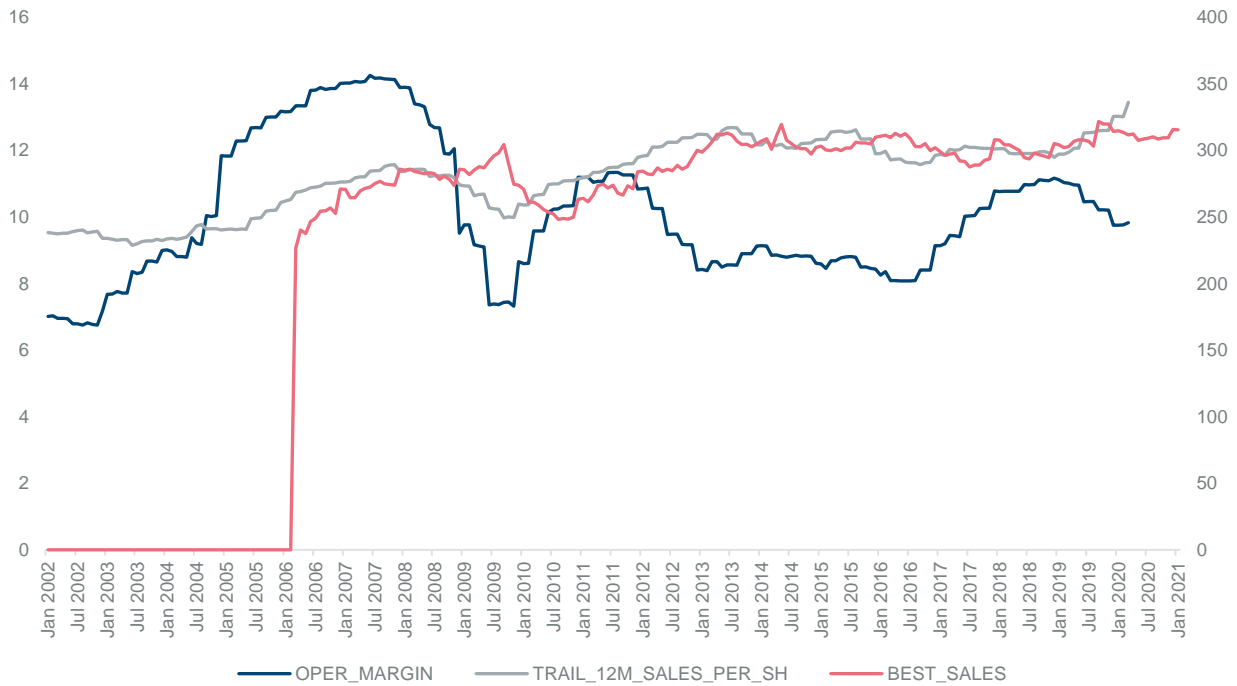


Figure 59: STOXX 600 operating margin, trailing 12m sales per share and forecasted sales per share for 2020



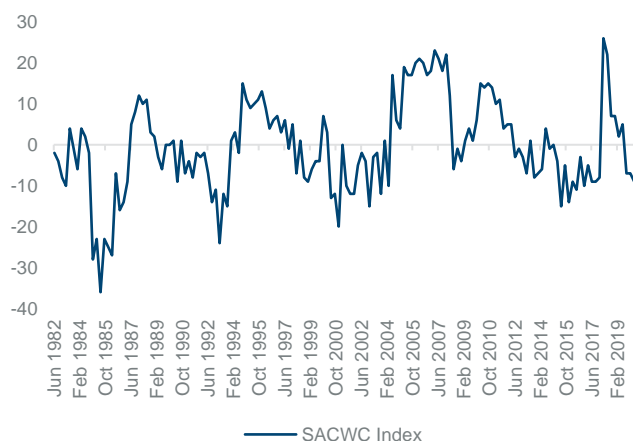
Source: Bloomberg

SOUTH AFRICA

NO LIGHT YET AT THE END OF THE TUNNEL

The South Africa Consumer Confidence Index slumped to -9 in Q1 2020 from -7 in Q4 last year. We expect this worsened sentiment to persist as the disruptions caused by the COVID-19-induced lockdown add to the burden carried by businesses. Over the same period, the Bureau of Economic Research Business Confidence Index showed a further decline to 18.

Figure 60: BER SA Consumer Confidence Index

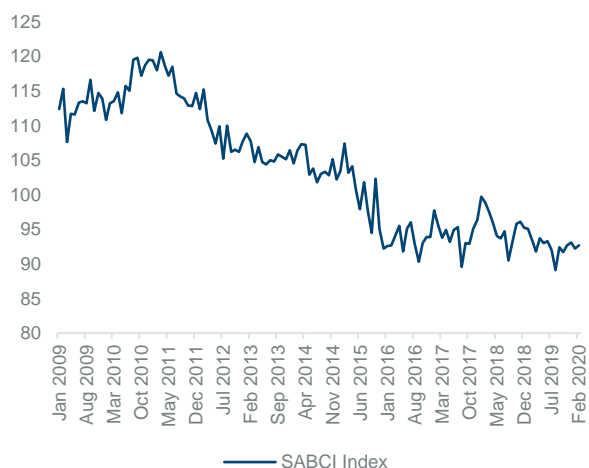


Source: Bloomberg

Figure 61: BER SA Composite Business Confidence Index

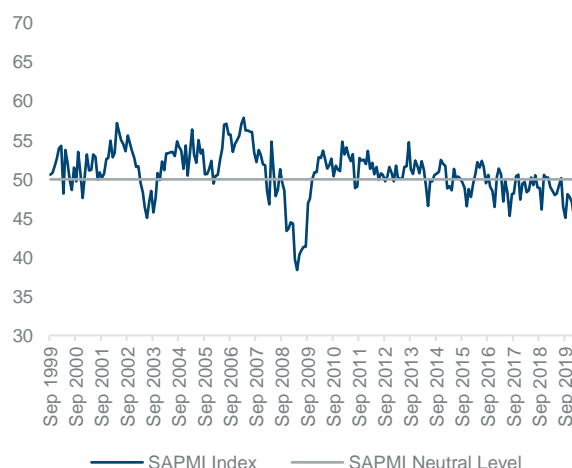


Figure 62: SACCI Business Confidence Index



Source: Bloomberg

Figure 63: SA PMI Barclays Index



The SA Chamber of Commerce and Industry (SACCI) Business Confidence Index weakened slightly from 93.1 in December 2019 to 92.7 in February 2020. The SA PMI remained in contraction but improved from 47.1 in December 2019 to 48.1 in March 2020. It was at its weakest point (44.3) in February.

Figure 64: Retail sales real YoY% SA

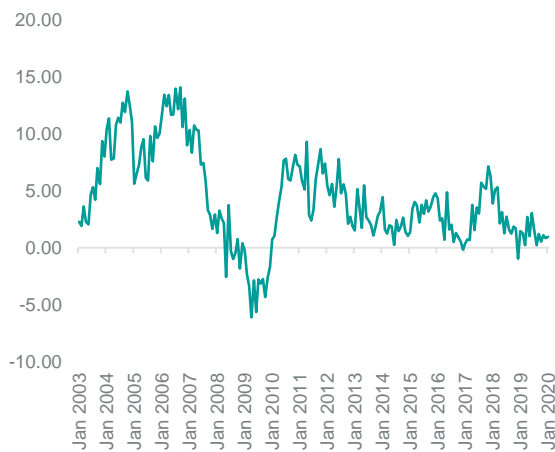
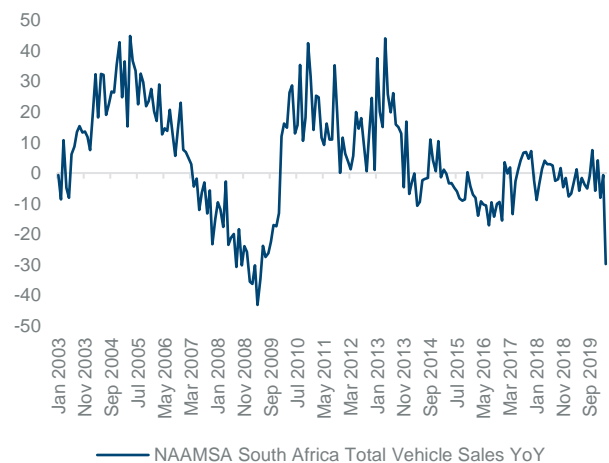


Figure 65: Car sales



Source: Bloomberg

The year-on-year growth in retail sales remained below 1% for January. The year-on-year growth in total car sales slumped to -29.7% in March, the lowest level since the 2008 financial crisis. This was prompted by a 21.5% decline in export sales and a significant 37.1% decline in domestic sales of new light commercial vehicles, bakkies and minibuses over the same period. The closure of global facilities and suspension of production in the domestic motor industry, together with the fall in global and domestic vehicle demand resulting from the restrictions placed on consumers' movements, shall continue to suppress sales over the short term. The worsening negative trends in building plans reveal a more bearish outlook for local consumers.

Figure 66: Total building plans YoY%

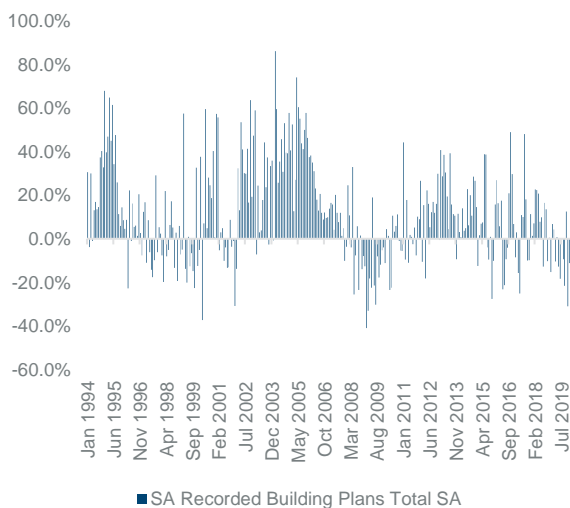
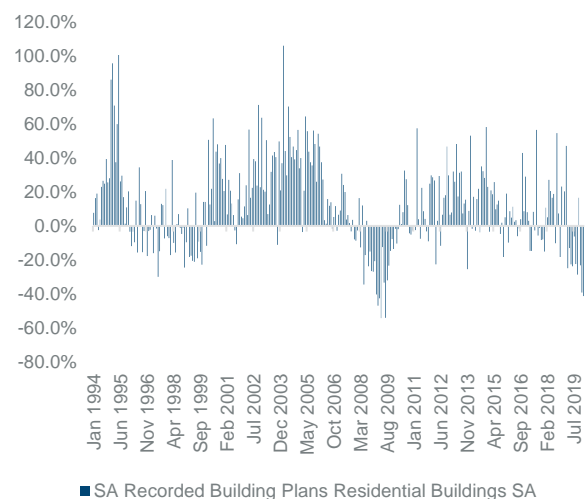


Figure 67: Residential building plans YoY%



Source: Bloomberg

The number of company liquidations in South Africa was 289 for the first two months of this year. A key concern is whether the number will spike in the coming months as COVID-19 containment measures place additional strain on liquidity and demand for goods and services further weakens. According to DebtBusters, a leading South African debt counselling firm, consumers going into debt review in Q4 2019 were experiencing greater strain in the past as income levels for DebtBusters' customers have not kept up with inflation. The current

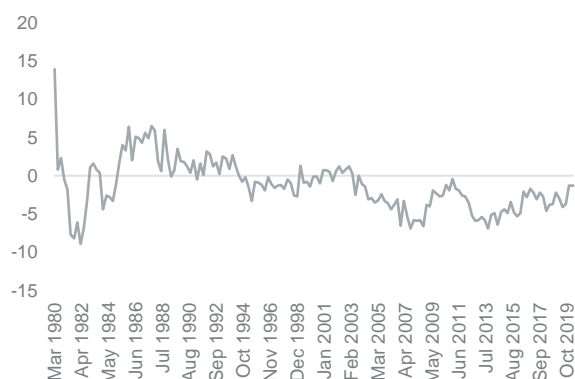
account deficit improved from 3.7% of GDP in Q3 2019 to 1.3% of GDP in Q4 2019. Exports and imports improved to 11.8% and 1.3% year on year, respectively, in February, resulting in a trade surplus of R14 billion over the same period.

Figure 68: South African company bankruptcies



Source: Bloomberg

Figure 69: Current account deficit % of GDP



Source: Bloomberg

Figure 70: Real GDP YoY%

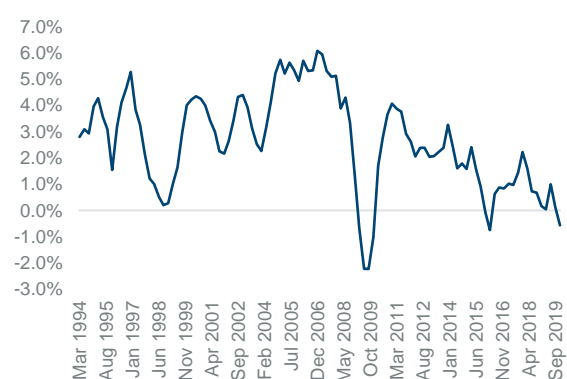
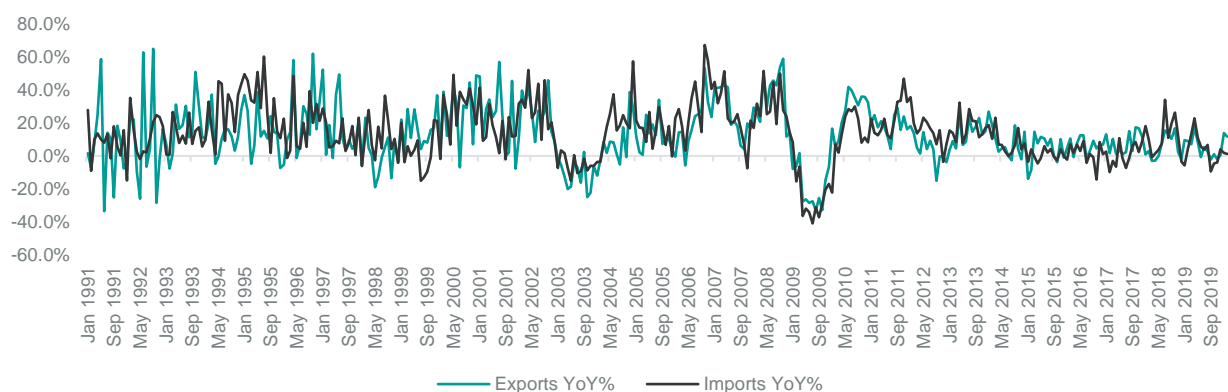


Figure 71: Imports and exports YoY%



Source: Bloomberg

We know that the South African economy was already on a very weak footing prior to the COVID-19 outbreak and there is currently much uncertainty surrounding its potential economic impact. Ultimately it will depend on the severity of the pandemic and how long the lockdown measures will be in place. On a more positive note, we think our government has acted swiftly in implementing a strong response in the face of the

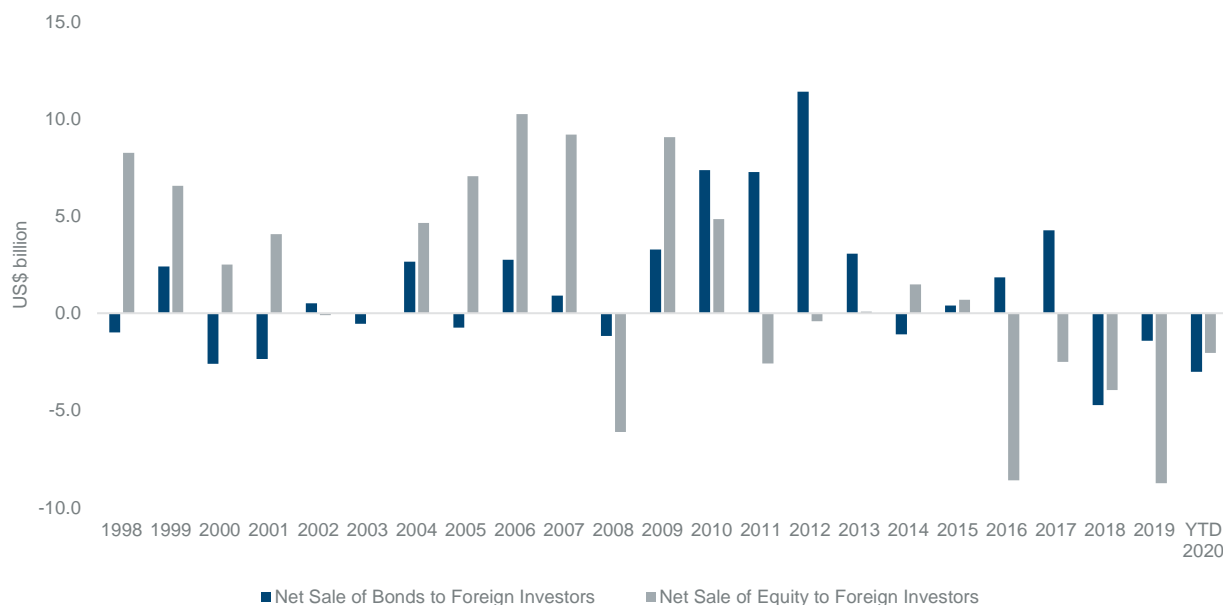
outbreak and has kept the public well informed about the general trajectory of the virus and containment measures.

DOWNGRADE AND INVESTORS RISK OFF

Finance Minister Tito Mboweni delivered a pro-growth budget speech in February, but the optimism was short-lived as investors became increasingly worried about the implementation risk, especially regarding the promised cost-cutting measures as wage talks and spending cuts have always met with much resistance from the labour unions. In the meantime, the COVID-19 outbreak has unleashed unprecedented levels of contagion which have mired much of the world in debt. Governments are all scrambling for practical measures and solutions to mitigate the fall-out.

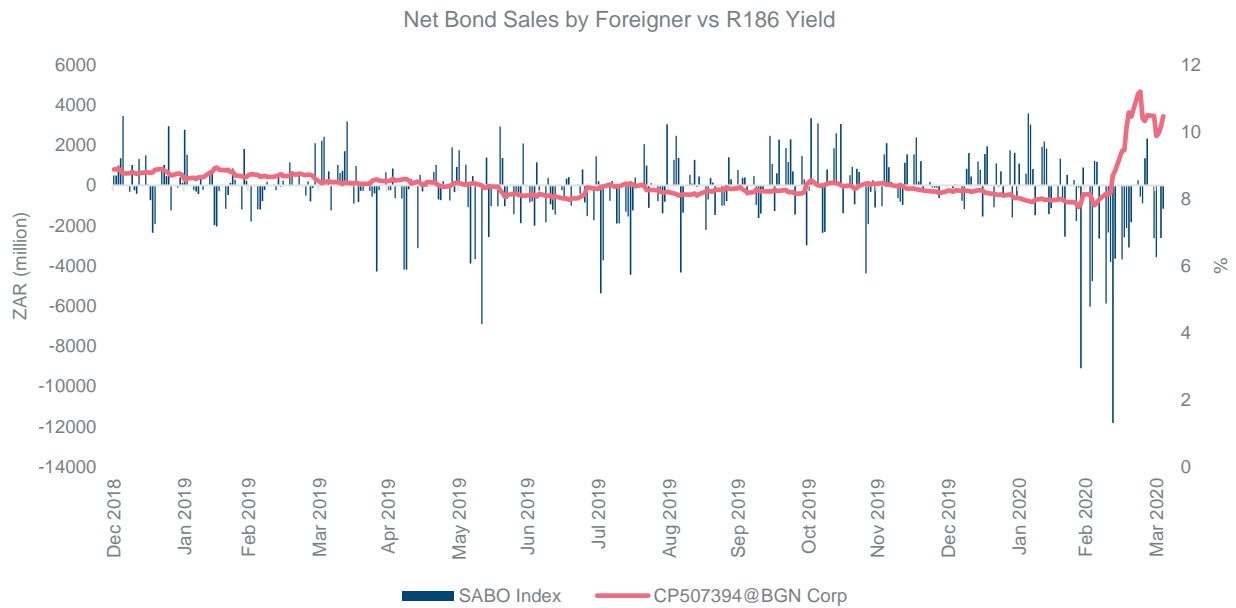
Developing countries are considered more vulnerable, especially a country like South Africa where fiscal deterioration has been a growing concern and load shedding earlier in the year hammered already dwindling output. By the end of March 2020, foreign investors were net sellers of US\$3.0 billion-worth of local bonds and US\$2.0 billion-worth of local equities. Much of the exodus had started long before Moody's downgrade decision on 27 March. The bid-to-cover ratio for the 10-year government bond auction dropped from 4.1 in mid-March to below 2 in the second half of March. The ratio recovered to 4.4 in the early April issuance, hinting the return of investors' appetite for domestic bonds.

Figure 72: Net bonds and equity sales by foreign investors



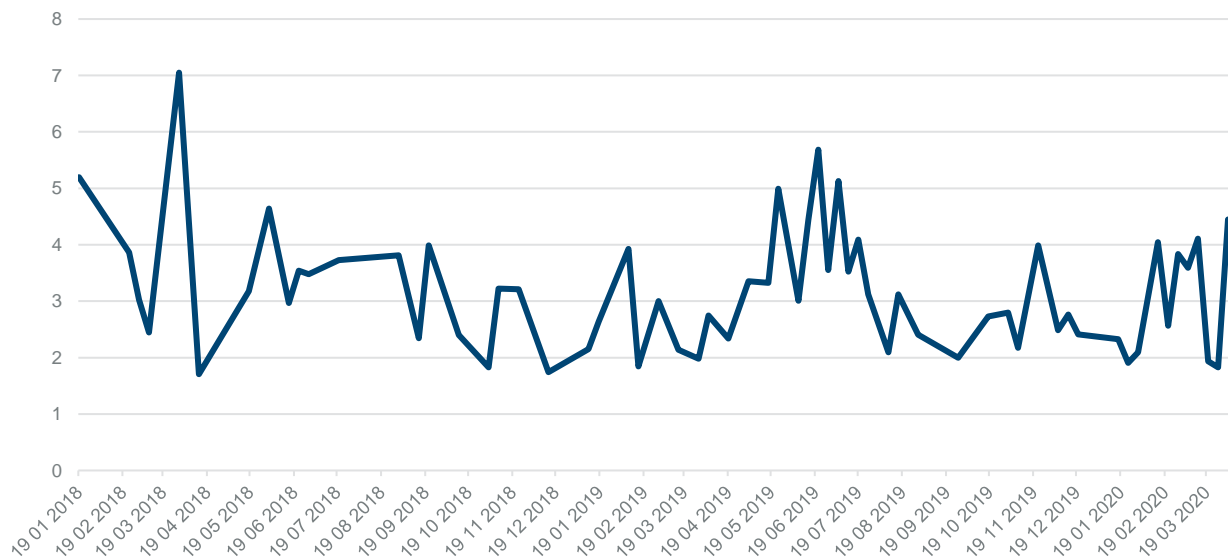
Source: Bloomberg

Figure 73: Bond sales and yield



Source: Bloomberg

Figure 74: 10-year government bond bid-to-cover ratio



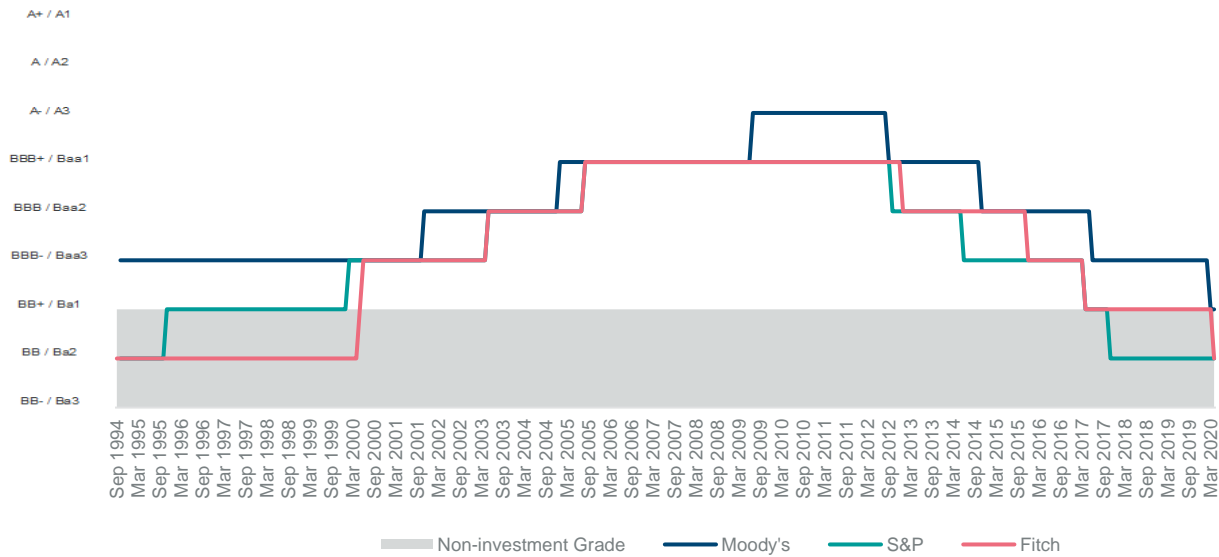
Source: Bloomberg

Fitch kicked South Africa further into junk status with its negative outlook announcement on 3 April, citing “the lack of a clear path towards government debt stabilisation as well as the expected impact of the COVID-19 shock to public finances and growth”, among the reasons for its rating decision. While the bond market has already priced in much of this long-anticipated downgrade by Moody’s, it has not fully priced in the impact of COVID-19. FTSE has delayed the World Government Bond Index rebalance from March to late April as global markets are experiencing severe volatility and liquidity shocks. However, 90% of South African debt is denominated in rand and the real yields still appear to offer some value here.

Rating agencies did not just downgrade South Africa; other, vulnerable economies have also had to swallow a bitter ratings pill and now have to shoulder the burden of negative outlooks and the ramifications thereof. The

Brazilian real and the South African rand were among the worst-performing currencies in developing markets over the first quarter of 2020.

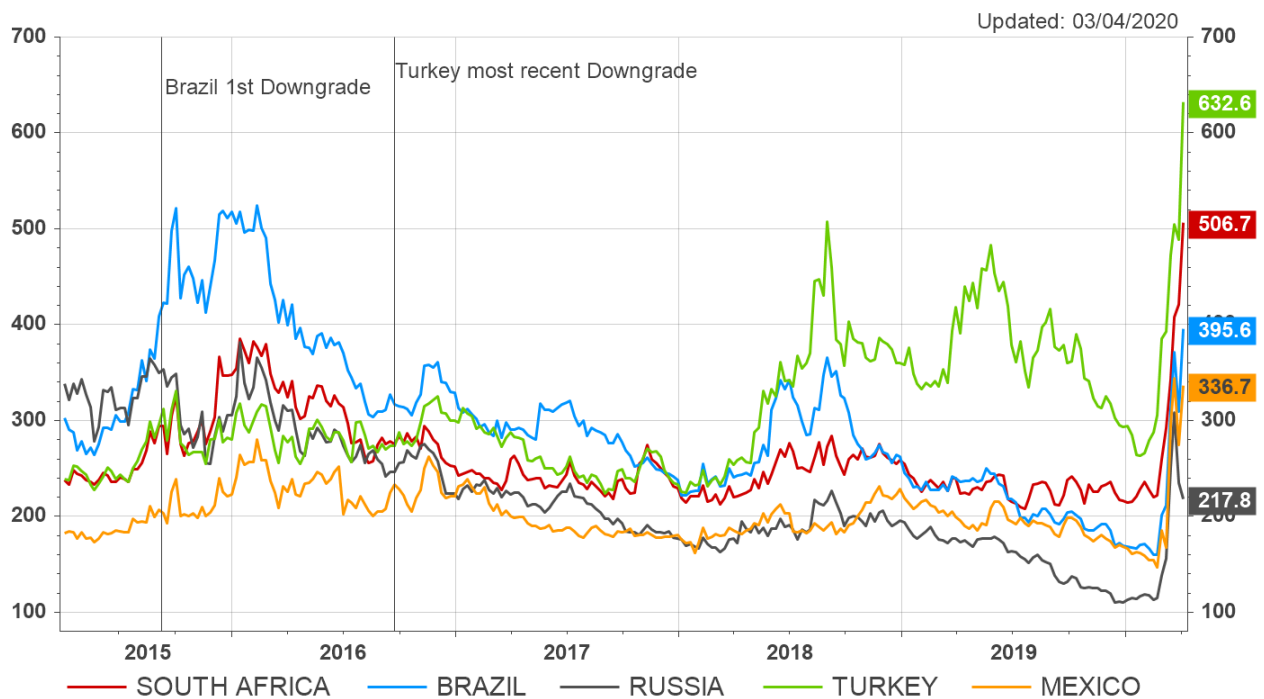
Figure 75: SA credit ratings (foreign currency long term)



Source: Bloomberg

Figure 76: 10-year CDS (credit default swap) spread

10Y SOVEREIGN CDS



Source: Reuters

Source: Refinitiv Datastream

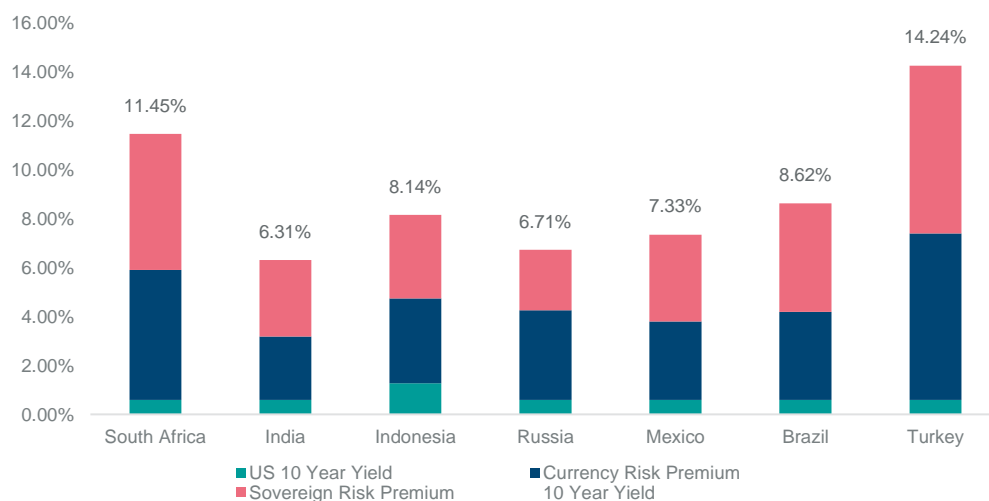
Figure 77: Selected country credit ratings

Country	Foreign Currency Long Term Rating			Outlook			Moody's Rating Direction	Date of change
	Moody's	S&P	Fitch	Moody's	S&P	Fitch		
BELGIUM	Aa3	AAu	AA-	STABLE	STABLE	NEG	DOWN	12/16/2011
BOLIVIA	B1	BB-	B+	NEG	NEG	NEG	DOWN	3/10/2020
CAMEROON	B2u	B	B	STABLE	NEG	STABLE	NEUTRAL	
CHILE	A1	A+	A+	STABLE	STABLE	NEG	DOWN	7/26/2018
COLOMBIA	Baa2	BBB-	BBB-	STABLE	NEG	NEG	UP	7/28/2014
COSTA RICA	B2	B+	B+	STABLE	NEG	NEG	DOWN	2/10/2020
ETHIOPIA	B1	B	B	NEG	STABLE	NEG	NEUTRAL	12/2/2014
HONG KONG	Aa3	AA+	AA	STABLE	STABLE	NEG	DOWN	1/20/2020
INDIA	Baa2	BBB-u	BBB-	NEG	STABLE	STABLE	UP	
ITALY	Baa3u	BBBu	BBB	STABLE	NEG	NEG	DOWN	10/19/2018
MEXICO	A3	BBB	BBB	NEG	NEG	STABLE	UP	2/5/2014
NIGERIA	B2	B-	B	NEG	STABLE	NEG	DOWN	11/7/2017
PANAMA	Baa1	BBB+	BBB	STABLE	STABLE	NEG	UP	3/8/2019
ROMANIA	Baa3	BBB-	BBB-	STABLE	NEG	STABLE	UP	10/6/2006
SOUTH AFRICA	Ba1	BB	BB	NEG	NEG	NEG	DOWN	3/27/2020
SRI LANKA	B2	B	B	STABLE	NEG	NEG	DOWN	11/20/2018
SURINAME	B2	CCC+	B-	STABLE	NEG	NEG	DOWN	2/20/2018
TURKEY	B1	B+	BB-	NEG	STABLE	STABLE	DOWN	6/14/2019
BRITAIN	Aa2u	AAu	AA-	NEG	STABLE	NEG	DOWN	9/22/2017
URUGUAY	Baa2	BBB	BBB-	STABLE	STABLE	NEG	UP	5/29/2014
VIETNAM	Ba3	BB	BB	NEG	STABLE	POS	UP	12/18/2019

Source: Bloomberg

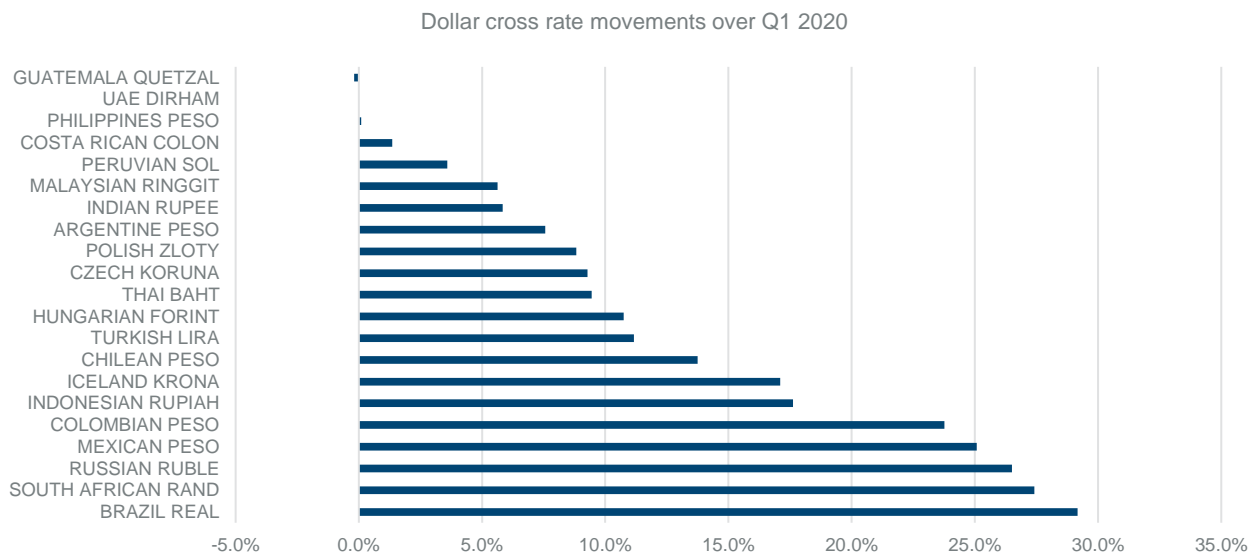
Figure 78: SA bond and real yield as at 3 April 2020

	South Africa	India	Indonesia	Russia	Mexico	Brazil	Turkey
10-year yield	11.45%	6.31%	8.14%	6.71%	7.33%	8.62%	14.24%
Inflation	4.6%	6.6%	2.96%	2.3%	3.7%	4.0%	11.9%
Inflation expectation	3.90%	4.80%	3.20%	3.40%	3.50%	3.50%	10.90%
10-year real yield	6.85%	-0.28%	5.18%	4.41%	3.63%	4.61%	2.38%
10-year real yield based on inflation expectation	7.55%	1.51%	4.94%	3.31%	3.83%	5.12%	3.34%
Currency risk premium	5.31%	2.58%	3.47%	3.65%	3.19%	3.59%	6.80%
Sovereign risk premium	5.54%	3.13%	3.41%	2.47%	3.55%	4.43%	6.85%
US 10-year yield	0.59%	0.59%	1.27%	0.59%	0.59%	0.59%	0.59%
S&P rating - Foreign currency	BB	BBB-	BBB	BBB-	BBB	BB-	B+
Moody's rating - Foreign currency	Ba1	Baa2	Baa2	Baa3	A3	Ba2	B1



Source: Bloomberg

Figure 79: Developing currency movements against the US\$ in Q1 2020



Source: Bloomberg

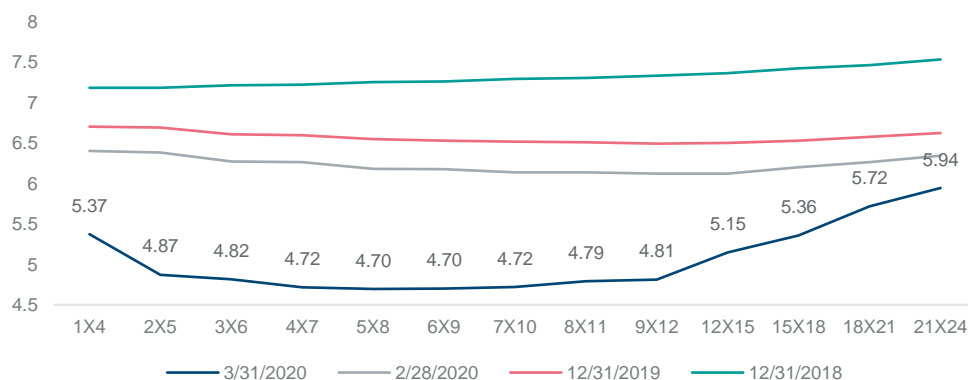
The South African economy already had the weakest outlook and was immersed in a wide range of economic problems – from anaemic growth and perilous public finances, to struggling SOEs and an unstable power supply – when the virus struck. Now it must face the same disruptions caused by COVID-19 as the rest of the world. Stay-at-home orders are particularly complicated in South Africa’s case as large numbers of people live in townships or are displaced and have poor access to water and sanitation.

The government is doing all it can under extremely difficult circumstances, but an ‘all hands on deck’ approach is clearly required. Some companies are being creative and are producing items desperately needed by society, from face shields or masks to hand sanitisers. Well-known individuals and companies have donated to the newly established Solidarity Fund to support the fight against COVID-19. While the pandemic will in many ways determine South Africa’s fate, this is also an opportunity for the country to unite, to reprioritise and to seriously tackle obvious and persistent shortcomings.

INTEREST RATE OUTLOOK

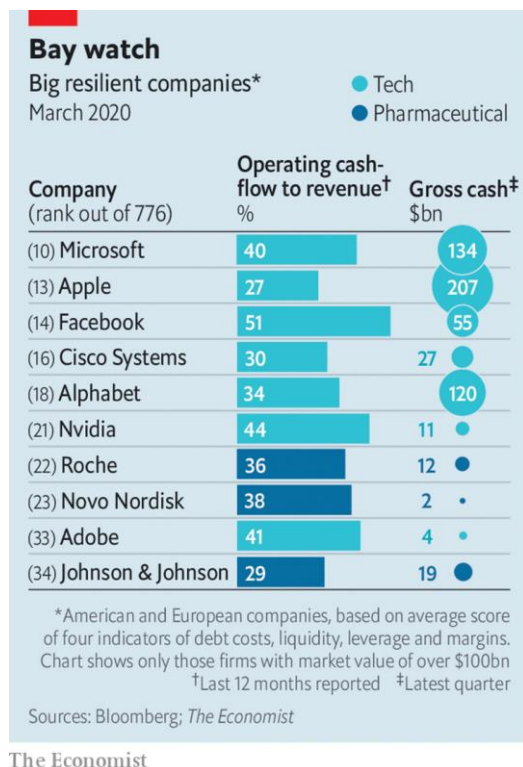
The MPC cut interest rate by 25bps on 17 January and by another 100bps on 19 March. Judging from the FRAs, the market is anticipating a further 75bps rate cut by the end of 2020, most likely driven by deteriorating economic conditions in the wake of the COVID-19 pandemic.

Figure 80: FRAs



Source: Bloomberg

Figure 81: Big, resilient companies



Source: The Economist

A FINAL WORD

This focus of 2020 is no longer South Africa's long-overdue economic turnaround, the US presidential election or the UK transitioning out of the EU. It is all about how we tackle COVID-19 in the coming months. Markets may remain turbulent as daily infection and death rates exceed or fall short of scientists' expectations. However, we are fortunate that, given the scale of the problem globally, all the leading medical researchers around the world have hit the pause button on other projects and are working around the clock to develop a vaccine.

As the months roll by, we will no doubt see more collaboration between countries in the fight against the virus. It has become very clear that no nation can tackle the problems alone or emerge from the crisis unscathed. Staying invested is key as the timing of the full recovery is highly uncertain. There are indeed some pockets of opportunity, especially in sectors and companies with less debt and abundant cash.

Eat well, exercise moderately, sleep enough and pray more. We will beat the COVIDzilla beast. It is just a matter of time. And how you spend that time and manage your investments will make all the difference.

2. PERFORMANCE OF THE FINANCIAL MARKETS – AS AT 31 MARCH 2020

Index	1 Month	3 Months	1 Year	3 Years (p.a.)	5 Years (p.a.)	7 Years (p.a.)	10 Years (p.a.)
Local Equities (ALSI)	14.0%	-8.8%	-10.8%	1.1%	1.6%	7.1%	9.1%
Resources	22.6%	-3.9%	1.8%	16.0%	4.0%	4.1%	2.1%
Industrials	9.6%	-1.2%	-4.6%	-0.5%	1.6%	8.5%	13.3%
Financials	11.9%	-28.5%	-35.7%	-9.9%	-6.6%	2.2%	6.9%
Local Equities (SWIX)	14.1%	-10.9%	-14.6%	-1.6%	-0.2%	6.4%	9.0%
Local Equities (Capped SWIX)	14.2%	-14.0%	-17.9%	-4.3%	-2.1%	4.9%	
Large Cap (ALSI Top 40)	14.7%	-6.0%	-8.1%	2.7%	2.3%	7.7%	9.3%
Local Equities (SWIX Top 40)	15.1%	-7.4%	-12.2%	-0.1%	0.3%	7.1%	
Mid Cap	8.5%	-27.8%	-23.4%	-7.9%	-3.5%	2.8%	7.1%
Small Cap	8.8%	-26.1%	-30.5%	-15.3%	-7.7%	0.0%	5.0%
Listed Property	7.0%	-42.8%	-46.0%	-21.4%	-12.3%	-5.2%	3.3%
Capped Listed Property	5.5%	-45.0%	-49.8%	-25.0%	-15.6%	-7.0%	
Local Bonds (ALBI)	3.9%	-6.3%	0.1%	6.1%	6.1%	5.5%	7.7%
1 - 3 years	3.9%	-6.3%	0.1%	6.1%	6.1%	5.5%	7.7%
3 - 7 years	4.1%	4.4%	10.3%	9.3%	8.7%	7.8%	7.9%
7 - 12 years	5.3%	-6.1%	1.5%	6.7%	6.6%	5.5%	8.0%
+12 years	1.8%	-10.4%	-5.6%	4.0%	4.4%	4.2%	7.1%
Inflation Linked Gov. Bonds (IGOV)	4.6%	-2.5%	-4.0%	0.6%	1.8%	2.8%	
Local Cash	0.5%	1.6%	7.1%	7.3%	7.2%	6.8%	6.5%
International Equities (MSCI)	15.3%	8.8%	25.1%	17.7%	15.3%	19.2%	18.7%
USA S&P 500 COMPOSITE	17.0%	11.3%	28.1%	19.2%	16.8%	20.9%	19.9%
UK FTSE 100	8.1%	-0.2%	3.1%	4.3%	5.7%	9.6%	10.3%
USA DOW JONES EURO STOXX 50	8.3%	-2.0%	5.4%	4.7%	4.2%	9.2%	7.9%
JAPAN NIKKEI 225	11.1%	4.3%	14.1%	13.4%	11.2%	14.6%	14.2%
International Bonds (World Government Bond Index)	5.1%	25.2%	39.9%	16.2%	12.5%	12.6%	12.2%
South African Inflation (CPI) (1m lag)	0.3%	1.6%	4.1%	4.2%	5.0%	5.0%	5.1%
Dollar/Rand Exchange	3.9%	23.3%	29.6%	11.5%	9.2%	10.9%	9.6%
Euro/Rand Exchange	3.1%	21.9%	26.6%	11.7%	8.7%	8.0%	7.5%
Rand/Yen Exchange	-4.1%	-19.9%	-25.7%	-11.5%	-10.4%	-8.6%	-7.6%
Pound/Rand Exchange	5.3%	17.7%	25.2%	10.5%	5.0%	7.7%	7.5%

Note: All international indices are shown in rand terms

3. INVESTMENT PERFORMANCE TO 31 MARCH 2020

Portfolio	Quarter		1 Year		3 Year		5 Year		10 Year	
	Actual	Bench mark	Actual	Bench mark	Actual	Bench mark	Actual	Bench mark	Actual	Bench mark
CRF Balanced Plus ¹ (Gross)	-12.3%	-17.0%	-8.8%	-13.1%	1.4%	-0.1%	3.7%	1.5%	n/a	
CRF Balanced Plus (Net)	-12.4%		-9.2%		0.8%		3.0%		n/a	
Target (CPI+6)	3.0%		10.6%		10.2%		11.2%			
CRF Balanced ² (Gross)	-10.5%	-16.3%	-7.0%	-12.2%	2.2%	0.4%	4.1%	1.9%	10.1%	8.7%
CRF Balanced (Net)	-10.6%		-7.4%		1.6%		3.4%		9.4%	
Target (CPI+5)	2.7%		9.6%		9.2%		10.2%		10.1%	
CRF Inflation Plus ³ (Gross)	-6.7%	2.5%	-3.0%	8.6%	4.2%	8.2%	4.7%	9.2%	8.0%	9.1%
CRF Inflation Plus (Net)	-6.9%		-3.7%		3.5%		4.0%		7.2%	
Target (CPI+4)	2.5%		8.6%		8.2%		9.2%		9.1%	
CRF Stable ⁴ (Gross)	1.6%	1.5%	5.9%	4.6%	6.5%	4.2%	7.3%	5.2%	9.4%	5.1%
CRF Stable (Net)	1.5%		5.3%		6.0%		6.7%		8.8%	
Target (CPI)	1.5%		4.6%		4.2%		5.2%		5.1%	
CRF Money Market ⁵ (Gross)	2.1%	1.7%	8.7%	7.2%	8.8%	7.3%	8.6%	7.2%	7.7%	6.5%
CRF Money Market (Net)	2.0%		8.4%		8.5%		8.3%		7.4%	
Target (STeFi)	1.7%		7.2%		7.3%		7.2%		6.5%	

Benchmarks used are as per the Funds IPS. Detailed notes are below.

Returns greater than 1 Year are annualized.

All net returns are netted as per the Alexander Forbes Total Investment Charges (TIC) Report as at 31 March 2020. Only the policy fees and net priced fund charges are netted off in order to provide an estimate of net returns.

Note 1: Benchmark: Composite: 65% SWIX, 20% All Bond Index (ALBI), 5% Short Term Fixed Interest Index (STeFi), 10% MSCI World Index.

Note 2: Benchmark: Composite: 60% SWIX, 25% All Bond Index (ALBI), 5% Short Term Fixed Interest Index (STeFi), 10% MSCI World Index.

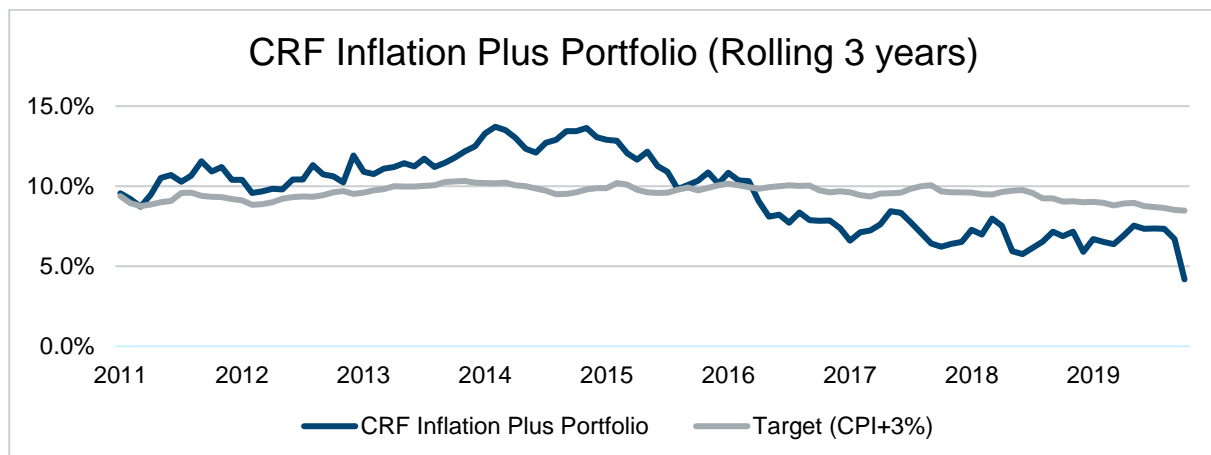
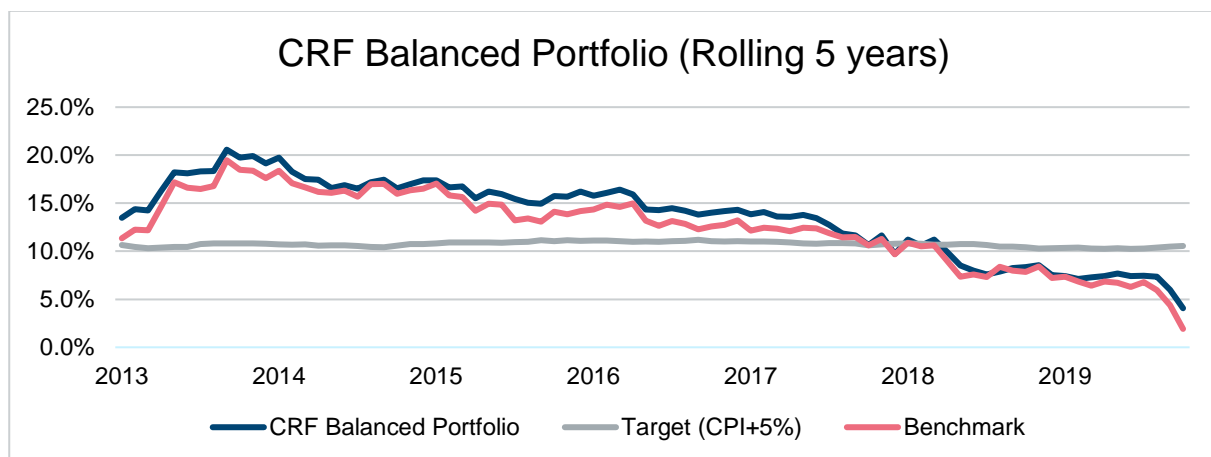
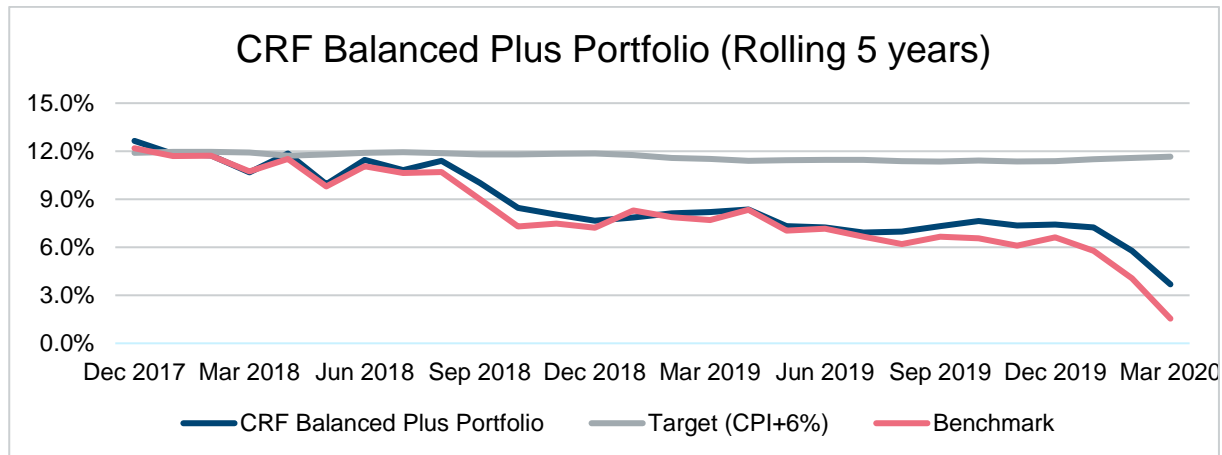
Note 3 - 5: Benchmarks are same as Targets (CPI + 4%, CPI & STeFi respectively) shown above.

Portfolio	Investment Returns						
	2019	2018	2017	2016	2015	2014	2013
CRF Balanced Plus Portfolio	-2.7%	8.3%	5.5%	5.8%	8.7%	12.8%	21.3%
CRF Balanced Portfolio	-0.8%	8.4%	5.8%	5.2%	8.7%	13.9%	20.3%
CRF Inflation Plus Portfolio	1.5%	8.4%	7.6%	4.7%	6.4%	12.6%	12.2%
CRF Stable Portfolio	6.8%	5.8%	7.9%	7.3%	9.7%	15.5%	15.5%
CRF Money Market Portfolio	11.0%	8.7%	8.9%	9.2%	7.6%	6.9%	6.6%

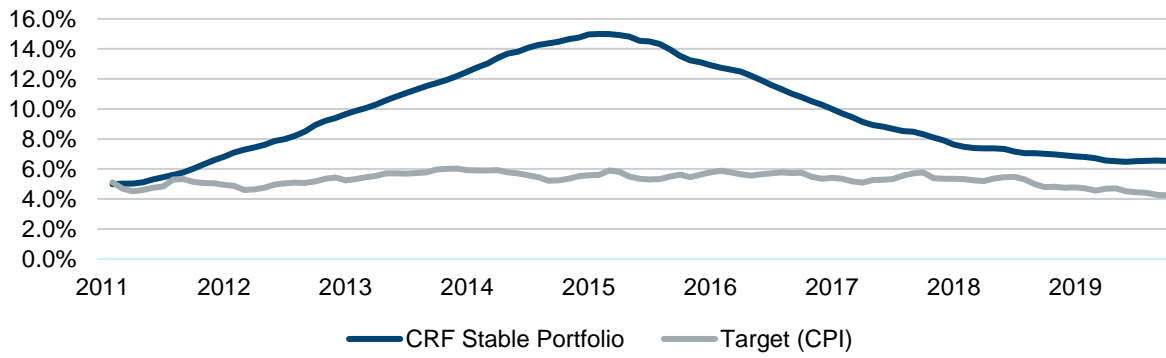
4. ROLLING RETURNS VS TARGETS AND BENCHMARK

The following section shows the performance of the portfolios against their CPI & composite benchmarks where applicable. We have used the mid-point or actual stated time horizon for each portfolio. The only exception is the CRF Balanced Plus where we have used 5 years. Since the data we received having only a 7-year history. We have decided to keep it consistent with the Balanced portfolio until a bit more data is available.

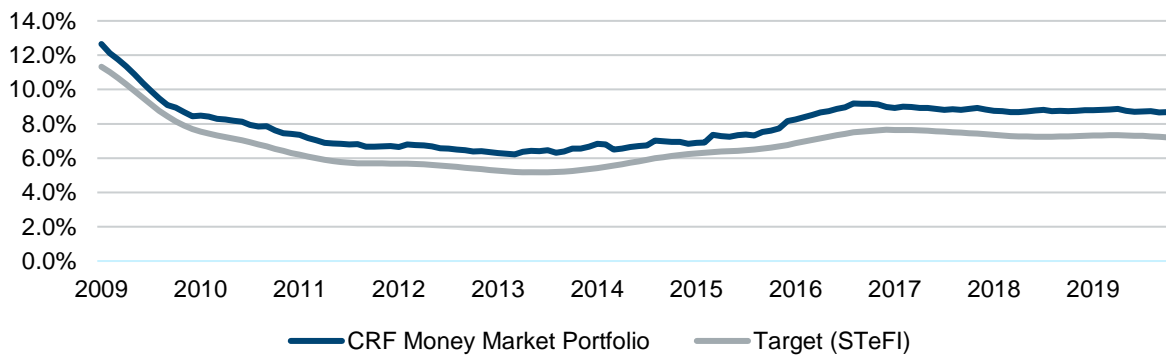
Note: CPI is lagged in all charts in this section



CRF Stable Portfolio (Rolling 3 years)



CRF Money Market Portfolio (Rolling 1 Year)



5. ASSET ALLOCATION – MARCH 2020

	CRF Balanced Plus Portfolio	CRF Balanced Portfolio	CRF Inflation Plus Portfolio	CRF Stable Portfolio	CRF Money Market Portfolio
Domestic Equity	37.8%	34.7%	25.4%	34.7%	0.0%
Global Equity	26.6%	25.6%	7.9%	12.1%	0.0%
Total Equity	64.4%	60.3%	33.3%	46.8%	0.0%
Domestic Property	2.3%	2.3%	3.9%	9.8%	0.0%
Global Property	0.7%	0.6%	0.5%	0.5%	0.0%
Total Property	2.9%	2.9%	4.4%	10.3%	0.0%
Domestic Bonds	14.2%	16.2%	23.4%	29.2%	28.4%
Global Bonds	0.9%	1.0%	7.1%	1.5%	0.0%
Total Bonds	15.1%	17.3%	30.6%	30.7%	28.4%
Domestic Cash	4.3%	4.6%	12.5%	5.7%	71.6%
Global Cash	6.2%	7.0%	7.6%	3.0%	0.0%
Total Cash	10.5%	11.7%	20.2%	8.7%	71.6%
Domestic Alternatives	5.1%	5.9%	11.2%	0.0%	0.0%
Global Alternatives	0.3%	0.0%	0.0%	0.0%	0.0%
Total Alternatives	5.4%	5.9%	11.2%	0.0%	0.0%
Domestic Balanced	0.0%	0.0%	0.0%	3.3%	0.0%
Global Balanced	0.0%	0.0%	0.0%	0.0%	0.0%
Total Balanced	0.0%	0.0%	0.0%	3.3%	0.0%
Commodities	1.6%	1.7%	0.0%	0.3%	0.0%
Total Domestic Assets	65.4%	65.4%	76.5%	82.9%	100.0%
Total Global Assets	34.6%	34.3%	23.2%	17.1%	0.0%