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House View

The Aviva Investors House View document is a comprehensive compilation of views and analysis from the major investment teams.

The document is produced quarterly by our investment professionals and is overseen by the Investment Strategy team. We hold a House View Forum biannually at which the main issues and arguments are introduced, discussed and debated. The process by which the House View is constructed is a collaborative one – everyone will be aware of the main themes and key aspects of the outlook. All team members have the right to challenge and all are encouraged to do so. The aim is to ensure that all contributors are fully aware of the thoughts of everyone else and that a broad consensus can be reached across the teams on the main aspects of the report.

The House View document serves two main purposes. First, its preparation provides a comprehensive and forward-looking framework for discussion among the investment teams. Secondly, it allows us to share our thinking and explain the reasons for our economic views and investment decisions to those whom they affect.

Not everyone will agree with all assumptions made and all of the conclusions reached. No-one can predict the future perfectly. But the contents of this report represent the best collective judgement of Aviva Investors on the current and future investment environment.

Foreword

The near-term economic outlook will undoubtedly be weak. The only debate is how deep the decline in activity will be and how long it will take to recover. From a financial market point of view, one needs to ask how much of this expected decline is already priced, and to what extent the size and speed of support from both governments and central banks might mitigate its effects.

The problem is the answers are simply unknown, as they are reliant to a large degree on the evolution of COVID-19 and the choices that governments will make in response to the evolution of the virus.

One of the questions I am asked with reasonable frequency is what are the characteristics, or the traits that make a good fund manager? Many assume the answer is conviction, insight and intelligence. All of these undoubtedly have a role to play. The key trait, however, in my view is something different. It is a trait that many are uncomfortable discussing or accepting. The key ingredient for long-term success is something quite different; and I use the expression long-term deliberately as our industry regularly falls victim to survivorship bias where we assess outcomes rather than the process that led to these outcomes. The key trait that one should look for is humility. This is a recognition that you may be wrong. It is an acknowledgement that the future is very uncertain and that we do not have all the answers or all the information This avoids overconfidence, which can veer off to both exuberance and too much risk taking, or unwarranted pessimism and risk aversion.

The primary driver for financial markets today is COVID-19 and we must all recognise that our ability to assess this is challenged. We are not virologists or epidemiologists.

In undertaking our analysis of the current macro-economic situation and the risks, we have considered several different scenarios for the evolution of the virus. These scenarios are described in Box A on pages 8 and 9. They are designed to help us frame the potential economic and markets outlook and can help us plan for an eventual recovery.

These are extremely challenging times for everyone in society. First and foremost, this is a healthcare and humanitarian crisis. And our thoughts are with all those who are directly impacted.

Additionally, the economic situation is hugely uncertain. This will be the largest decline in economic output in recent history and the recession is just starting. Whilst it will be difficult and at times it may feel overwhelming, we must not lose sight of the fact that society will come through this. It is possible to see a path to better days ahead.

Our job is to do the best we can to deliver what our clients need. For investment professionals, the key will be selecting the right areas to invest, while also seeking to preserve capital in case you are simply too early.

As ever, the House View captures how we see the world evolving over the next couple of years. In these highly uncertain times, we think it is more important than ever to ground our investment decisions in this framework and to communicate that view clearly with clients.

Peter Fitzgerald

Chief Investment Officer, Multi-Asset and Macro

Executive Summary

COVID-19: A healthcare and economic crisis

This is a House View unlike any that we have written before. In the space of just eight weeks, the global economy has gone from one showing encouraging signs of better growth, to one that is likely to see activity decline at a rate not seen since the Great Depression. Unlike either the Depression, or the 2007/08 Great Recession, the catalyst for this crisis has not been a financial implosion. Instead, it is a sudden healthcare crisis that threatens people's livelihoods, the global economy and financial markets. The pace at which this pandemic has spread around the world, the tragic deaths that have followed, and measures that governments have taken to protect people have been truly extraordinary. With much of the global economy in some form of lockdown, people have been forced to stay at home, unable to work (apart from those in essential services) or socialise. Schools have also been closed. As we write this, those lockdowns have begun to slow the spread of the virus. In China, where the crisis began, restrictions have been significantly eased, although it remains far from normal. Elsewhere around the world, particularly in Europe and the United States, extremely restrictive conditions remain in place. How much longer those conditions will remain in place is unclear. In the Box A on pages 8 and 9, we describe in more detail three scenarios for how the virus might evolve. These scenarios help us frame the potential economic and markets outlook.

The COVID-19 crisis has led to profound changes to the outlook

The measures have been put in place to prevent healthcare systems becoming overwhelmed and to save people's lives. But there is a severe economic cost that comes with such measures. Given how recently this crisis began, we have only limited insight into how severe the economic impact has been so far. Indeed, the depth of the economic decline and the time it might take before a recovery begins are both highly uncertain. Nevertheless, based on the limited information we do have, alongside the assumptions we have made for the degree to which large parts of the economy will be in hibernation, we expect global activity to fall somewhere between 8-14 per cent over the first half of 2020, compared to where it otherwise would have been (Figure 1). That would be a similar decline to that seen in the United States in 1930, the first year of the Great Depression. For a period, the unemployment rate could rise to over 20 per cent in major economies. While we judge our downside scenario to be severe, such is the uncertainty about the impact on activity of this crisis, and the offset that fiscal and monetary policy may provide, that it could plausibly be worse. Based on an analysis of the impact on both industrial output and final demand, the OECD recently estimated that the impact on GDP could be as much as 20-25 per cent for major economies.

We expect activity to be substantially weaker in the first half of 2020. Recovery thereafter will depend on the success in limiting the spread of the virus and easing social distancing measures

While the impact of lockdowns on activity is expected to be severe, unlike in the 1930s, we expect that it will begin to recover as better viral treatments are found, improved data on immunity is utilised and ultimately if and when a vaccine is available. Indeed, many sectors should recover quickly, as most of the contraction comes from workers staying home rather than declines in capital or productivity. But we do not know how well small and medium-sized businesses can survive a prolonged shutdown. Given the uncertainty around the timing of

Figure 1. Impact of COVID-19 crisis on level of global activity
Deepest decline in activity in post-war period expected

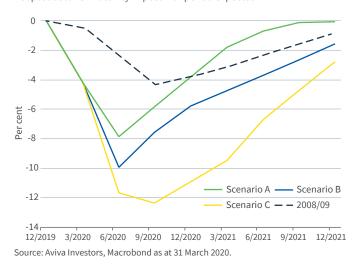
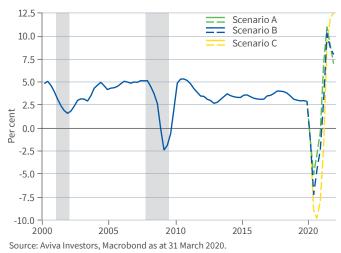


Figure 2. Global growth scenarios
Severe downswing should be followed by a rebound



Given the uncertainty, we consider three scenarios to describe the outlook

Fiscal policy response has been swift and sizeable and should help to prevent longer-term economic effects

Monetary policy has been eased dramatically, with a range of liquidity measures and asset purchases

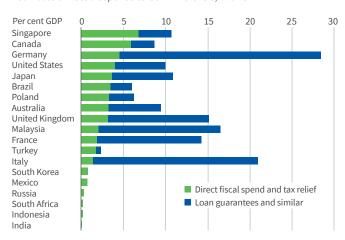
these factors, we consider three scenarios: Scenario A: where the recovery begins in 2020H2; Scenario B: where the depth of the downturn is greater, but again recovery begins in 2020H2; and Scenario C: where the depth is greater still and the recovery begins later. These scenarios broadly map to those laid out in Box A on pages 8 and 9. These scenarios do not see the level of activity back to the previous trend until between late 2021 and late 2022. The paths for activity produce rather dramatic year-on-year growth rates for 2020 and 2021 (Figure 2).

Crucial to a successful and speedy recovery from this crisis is the policy support from both governments and central banks. Those policies are designed to prevent businesses from becoming impaired or going bankrupt due to a lack of revenue, and to prevent households from suffering hardship from being unable to work. Governments around the world have announced a range of support measures for both businesses and households. In many countries those measures have focused on a range of loans or loan guarantees for business – particularly small and medium-sized – to assist them with bridging the financial impact of dramatically lower revenues. In addition, there has been focus on keeping people in their jobs, even if unable to work, through various forms of wage subsidy. Many countries have also enhanced unemployment benefits, most notably the United States, to provide a stronger safety net for those who cannot be retained and therefore become unemployed. Other measures, such as deferral of tax payments, encouraging forbearance from lenders (e.g. through mortgage payment holidays) and direct cash handouts all serve to provide support. The magnitude of these fiscal measures is vast. Figure 3 attempts to quantify both the direct measures and the contingent liabilities (in the form of loan guarantees and similar) as a percentage of annual output. Perhaps just as striking as the magnitude for the developed market economies is the, so far, limited fiscal response from emerging market economies, where institutional and market constraints may have limited the response.

In addition to the fiscal response, there has also been a vast monetary policy response. Policy rates have been cut to the effective lower bound in the major developed economies. More importantly, a host of balance sheet measures have also been put in place to improve market liquidity and functioning. The Federal Reserve (Figure 4) has been most active in this area, launching a range of facilities to support international dollar funding markets and short-term money markets, while a host of central banks have begun large-scale asset purchases of government bonds, and in some cases corporate debt. The pace and scale of purchases of government debt by the Federal Reserve and the Bank of England has been vastly greater than in 2009. This has been important in returning functioning to government bond markets, and in creating fiscal space for increased government issuance.

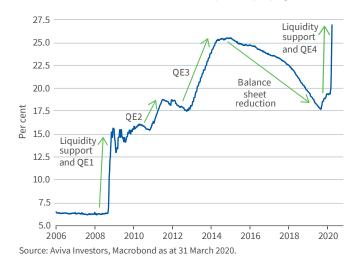
While the fiscal and monetary support will undoubtedly cushion the global economy from the worst outcome, it will not provide an offset to the near-term decline in activity. With such uncertainty around the outlook, both in terms of risks to personal health and financial situation, it may be that much of the support to households is saved, rather than spent. And the cost to business profitability will be significant. Perhaps the best that can be hoped for is that policy support measures help to ensure a quick recovery once the uncertainty has passed.

Figure 3. Unprecedented peace-time fiscal support for major economies Estimates of fiscal response to COVID-19 crisis, % of GDP



Source: Aviva Investors, IFS, IMF, JP Morgan, Macrobond as at 31 March 2020.

Figure 4. Central bank support
Federal Reserve balance sheet (% of GDP) expands rapidly again



The COVID-19 pandemic has resulted in a sharp sell-off in risky assets and a flight to quality in the form of government bonds (Figure 5). It has also led us to materially change our outlook and asset allocation views (Figure 6). Those changes reflect both the immediate impact and further disruption over 2020. We have increased preference to be overweight government bonds, expressed primarily through US Treasuries. That reflects our view that central banks will continue to act to maintain easy monetary conditions, and at the same time allow for fiscal space to be created without higher yields. We have reduced our equity allocation to be overall moderately underweight. The equity allocation view reflects our concern about severe economic weakness translating into historically weak corporate earnings in 2020. Further, we have moved to a more cautious stance in our currency allocation, with a preference to be long Japanese yen and short Asian currencies. We have a neutral view across credit, where corporate bond spreads have widened sharply, but where there is now significant support from central bank asset purchase programmes.

We acknowledge that there is enormous uncertainty regarding the outlook. That uncertainty pertains to the likely further spread of the virus, the measures governments might take to contain the spread, the economic impact of the both of those factors, and finally the monetary and fiscal policy support for households, businesses and asset prices. With so much uncertainty, our confidence in market developments from here is even less than usual. As such, at this time we regard it as imperative to act in favour of capital preservation. But there will also be an opportunity to look beyond the current crisis and invest in those companies, sectors and countries which will be more likely to recover rapidly. For now, that likely means avoiding those carrying excessive debt, where the current crisis will be more likely to expose those vulnerabilities, and instead seeking out strong balance sheets.

Given the uncertainty and downside risks, we prefer a defensive approach to asset allocation, favouring government bonds over equities.

Opportunities to invest in companies, sectors or countries with strong balance sheets is even more attractive

Figure 5. Risk assets materially lower already on COVID-19 crisis Year-to-date returns

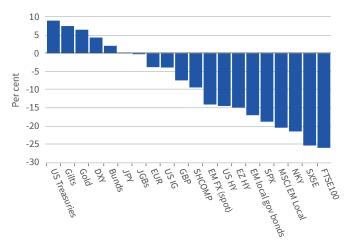
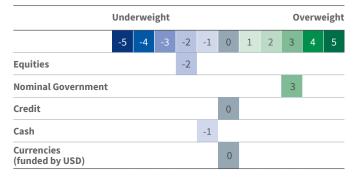


Figure 6. Asset allocation summary
Underweight equities, overweight government bonds



Source: Aviva Investors, Macrobond as at 31 March 2020.

Source: Aviva Investors, Macrobond as at 31 March 2020.

Box A: Scenarios for the spread and containment of COVID-19

One of the challenges of trying to make market assessments at the present is the uncertainty around how the COVID-19 pandemic will progress.

Part of the difficulty lies in the fact that there is a lack of consistent and reliable data available for medical researchers and others. The data are being collected in a crisis event and are subject to many constraints (e.g. testing regimes). As a result, many assumptions need to be made when modelling the potential spread of the virus. Given the exponential nature of the spread, small changes to those assumptions can result in vastly different conclusions. This is part of the reason why there is much debate within the research community regarding the path forward. Whilst we make no claims as to being able to better assess this research than the experts, we can try to use a scenario-based approach to think about possible outcomes and their implications. We can then use expert opinion, as it is released, to think about whether one or another path is becoming more likely.

Scenario A

After the first lockdown the virus can be contained whilst economy is restarted.

China has been successful in reducing the numbers of new infections across the whole nation, including in Hubei where the spread had been most rapid. They are in the process of restarting their economy and have so far only identified small and seemingly containable outbreaks. First, this suggests that the measures being employed in China can be effective in limiting the size of outbreaks, if done early and comprehensively. Second, it suggests that enforced lockdown can be successful in reducing the spread of the virus. These measures included phone apps to track contacts between people, to warn those who may have been in contact with an infected person, and temperature checks at entrances to many public buildings to identify those who should be tested. Those who are identified as higher risk are asked to self-isolate or are tested to check whether they are clear. Face masks were compulsory in the early stages for anyone venturing out in public. Clearly, we are in the early stages of their economic reopening and it is important to watch to see if there is a limitation to the degree of restarting that will be possible. There are also those who are sceptical on the validity of the China numbers. However, at present what we hear from Non-Government Organisations (NGOs) on the ground and from most researchers is that their achievements are real. Using Hubei as an initial indication suggests this scenario might require a lockdown of two months to reduce the number of cases to one in which the second stage of containment can be achieved.

After the first lockdown, restarting economic activity results in new infections rising again. However, more targeted social distancing for at-risk groups, alongside improved testing, contact-tracing and health system capacity means that social distancing can keep the numbers to a level at which treatment can be provided to those in need.

Across the world there is a monumental effort to increase the capacity of health systems to manage the impact of the virus. We see industrial manufacturers utilising their expertise to begin production of ventilators, cosmetics firms switching production to sanitisers and research engineers everywhere looking for ways to provide additional equipment specific to the needs of those with severe symptoms. Whilst we may not be able to contain the virus, as economic activity increases it is entirely conceivable that the achievements in increasing treatment capacity mean that social distancing, rather than social isolation, can be sufficient to keep the level of infections at a level at which health systems can provide treatment to those who require it. This may involve the most vulnerable being asked to follow a more stringent protocol than the rest of the population to reduce the number of people requiring hospitalisation. It may also result from the discovery of new treatment options which reduce the severity of symptoms. An unprecedented global effort to find such options is already underway. Another indication of this would be strong evidence that a high proportion of infections are asymptomatic. Many experts currently estimate this to be around 50 per cent. However, without testing along statistical sampling methodologies it is hard to establish the true number. However, with the greater testing capacity being introduced across the world, there will increasingly be the ability to extend testing from being purely driven by symptoms or the effort to track outbreaks, to studies to find the extent of infection and produce better measures of the severity of the virus. Importantly, we don't consider these outcomes equally likely or assume that the less extreme Scenario B is more probable than the other two.

After the first lockdown, restarting economic activity results in a resurgence of new infections. Further rolling lockdowns occur periodically across much of the globe.

Prior to this pandemic, much of the academic research was very sceptical on the ability of even extreme social distancing measures to contain a virus with these characteristics. This can be seen in the UK government's influenza pandemic preparedness document, where the impact of such measures was downplayed. It's possible that this was because the extent of the current lockdowns was not considered as a viable option. It is also possible, however, that containment strategies will ultimately be unsuccessful alongside increased economic activity. One scenario could be that this results in further periods of rolling lockdowns as the virus spread declines and then subsequently re-accelerates. This would continue until the development of a vaccine that protects populations from the virus and allows a sufficient population immunity to develop that makes further outbreaks much slower to spread and easier to stop in their tracks.

Scenario B

Scenario C

Key investment themes and risks

Everything has changed

A major global recession is now inevitable

We should have known better. Just three months ago in our 2020 Outlook, we stated that the world growth outlook was finally improving after two years of gentle, but relentless slowdown. Key risks had receded, and the probability of a global downturn or recession had diminished significantly. The outbreak of the COVID-19 virus has changed everything. It is now inevitable that 2020 will see a major recession and that all – or very nearly all – nations of the world will participate in the coordinated downswing. It had initially been hoped that the impact of the virus and associated containment measures might be largely confined to China and some parts of Asia – a significant, but hopefully limited, transient and manageable disruption. It is now readily apparent that the global pandemic and reactions to it amount to one of, if not the, largest economic shock of modern times. While that may sound overly dramatic, the scale of declines in GDP that we anticipate have not been seen since the Great Depression and dwarf those witnessed during the Global Financial Crisis (GFC) of 2008-9 (Figure 7).

Previously in this document we have tried to identify the key themes which we believe will frame the investment backdrop over a two-year horizon and also to consider what the key risks to our central view might be – where things could turn out for the worse or, indeed, the better. This time around, that approach is challenged: there is only one theme and a single risk completely dominates the outlook, albeit one that has several dimensions. So instead, this section will attempt to characterise the broad macroeconomic parameters of the COVID-19 crisis, assess its likely impact along with those of the many containment measures that have been implemented, and evaluate the multitude of policy responses that have been made.

Winter is coming

Weakness will be concentrated in Q2 for most nations; Q3 should see a rebound A severe recession is now unavoidable. The hope is that it will be short-lived, and that economic activity will start to make the journey back towards normal levels in the second half of 2020. But while the downturn is certain, the nature of the recovery path is not, largely because of the form of the disease and resulting doubts about how long restrictions on "normal" activity will have to remain in place. Even more worrying, economic downturns often create their own self-reinforcing downward momentum: businesses fail, people lose their jobs, leading to damaging second-round effects and some permanent loss of productive capacity. The efforts of central banks and governments aim to alleviate these effects to the extent that they can. But they will not be able to prevent lasting damage, only limit it. The February and March PMI survey balances in China and the Eurozone provide a glimpse of the scale of downturn that we may expect (Figure 8), but also to the possibility of a rebound. The initial declines were not pretty. What is clear is that the falls in GDP will be huge and it will be the domestic-facing service sector which is likely to suffer most. It will be concentrated in Q1 for China and Q2 for the rest of the world. The rebound in the Chinese balances for March were encouraging, but they need to be interpreted carefully. All they show is

Figure 7. Peak to trough GDP declines
Scale of likely falls in GDP is highly uncertain but will be large

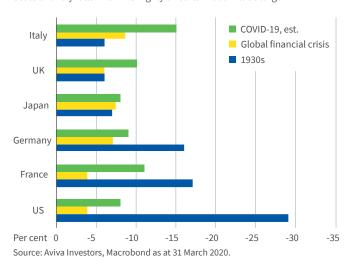
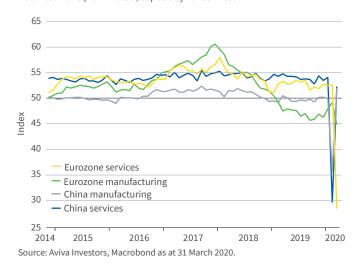


Figure 8. PMI surveys in China and Europe
Balances have plummeted, especially for services



that activity in March was better than February. But less awful is a better description – these are "diffusion" indicators, not an indication of the level of activity or what is "normal".

Hard data will eventually tell us the extent of the downturn and the magnitude of any rebound. But one way of gauging where these comparisons will fall is to look at real-time indicators of activity. And to use China as the example since they experienced the first lockdowns. Figure 9 shows the pattern of coal consumption among China's major electricity producers around the time of the lunar New Year. 2020 saw a decline as the holiday period began, as always happens. But the usual pick up did not materialise because of shutdowns related to the reaction to the virus. At times, coal use was 30 per cent or 40 per cent down on comparable periods. It has recovered a bit since then, but still looks below where it might ordinarily have been. Activity levels are better in China, but not yet back to "normal". The same sort of pattern is visible for port activity, pollution levels, congestion aggregates and subway usage.

Financial markets have reacted before the hard facts of downswing become official: composite indices of financial stress have also collapsed (Figure 10). While it is encouraging that these measures have not reached the levels that prevailed in the GFC – partly because of the policy response we assume – they still signify markedly tighter financial conditions than normal.

China is already rebounding, but is not back to normal yet

A different world

The cold facts are that these are unprecedented times. That word is badly overused, but there is no more apposite description today. The bare truth is that no-one knows how the transmission of this disease will unfold, how many people will be affected, how restrictive and extensive the containment measures will have to be and how damaging and lasting the economic downturn will be. As many others are doing, we are attempting to model different outcomes, but the disease is new and many aspects of it are, as yet, unknown. Meanwhile, in the area where we should have greater confidence in our methods – economic modelling – some of the numbers that are implied are "off-the-scale" awful in the context of recent times and so do not lend themselves to routine analysis. The technical explanation might refer to complex non-linearities in what were previously considered to be well-understood relationships; a more prosaic description would be, no-one knows. With that qualification in mind, below we attempt to distil some strands of analysis that are useful and do at least help us frame the discussion.

Hard economic data in coming months will be horrendous

Supply and demand shock

This is both a supply and demand shock. Not that long ago, most people – ourselves included – believed that it would primarily be the former. A transient interruption to activity, mainly in parts of China, that would adversely impact global supply chains. That was enough to cause a ripple of anxiety in financial markets, but such worries quickly dissipated. It is now clear that the demand component of the shock will dominate. One of the key differences between the GFC and today is that the COVID-19 virus-induced lockdowns are in some ways a known enemy – it is really important to stress that the damage from the virus is INSIGNFICANT; it is all about the panic and desire/need to prevent it from spreading. The cause of the shock is clearly identified (even if

Figure 9. China coal consumption of major electricity producers Activity levels are probably around 10 per cent below "normal"



Source: Goldman Sachs, WIND as at 31 March 2020.

Figure 10. Bloomberg composite indices of financial conditions Overall conditions have tightened significantly in the last month



Containment measures are necessary, but will have a huge economic cost

The demand shock is likely to be deflationary in the first instance

some aspects of the disease itself are still mysterious). In 2007-09, one of the underlying themes of the crisis was that no-one really knew exactly where some of the problems were. This made identification of appropriate policy responses more difficult. Many were delayed, inadequate or poorly directed. This time around, the negative demand shock is a deliberate intention for medical reasons. Sadly, that does not make it any less painful. The downturn is, essentially, an act of economic self-harm. But it is one that is viewed by governments and many health experts as necessary if we wish to limit the spread of the disease to a pace at which health systems can cope. The experiences of Wuhan, Italy, Spain and others have demonstrated how fast treatment capacity can be reached and we are still at a comparatively early stage of the spread of the virus.

Deflation worries

The demand shock that is coming is deflationary, potentially on a disturbing scale. Central banks around the world had previously been struggling to achieve inflation targets, typically around 2 per cent. Moreover, the collapse in the oil price following the spat between Saudi Arabia and Russia (and others) was already pointing to significantly lower inflation in coming months anyway. Steep declines in energy prices were inevitably going to lead to much lower CPI inflation in all economies in any case, just as they did in 2009 and, to a lesser extent, in 2014/15 (Figure 11). Estimates varied but it was likely that headline rates of inflation would have fallen by a full percentage point between February and May and perhaps more. The overlay of the huge demand shock could well push many countries into deflationary territory. The mechanical impact on inflation rates from the collapse in oil prices is one thing. The deflationary impulse from collapsing demand is another and is far more of a concern: as history has shown, once deflation sets in, it can be difficult to shift. As the extreme policy measures that have been adopted gain traction, it is plausible that inflation will receive an upward jolt. There were siren voices during the GFC that QE and the like would lead inevitably to hyperinflation. Such worries were unfounded and betrayed a woeful misunderstanding of the monetary transmission mechanism. Nevertheless, higher inflation in the future is possible, but central banks would probably like nothing more than an inflation "challenge" - they have the toolbox for that and know how to use it. Runaway inflation is the least of our problems today.

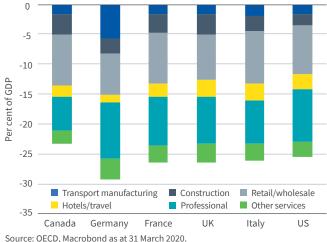
Desperate times, desperate measures

Many commentators have drawn comparisons with periods of war in the past, and in terms of the size of shock and enforced changes of behaviours, there are parallels. But they can only be taken so far. In wars, countries typically attempt to maximise output, calling on all resources to contribute to such efforts. Today, the authorities are trying deliberately to restrain demand and output. In the most simplistic terms, there will be two stages to these actions. In the first, there is a policy-led retrenchment in demand because of disease containment measures. The OECD recently estimated that the negative impact of shutdowns could easily amount to a fifth or a quarter of GDP (Figure 12). In the second, as such measures are relaxed, there will be a rebound in activity and demand. Stimulus measures clearly make little sense in the first stage – they

Figure 11. Oil prices and world inflation
Tumbling oil price already likely to weigh on global inflation



Figure 12. Potential impact of lockdowns on economic activity OECD estimates that effects could be enormous



would go directly against the basic principle of containment. Rather, they should be directed in two ways: to keep the period of demand decline as short as possible (subject to the medical constraint) and to try and provide an offset to those (individuals and households) who are hurt by the enforced hits to activity. In the second stage, policies should help restore demand as quickly as possible, supporting it where it has been weakened and replacing it where it has been lost. This is an immense task, in terms of both scale and complexity. It is highly unlikely that policy-makers will get it completely right and it is inevitable that there will be longer-term consequences. Neither of these should prevent them from trying.

Despite best intentions – attempts to keep firms in business and people in employment – there will be widespread damage. It is simply not possible to either entity. Revenues and incomes may be put on hold, but it is generally not as easy for costs. This is where government and central bank help comes in. The general principle is to nurture and protect private incomes and balance sheets so that they can recover normal economic activity returns. Nevertheless, casualties are inevitable: cash-flow crises will drive some businesses to the wall and unemployment will rise. This has already begun, as illustrated by the shocking initial jobless claims data in the US recently. The total rose more than ten-fold to over 3 million and then doubled again. Taken at face value, this suggests that 10 million people have been added to the ranks of the unemployed in the US in just two weeks. If that is right, it means losing all of the job gains of the last five years in an instant. The March US payrolls numbers were poor, back to GFC-style declines (Figure 13). But April's data will be horrendous, running well into the millions. Of course, it should be the case that the vast majority of people affected will simply get their jobs back when containment measures are relaxed. But in the meantime, they will lose wage income and have to rely on (lower, sometimes much lower) unemployment benefits. And the entirely justified worry is that while economic activity is deliberately squeezed, not all companies will survive, so not all of the old jobs will be there to return to. There will be many more economic data release horrors in the coming weeks, but the form of the shock will vary around the world. It was noteworthy in the GFC, for example, that regulated Europe hoarded labour, while free-market USA let the jobs market bear the brunt of the downswing (Figure 14).

It is heavy-handed to characterise so bluntly, but broadly speaking the US seems to have adopted a similar approach to the COVID-19 crisis – allowing unemployment to take the strain – while others, such as Europe, the UK and parts of Asia have instead tried to protect employment by providing wage subsidies. The UK scheme is just one example, but it is a good illustration of the principle. The British government has effectively underwritten 80 per cent of workers' incomes (employed and self-employed) for those affected by the lockdowns. Sadly, even with this support buffer, there are still going to be significant and permanent job losses across all nations.

The policy initiatives that have been put in place are wide-ranging. There has been a combination of monetary and fiscal measures. There is no single panacea, but it is very likely that fiscal measures – both direct and indirect – will have to do much of the heavy lifting. Access to cheap lending will help some, but not all. Others will need grants, handouts or other

Policy response has been massive, but cannot prevent significant damage

Big increases in contingent liabilities for the public sector

Figure 13. US monthly change in non-farm payrolls Decline in March was bad, but will be swamped in April

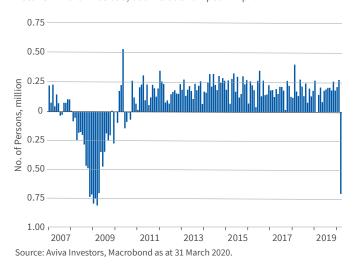
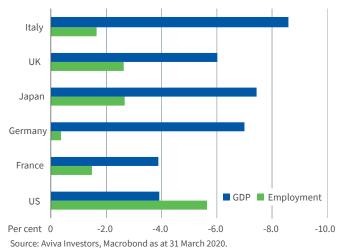


Figure 14. GDP and jobs declines in 2008/9
Job losses were far greater in the US in the GFC



forms of direct transfer. The basic principle will see a massive run down in public saving to finance an increase in funding for the private sector. Here again there are some parallels with war financing. Cash handouts to households or grants to companies will help both groups in the first and the second stage as referred to above. But they will certainly not be enough to prevent some pain – and quite possibly lasting damage – during the harrowing first stage.

The policy measures themselves

There is no merit in listing the details of the various policy assistance measures that have been put in place around the world. There is a vast range of such schemes and they are changing daily. Rather, we can group them into the following broad categories:

- · Monetary conventional
- Monetary unconventional
- Fiscal direct
- Fiscal indirect

(Note: these are separate from specific medical and health policies being put in place.)

The categorisation is neither perfect nor all-encompassing and there are some blurred edges between some of them. But it allows us to provide a summary.

Monetary - conventional: policy interest rates have been reduced in most countries and to new lows in many. Several have jumped instantly to where the effective lower bound is perceived to be (Figure 15). Partly as a result of the GFC, central banks (CBs) understand better the dangers of delaying or not acting boldly enough and have reacted swiftly to the current crisis. Policy rates are likely to remain low - they could even move lower - until an economic rebound is assured and underway. The most basic cost of credit will be kept as low as possible for an extended period.

A critical part of the monetary policy response and central bank signalling is the implicit commitment to own the debt and to keep debt servicing costs as low as possible now and in the future. There is, rightly, a recognition that significantly more public debt is going to be required. Issuance will rise enormously and the additional debt must be willingly held if markets are to remain orderly. It must also be serviced of course, and to ensure that will happen without stress, rates will need to be kept low not just at the policy end of the maturity spectrum, but all along the curve.

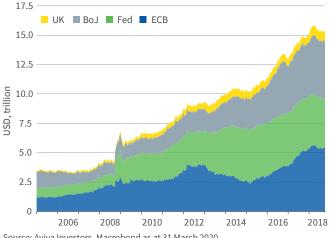
Monetary - unconventional: this is fast becoming an outmoded description as actions being undertaken by global central banks have become more widely accepted. Old rule books have been ripped up. Details vary, but most have restarted asset purchases (QE), some on an unlimited basis, and introduced new such facilities. Central bank balance sheets are going to expand rapidly once more, just as they did in the wake of the GFC (Figure 16). In addition, a wide range of schemes have been put in place to ensure that the banking system has access to unlimited liquidity. In the 2008/9 crisis, banks were perceived to be a major part of the problem; today they have to be a key part of any solution, becoming in part a vehicle for public policy. In return, the

Policy interest rates back to the effective lower bound

Figure 15. GDP-weighted policy interest rate around the world Rates have been cut quickly in response to the crisis



Figure 16. Size of major central banks' balance sheet (USD) CB balance sheets are about to balloon again



Source: Aviva Investors, Macrobond as at 31 March 2020.

state must indemnify them in the form of state guarantees on loans. A range of resources have been put in place in attempts to ensure smooth functioning of corporate finance markets, a key requirement for larger enterprises. Together, these schemes should help prevent funding crises – for both private firms and the Government. But while necessary, such schemes are not sufficient to achieve these aims. More will be needed, much of it in the fiscal arena, but also in the grey area between monetary and fiscal policy. It can be argued today that purchases of government bonds – conventional QE if you like – even mortgage-backed securities too, are not that contentious any more. But extending the range of asset purchases to private sector risks assets is a bigger step. It is already the case that central banks have bought and are buying corporate bonds and equity ETFs, but it may become necessary for them to go further if this crisis deepens.

Fiscal – direct: traditional discretionary spending initiatives and tax reductions will help provide some offset to impacted parties – mainly small and medium enterprises and households, but also several larger companies too. Arguably far more important are the range of measures that have been introduced to directly address the cash-flow problems that are already hitting many companies and individuals and will undoubtedly do so much more in the near future. Again it is difficult to characterise in general, but most estimates suggest that the remainder of 2020 and 2021 (recall that governments don't want to stimulate activity during lockdowns) could see fiscal stimulus amounting to around 2 per cent of GDP. In several countries, that number is likely to be much bigger: Germany and the UK, for example, could see budget deficits balloon higher by 4 per cent or 5 per cent of GDP in short time. Others may well follow (Figure 17). The recently agreed \$2 trillion package in the US as well as ongoing negotiations in Congress over additional stimulus provision, if taken at face value, indicate that the US budget deficit could very swiftly double as a proportion of GDP and move above 10 per cent. Public debt everywhere will rise sharply, exposing existing vulnerabilities (Figure 18).

Fiscal – indirect: a vital part of the collective "whatever it takes" policy approach that has been adopted by many countries is the wide range of loan guarantee and de facto underwriting schemes that have been announced. The headline numbers that define these arrangements are truly mind-boggling in scale. It is important to understand that the figures involved do not represent the actual cost to Government. Rather, they represent a contingent liability that will be incurred if and when such facilities are accessed by companies and people. It is inevitable that they will do so in coming months, but the scale is inherently unpredictable. There is also the not insignificant issue of ensuring that such funding gets to the appropriate recipients – the potential for deceit and fraud is enormous. It is impossible to generalise, but the financial resource that effectively underpins these sorts of facilities can easily amount to 10 per cent or even 20 per cent of GDP. The eventual fiscal cost to governments should be a fraction of that, depending on the amount that is drawn down and not repaid – in other words, the size of the effective transfer from public to private.

In such a fast-changing environment it is almost impossible to quantify the size of the stimulus that will be provided. But is very clear that all of the policy authorities are trying to reassure

Significant direct fiscal assistance is expected everywhere

Numerous schemes introduced to ensure financial markets function as smoothly as possible

"Whatever it takes" policies being adopted everywhere

Figure 17. Public sector budget deficits as a % of GDP

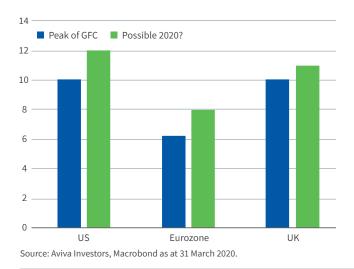
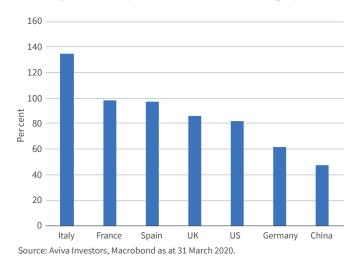


Figure 18. Public debt as a per cent of GDP
Of the major nations, Italy is the most vulnerable (excluding Japan)



with the sort of "whatever it takes" message that Mario Draghi famously provided in 2012 during the Eurozone sovereign debt crisis. On that occasion, merely the threat of extreme actions was enough – in the end the ECB did not have to deliver. This time around, that will not be enough – real assistance will be required on a massive scale and in short time. In the GFC, budget deficits around the world rose sharply. Something of at least a similar magnitude is likely to be required in 2020 – but it could be larger than that and may be needed for a long time. It is little more than speculation really, but given the scale of measures already announced around the world, it seems inevitable that the size of deficits seen in the GFC will be matched again very soon and could very easily be quickly exceeded. Currently, the US is running a deficit of a little over 4 per cent of GDP, while those for the Eurozone (overall) and the UK are both less than 2 per cent.

Again, it is little more than guesswork at this stage, but a rise in public debt of the order of 20, 30 or more percentage points of GDP may well be required.

Will the policy response be enough?

Enough for what? It will not be sufficient to prevent a nasty recession. But it might be enough to avert a depression. Although there are still many worries about assistance reaching the right people in time (this applies to financial help rather than medical), most policy-makers are to be applauded for the size and speed of their reactions. The magnitude of the crisis has meant that, in most quarters, there has been an almost instantaneous acceptance that there will have to be a substantial increase in public debt. There may also need to be private debt cancellation.

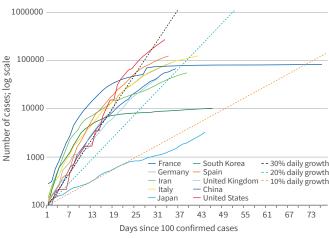
Loans, even cheap loans, are not enough. Some companies will be able to survive by borrowing until the good times return. Others will not, but if they are not helped, the longer-term consequences of business failure, idle resources and permanent loss of productive capacity will be far more costly. The appropriate length of lockdown period is not known but will depend fundamentally on the extent and form of the disease's spread. This will vary from country to country, but some common patterns are becoming apparent (Figures 19 and 20) and, thankfully, containment measures do appear to be working, albeit at huge economic cost. It is entirely appropriate for the public sector to deploy its balance sheet to absorb those risks that the private sector cannot. That has always been the purpose of the state.

While "joined up" policy thinking between governments and central banks is welcome, it is not always perfectly harmonious and, in any case, does not guarantee perfect results. Some problems will prove insurmountable and mistakes will be made. One area of concern is the Eurozone where, not for the first time, differences of view about fiscal union and debt mutualisation have hampered attempts to provide the necessary backstop in these unprecedentedly difficult times. Moreover, while the immediate global crisis is a health one, in the very near future it will also become an economic one. The toxic combination of collapsing GDP, a deflationary down-draught and huge increases in public sector deficits will push some countries onto unsustainable fiscal paths. Those with already high public debts, such as Italy, look most vulnerable.

Figure 19. Pattern of confirmed COVID-19 cases

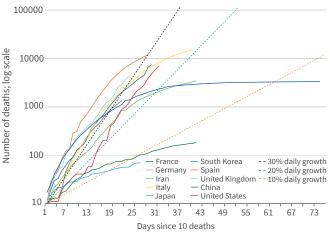
Loans and direct transfers

will be required



Source: Aviva Investors, Macrobond as at 31 March 2020.

Figure 20. Pattern of COVID-19 deaths



Source: Aviva Investors, Macrobond as at 31 March 2020.

Macro forecasts charts and commentary

US

US growth prospects for 2020 are the weakest in the post-war era. The impact of COVID-19 and the associated measures to prevent its spread will have a debilitating effect on the economy for a period of time. Quite how long is hugely uncertain, and therefore makes any assessment on growth for the year as a whole extremely difficult to assess. However, we do expect the worst of the crisis to pass by the end of 2020 and therefore expect a bounce-back in growth in 2021. The inflation outlook is weak given both the negative impact of the COVID-19 crisis on demand, but also because of the sharp decline in oil prices. In terms of policy, an initial fiscal package of US\$2 trillion will help to mitigate the decline, but more is likely needed. The Fed has cut rates to the lower bound and undertaken QE and other liquidity measures. We expect these will remain in place for the course of 2020 and into 2021.

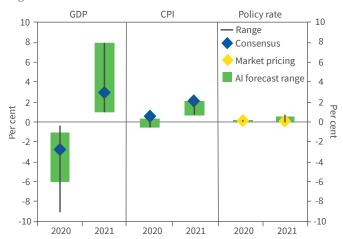
Eurozone

Expectations of a growth revival, including a boost to trade following the significant thaw in trade tensions, have been dashed by the spread of the COVID-19 virus and the reaction to it. A deep recession is now inevitable, although it is hoped that activity can revive in the second half of the year as containment measures are relaxed. For now, any upswing looks a long way off. Policy-makers must focus on mitigating as far possible the worst aspects of the downturn. The scale of fall in activity that is expected has not been seen since the Great Depression. A range of extreme monetary and fiscal measures has been undertaken, but there will still be widespread economic damage in the form of business failures and large rises in unemployment. There must be enormous transfers from the public to the private sector. Unfortunately, on the fiscal front the Eurozone is, once more, vacillating rather than showing the united and bold collective effort that is required and would be forthcoming in a single country. Ongoing ECB support will be vital again.

UK

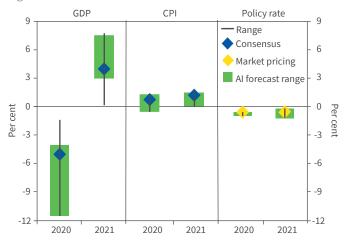
Headline growth numbers for 2020 and 2021 bear no relation to Britain's post-war history. GDP is set to collapse this year, before reviving next as people and businesses return to "normal" work. For now, sadly, only the downturn is certain. Without direct and immediate cash-flow assistance from Government, firms will go under and people will lose their livelihoods in coming weeks and months. Some of this will happen anyway. But policy must try and offset the financial impact from the induced slowdown and preserve as much productive capacity as possible to minimise permanent losses. As elsewhere, the central bank balance sheet will swell, and public sector deficits and debt will soar. Any problems resulting from these trends can be addressed in the future. Now is the time for bold and decisive actions to address the crisis. The UK's policy initiatives will help alleviate the economic pain, but they cannot prevent much of it. And recessions can always generate their own downward momentum. There are dark times ahead.

Figure 21. US



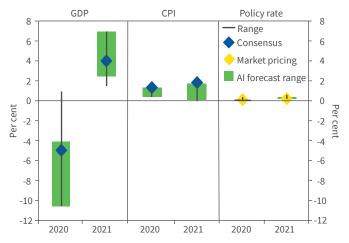
Source: Bloomberg, Macrobond as at 31 March 2020.

Figure 22. Eurozone



Source: Bloomberg, Macrobond as at 31 March 2020.

Figure 23. UK



Source: Bloomberg, Macrobond as at 31 March 2020.

China

China was anticipating an improvement in trade relations when the COVID-19 shock hit. After initially covering up and bungling the response, a major effort has contained the virus, for now, earlier than the rest of the world. This has had a severe economic cost, with February's dire retail sales, investment, export, and industrial numbers showing the economy contracted around 10 per cent. Even with additional stimulus, the normalisation appears slow, with a drag from the rest of the world's demand hitting hard in Q2. Some supply chain problems will cause inflation, and food prices remain high, but other trends are deeply disinflationary. Annual output growth for 2020 will be zero or negative for the first time in decades, despite a policy-induced rebound in H2 that will include lowering LPR and other policy rates by 50-100bps. We expect a weaker currency, at least against the US dollar, but for depreciation to be tightly controlled.

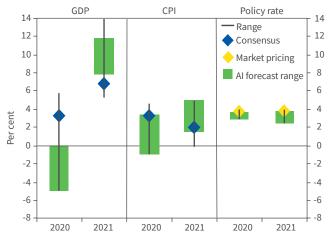
Japan

Postponement of the 2020 Olympics is a severe blow, but the impact of the coronavirus pandemic on Japan has thus far been minor. Tracking and testing have enabled better containment, but most likely this slows, but does not prevent, total cases from taking off. This will help keep the hospitals from being overwhelmed as they have been in some cases, but the key question is whether some sort of lockdown, which has been avoided until now, becomes inevitable. With 25 per cent of economic activity in travel, leisure, and restaurants, a harsh contraction in Q2-2020, also combined with falling demand for exports, is our base case (with both upside and downside risks), followed by a steady rebound in activity. A large stimulus package, on the order of 10 per cent of GDP, will cushion the blow, but much of the subsidies and handouts may be saved. Rates are at their effective lower bound already, and real rates are too high, with inflation stuck around zero, though headline rates may decrease because of a strong yen and weak commodity prices.

Canada

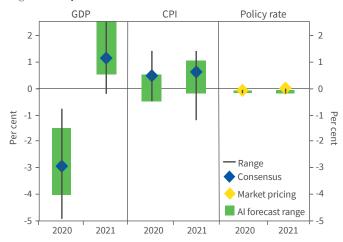
Coronavirus containment measures and the significant fall in oil prices have dramatic economic repercussions for the Canadian economy. The BoC has acted to ensure that credit remains "available and affordable". The policy rate has been cut by 150bp cumulatively year to date, bringing it to 0.25 per cent and BoC has implemented a Large-Scale Asset Purchase (LSAP) programme. The LSAP will be implemented across the yield curve and will remain in place until the "economic recovery is well underway". This comes alongside a host of liquidity measures such as the Commercial Paper Purchase Program (CPPP) to improve liquidity in short-term funding markets, various term repo facilities and purchases of Canada Mortgage Bonds, banker's acceptances, and of provincial money market instruments. The government's fiscal stimulus package has expanded considerably in recent weeks and now totals C\$202 billion. The package includes tax deferrals, direct spending to individuals, government-backed credit and wage subsidies for business. Further announcements are expected with the next move likely to be relief measures for the oil and airline sectors.

Figure 24. China



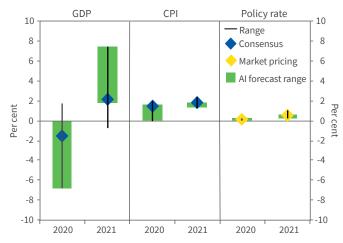
Source: Bloomberg, Macrobond as at 31 March 2020.

Figure 25. Japan



Source: Bloomberg, Macrobond as at 31 March 2020.

Figure 26. Canada



Source: Bloomberg, Macrobond as at 31 March 2020.

Global market outlook and asset allocation

- Favour capital preservation
- · Slight underweight in equities to reduce the economic sensitivity of portfolios
- · Overweight government bonds with preference for US, Australia and UK
- Neutral across credit

Overweight sovereign bonds and underweight equity The start of 2020 feels like a lifetime ago. In our 2020 Outlook (published in December last year) our expectations were for a moderate growth recovery this year and a preference to be overweight risk assets across our portfolios. The COVID-19 pandemic has dramatically impacted the global economy and financial markets, and caused us to materially change our own outlook. The impact on the wellbeing of those impacted, as well as the policy measures taken to curtail the spread of the disease has led to a sudden halt in economic activity. As a result, we have changed our asset allocation views to reflect both the immediate impact and further disruption over 2020. Specifically, we have increased our overweight in government bonds, expressed through overweight in the US, Australia and the UK and have reduced our equity allocation to be overall underweight. The equity allocation reflects our concern about further severe economic weakness putting material downward pressure on corporate earnings over the course of 2020. Our duration view is a reflection of both the demand for safe haven assets and the powerful response from central banks to ease monetary and financial conditions.

Further, we moved to a more cautious stance in our currency allocation, introducing a short Pound sterling view and retaining a preference to be long Japanese yen and short Australian dollar. We have a neutral view across credit, where corporate bond spreads have widened dramatically.

Overall, these changes imply a significant reduction in the economic sensitivity of the portfolio.

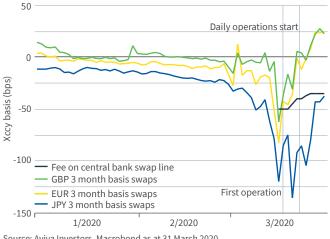
We acknowledge that there is enormous uncertainty regarding the outlook. That uncertainty pertains to the likely further spread of the virus, the measures governments might take to contain the spread, the economic impact of the both of those factors, and finally the monetary and fiscal policy support for households, businesses and asset prices. With so much uncertainty, our confidence in market developments from here is even less than usual. As such, at this time we regard it as imperative to act in favour of capital preservation. Once there is more clarity, and a recovery is within sight, there will undoubtedly be more investment opportunities. A detailed asset allocation table can be found on page 29. The remainder of this section looks at the seizing up of global liquidity in March, followed by the outlook for the major asset classes in more detail.

Huge uncertainties favour capital preservation strategies

Figure 27. 30-year UST-Swap Spreads have dislocated



Figure 28. Intense USD funding stress partly assuaged



Source: Aviva Investors, Macrobond as at 31 March 2020.

Global funding market stress

Liquidity and market function (sometimes referred to as "plumbing") problems, particularly a global dollar shortage, became a key concern in global markets in mid-March. This breakdown was reminiscent of the Global Financial Crisis (GFC) and was causing the prices of certain assets to be dislocated away from fundamentals, as liquidity risk rose sharply. Without a circuitbreaker, the rising liquidity premium can feed back into fundamentals and create further problems – at the extreme precipitating a fire sale of assets. Central banks have stepped in to address these issues, launching a range of facilities, which have already helped to stabilise and, in some cases reverse, the illiquidity problem. But challenges remain. A combination of embedded leverage in some investment structures and illiquidity in the underlying assets could continue to make it difficult to ascertain credit issues versus liquidity risk in some assets.

The main aspects of these liquidity risks – a longstanding risk to our past House Views that has now materialized - are as follows:

Commercial Paper (CP), credit lines, LIBOR: Problem: Many banks and corporates fund themselves via short-term CP or repurchase agreements, which in turn form multi-trillion dollar pools of assets for money market investors. This has become illiquid and issuance has stopped, while funds have faced redemptions; prime money-market funds lost nearly 10 per cent of assets. Corporates have drawn down committed credit lines from banks to increase their cash buffers, or substitute for other funding and/or lost revenues. Banks, faced with this sudden demand for cash, are hoarding liquidity or need to borrow from others via interbank markets, which elevates repo rates, LIBOR and unsecured lending rates. Solution: Central bank buying and funding programmes for CP, opening the Discounting facility/LTRO to a wider range of assets at less punitive rates, without stigma.

Deleveraging, forced selling: many investors use derivatives to optimize portfolios or lower costs, from options, futures, and swaps to more complex structured products. As markets became volatile, counterparties and clearing houses needed to raise margin requirements, while other investors (e.g. risk parity funds, or CLOs) became forced sellers to reduce risk or protect capital, and other managers got redemptions from their investors, and had to raise cash. Leveraged hedge funds, who had been arbitraging treasuries against futures, also hit stop-losses or just tried to rush for the exit door before everyone else did. Credit funds who hedged interest rate risk sold their risky assets, but then had to cover their hedge by receiving swaps. All these factors and others caused volatility to skyrocket, and cash products like treasuries or corporate bonds to underperform; this can be seen in the extreme negative basis seen especially in 30-year treasuries, where yields were as much as 104bps above swaps (Figure 27). Solution: Central bank corporate bond buying and QE helps to a degree, but sometimes the fire just needs to burn itself out; eventually the selling will have run its course, and new funds will be deployed to take advantage of the dislocation. As the saying goes in commodity markets, "the cure for low prices is low prices".

Severe liquidity stresses materialized in many markets, particularly funding problems and leveraged fixed income securitie

Figure 29. Tight relationship between equity prices and earnings

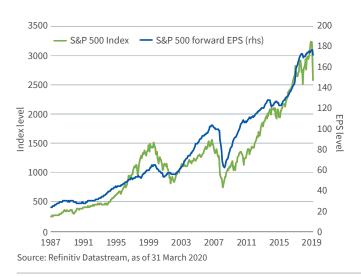
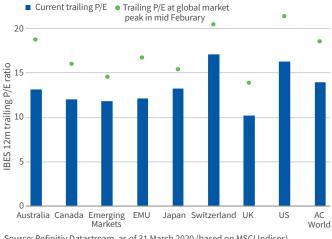


Figure 30. Taking stock of equity valuations



Global central banks, particularly the Federal Reserve, have stepped in to prevent a worsening crisis **Dollar shortage:** Internationally, the dollar is the one global currency, the safe asset and common medium of exchange par excellence. This may or may not be optimal or desirable, but that's the way it is in the global financial system of 2020. The sudden halt in much global activity and trade, combined with the drop in oil revenues to producers, has caused a global dearth of dollars. This impacts the global financial system, as it did in the 2008-9 financial crisis: everything from currencies to trade finance to collateral on futures and ISDA agreements with counterparties. There is real risk of a systemic shock in some part of this complex system. One measure of this is cross-currency basis, which measures the additional cost of FX hedging beyond what interest rates imply they should be (Figure 28). Solution: once again, central banks needed to step up to the plate, providing dollars to the market to assuage the drought. Many central banks have amassed plentiful reserves; hoarding them instead of using them is a policy error. The key actor here is the Fed, which, not before time, redeployed its dollar swap lines for foreign central banks, made the facility accessible daily rather than weekly, and expanded the lending to important central banks of friendly countries – though leaving some, like Russia, Saudi Arabia, China, and Turkey out in the cold. The recent introduction of a FIMA repo facility for a broader range of central banks has plugged this gap.

The cycle ends and equity markets enter bear market territory

Equities

Equity market returns are heavily dependent on realized and expected earnings (Figure 29). Earnings, in turn, are closely tied to the economic growth environment. A sharp deterioration in global economic growth – we expect global demand to decline in the first half of 2020 by the most in the post-war period – thus translates into a deep contraction in earnings, increased probability of corporate default and therefore materially lower equity prices.

As such, it comes as no surprise that global equity markets have sold off sharply in light of the global COVID-19 outbreak and the containment measures adopted, both of which are expected to substantially reduce revenues. Global equities quickly entered a bear market and as at the time of writing had fallen by around 25 per cent from peak levels in mid-February. The sell-off has spared no region or sector; however, broadly speaking, those areas of the market that are most economically sensitive, where balance sheets are weakest, where policy tools to combat the crisis are most limited and containment measures have been applied particularly extensively, have sold off most. One area where we regard economic sensitivities to global demand as currently mispriced is between European and Emerging Market equities. Whilst both are heavily geared to the global cycle, EM equities have so far fared much better than their European counterparts – a development we expect to reverse once the ramifications of slower global demand start affecting EM profits.

The emergence of value critically depends on the magnitude of earnings decline ahead

The sell-off in global equities led to steep valuation adjustments, as shown by the current cross-regional trailing P/Es vs. the multiple that prevailed when global markets peaked in mid-February (Figure 30). There haven't been many instances over the past approximately 30 years during which the P/E ratio for global equities reached levels as low as those prevailing in mid March (as indicated by the red bars in Figure 31). The few times they did, average returns over

Figure 31. Sell-off has led to valuation adjustments

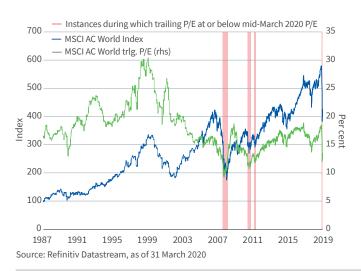
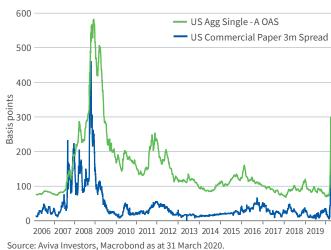


Figure 32. CP and High Grade spreads under pressure



the subsequent three months tended to be negative, whereas they tended to be positive over the subsequent 12 months. However, whether returns are positive over either time period critically depends on the severity of the economic downturn, both in terms of magnitude and duration. For example, in the Global Financial Crisis, a deep and prolonged crisis, three and 12-month returns were negative after multiples reached this year's mid-March valuation lows.

Whether value has emerged or, asked differently, how much more downside there is to equities, critically depends on the expectation for the denominator, i.e. for the low point in the level of earnings. Consensus expectations for 2020 earnings growth are only slowly starting to adjust to economic reality. Having started the year with an expectation for ~10 per cent yoy EPS growth for 2020, consensus has adjusted expectations down to low single-digit growth. We view this number as utterly unrealistic and expect further downgrades to come.

Rather than attempting to estimate P/E and earnings separately, we are mapping our global growth forecast directly onto global equities, thereby gauging what the historic relationship between the two could imply for near-term performance in the AC World index. The results of the analysis leads us to assume that in a scenario where policy is partially successful in offsetting the negative second round implications on growth, but where the healthcare and economic crisis continues for the next 3-6 months, we could see an additional double-digit drop in global equity prices, potentially going as far as reversing the largest part of the gains of the 2009-2020 bull market. It is worth remembering that the last two bull cycles in global equities prior to the one that started in 2009 ended by giving up 70-90 per cent of their gains.

These estimates by no means aim to give precise forecasts but rather attempt to offer a more comprehensive approach to assessing value in equities as opposed to merely looking at valuation metrices.

As equities tend to over- and undershoot "fair" and/or long-term valuations and prices frequently and for extended period of times, we draw on additional tools to assess the attractiveness of being invested in the asset class. Owed to the well-researched tendency of humans to herd and for feedback loops to be reflexive (e.g. Soros (2009)), the speed and magnitude of declining prices by themselves help assess the risk-taking environment. The speedy declines seen over the past weeks have typically been associated with non-linear negative return territory.

Combining both, our fundamental framework with the observation of sharply negative equity market momentum, we regard the risk return trade-off for broad equity indices as challenging, even after the recent steep drop.

However, there is a silver lining. As quick as the sudden halt to the economy has been brought upon us, once we move beyond the virus there is the potential for the steep decline be reversed just as quickly. Contrary to most past recessions, this is not one driven by imbalances or excesses, but rather one caused by an external shock and the policy response to it. Once there is greater visibility on where economic growth troughs, equities might be quick to focus on the equally steep subsequent increase in economic and earnings growth. Remedy could also come

Global growth outlook presents material downside risk to equity markets

Figure 33. HY spreads price in a more dire picture

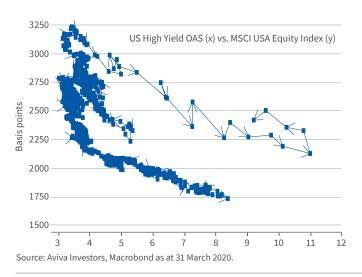
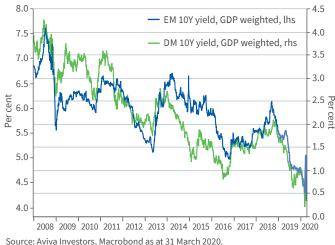


Figure 34. Global 10Y yield Aggregate



Source: Aviva Investors, Macrobond as at 31 March 2020.

from the implementation of further exceptional policy tools, such as supporting companies' income directly and without insisting on the creation of future obligations, i.e. handing out money to companies.

Credit

Rapid revenue deterioration and funding problems have widened credit spreads, but not to usual recession wides. Defaults and more downgrades loom. Corporate credit spreads violently widened in March due, in part, to a fall in oil prices of over 60 per cent from January to March. This was caused both by OPEC and Russia increasing supply, and because of the large demand destruction for oil and other commodities from the COVID-19 crisis. In addition, disruptions to manufacturing supply chains alongside falling demand as a result of the outbreak will impair firms' revenues, and this in turn will hamper their ability to access liquidity. Much of this widening in spreads is justified by worsened fundamentals, but some of it is already building in liquidity premium, in our view.

Specific sectors, particularly shale producers, leisure, hotels, and restaurants, are taking a huge direct hit on the demand side. Globally, governments are responding to help corporations, but such help may involve nationalization and/or debt restructuring, as for example with automaker bailouts in the GFC. A default cycle is beginning that we expect to be concentrated in these sectors; this is priced into Energy HY spreads which were in the 2000s in late March, but less so elsewhere, where spreads remain well below previous recession peaks.

Central banks slashing rates and buying sovereign and, in many cases, corporate debt through massive asset purchase programmes will help governments to finance their fiscal packages at a lower cost, and provide aid directly to businesses. Banks, corporates, and households with mortgages should also benefit from these measures, so long as markets are functional. If not, they may be able to access central banks' commercial paper or corporate bond purchase programmes, or take advantage of banks' ability to fund these assets cheaply with the monetary authorities. However some business models may be unviable, whether or not there is any debt at all.

The current liquidity shock (see earlier section) means that credit lines may be cut off, just as corporate bond funds face redemptions, the commercial paper market has issuance problems, and CLOs or other "rules-based" managers become forced sellers. This can cause spreads to widen due to supply (Figure 32), but also can cause firms themselves to have serious problems, with illiquidity potentially becoming insolvency. Again, government and central bank actions are critical, but it is unknown how the capital structure might evolve, and that uncertainty also requires elevated risk premia.

Finally, the global downturn, even if it lasts several months only, is a negative event for cashflows for companies and many sovereigns, especially those that are dependent on commodities or tourism (the positive oil supply shock will be a boon for many, in the long run). The downgrades have only just begun, and the large number of triple-B rated companies means that the fallen angel risk – forced selling by investment grade funds, and inability to absorb billions in "new supply" by high yield managers – is expected to cause some dislocations in pricing.

Figure 35. G4 bond volatility spillover index

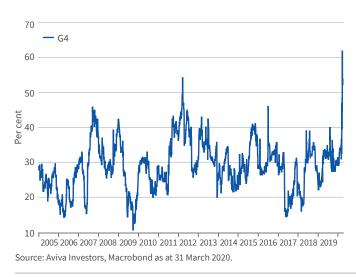
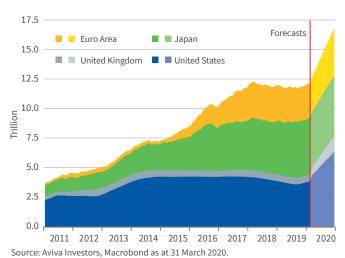


Figure 36. Central bank asset purchases (USD)



There are – and will be – bargains here, but substantial real credit deterioration is occurring.

With both investment grade and high yield spreads widening so dramatically, credit as an asset class has underperformed equities on a risk-adjusted metric, and so is pricing in more of the recession which is just beginning. Should spreads stay elevated, not only will defaults ensue, but the equity risk premium will be impacted as well (Figure 33).

Rates

The shock imposed to the global economic activity by the outbreak of COVID-19 plus the tensions related to the oil war between Russia and OPEC countries have driven bonds yields to new historical lows in many developed countries. The yield of the global developed market sovereign index fell to only 0.2 per cent in early March (Figure 34). Our bond volatility spillover index, which accounts for the way in which G4 sovereign bond markets impact each other, reached a peak of 60 per cent, higher than what was recorded during GFC or the Eurozone debt crisis (Figure 35), with the largest contribution coming from US Treasuries market.

Taking the US yields as a reference, we observe that the decline of bond yields during this crisis has been characterized by two phases: from the beginning of January to the third week of February, yields were pushed down by a higher risk aversion, which triggered lower term premia; afterwards with the spread of the virus in Europe, the dominant driver of lower bond yields has been monetary policy and expectations of lower risk-free rates.

Central banks' response was timely and impressive. Government bond markets started showing signs of dysfunction in mid-March, as forced liquidations and margin calls triggered selloffs for even the safest sovereign markets. However, large scale purchases by central banks subsequently saw yields stabilize and fall back in late March, with expectation of central banks moving to their effective lower bound (ELB) and ramping up asset purchases (Figure 36). The Federal Reserve and Bank of England began to buy government bonds at a pace and size many times greater than in the GFC. The ECB has similarly committed to rapid and large-scale purchases. Meanwhile, the BoC, RBA and RNBZ have joined the club of Quantitative Easing (QE). The aim of QE is precisely to keep the bond Term Premia (TP) low so that global financial conditions remain easy (Figure 37). As a reminder, past Fed QE programmes' cumulative effect in the US TP are in the range of 100-120 basis points on 10Y maturity. Estimates of the impact of ECB QE on TP are similar. The fiscal support that is also coming will work out as an opposite force to asset purchases via supply of new bonds. A recent IMF paper estimates a baseline increase of approximately 20bps in yields for a one-percentage point deterioration in the fiscal deficit, which could rise to over 50bps if exacerbated by additional adverse factors, such as unfavorable initial fiscal conditions or weak institutions. But the debt management policy will also matter, and so far, most countries have funded the COVID-19 fiscal spending mostly through the issuance of bills rather than bonds, probably due to the fact these measures are perceived as temporary. This should mitigate downside pressures on bonds for now. However, ultimately this issuance will need to be extended.

Two opposite forces will drive sovereign yields, on the one hand massive purchases by central banks and on the other hand higher issuances related to contingency plans

Figure 37. Bond term premia (10Y maturity) and CB holdings

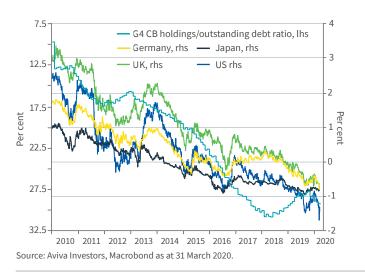
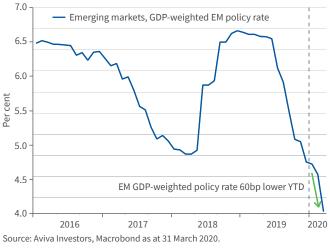


Figure 38. Emerging Market monetary policy (GDP-weighted; ex-China)



There are concerns that the announced fiscal stimulus plans will create an inflationary world. The effect on inflation will depend on which of the two shocks (supply-side or demand-side) prevails. However, there are two important elements. First, the bulk of fiscal measures aims at addressing socio-economic impacts of the COVID-19 pandemic, essentially replacing lost income (via unemployment benefits) or ensuring there is no lasting decline in production capacity via public guaranteed loans. In principle, these measures should not be inflationary, and even more in a context of global downturn. Second, lower oil prices will exert downward pressures on inflation in coming months. We therefore consider that the risk of upside inflation surprises is limited, at least for the rest of this year.

A low yield environment should prevail, namely in a context of non negligible uncertainty and downside risks As for Euro Government Bonds, the €870bn of additional securities' purchases announced by the ECB on top of regular QE will absorb the extra issuances even for peripheral countries in 2020. However, we believe that a wider coordinated fiscal response is crucial to increase the effectiveness of the fiscal measures, in particular for weaker countries, starting with Italy. ESM Precautionary Conditioned Credit Line (PCCL) or "Corona bonds" are some of the measures under discussion. As always the devil is in the details, and the conditionality of credit lines might leave long-term marks on the Italian domestic political debate, and/or a relatively small size of the proposed instrument might be considered not enough by the market. But don't forget that usually Europe advances in crisis time!

All these factors support our view of a prolonged low yield environment. We believe that an additional deterioration in risk appetite, due to the materialization of a more severe and prolonged global recession (our downside scenario), will boost demand for top-rated fixedincome securities, triggering still lower yields. Expectations of a Fed Yield Curve Control might push in the same direction. We therefore remain overweight bonds, more pronounced in US Treasuries which offer more protection relative to other zones.

Emerging market debt

EM has been hit hard by the significant downgrade to the global growth outlook and central banks have responded quickly Emerging markets – economies and assets – have been hit hard by the onset of the COVID-19 crisis and the rapid deterioration in the global growth outlook. For those with significant exposure to commodity (particularly energy) exports, the oil price shock has added to the pressures. Even prior to the outbreak of the coronavirus' growth in a few of the core EM countries was already low. Following global developments, these already struggling economies have seen significant downgrades to their growth outlooks. Nonetheless, major EM central banks have reacted and are expected to continue to provide ongoing monetary support. Figure 38 shows that emerging market GDP-weighted policy rates are 60bp lower YTD despite having already fallen significantly throughout 2019, bringing EM policy rates to all-time lows. The willingness of EM central banks to cut rates highlights their desire to prioritise the real economy over potential currency implications. This is a notable shift in priorities relative to the global financial crisis (GFC) where currency concerns were more dominant. However, the extent to which they are able to pursue this approach may well be tested over the coming months, particularly as they see an increasing number of COVID-19 cases. Indeed, EM economies that rely on external funding will

Figure 39. EM LC v Risk asset growth basket (yoy)

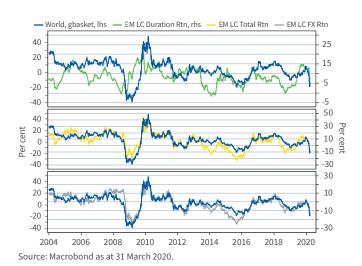
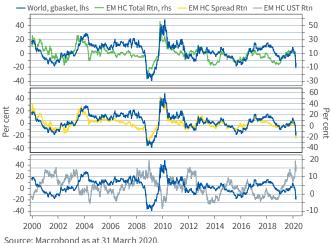


Figure 40. EM HC v Risk asset growth basket (yoy)



need to carefully judge their fiscal and monetary response against their perceived institutional robustness. Otherwise, the currency could move from being a pressure release valve to a destabilising force. Given the backdrop, our appetite for EMFX is limited here.

Liquidity continues to be a challenge within emerging markets and therefore investment opportunities must be considered from a structural rather than tactical basis. At this time, therefore, investors in emerging market assets must focus on those economies that offer longer-term fundamental value and acknowledge that returns are likely to remain volatile over the near term.

Within local currency (LC) bonds, FX depreciation has dragged on performance and pulled yearon-year returns negative. However, some high yield LC rates markets are now approaching their post-GFC highs both in real and FX hedged terms and could start to look attractive. Elevated yields in parts of the LC universe, alongside attractive valuations for some EM currencies, suggest potential for above average returns once the external environment stabilises. Similarly, some investment grade sovereigns in hard currency (HC) look to have widened beyond fundamentals given the balance sheet strength they possess. In the HY segment of HC, return dispersion should remain elevated as vulnerabilities are exposed by the current situation in certain countries, whilst others have greater internal resources, and access to external support, to allow them to navigate through the ongoing challenges. While small pockets of value may be found, the overall outlook for emerging market assets remains challenged given our global economic expectations. Figure 39 and Figure 40 break down LC and HC into their component parts and show how they relate to other global growth sensitive risk assets, indicated by Aviva's risk asset growth basket. EM FX and HC spreads have historically had a positive relationship to the global growth cycle and generally drive total returns in LC and HC, respectively. While EM along with other risk assets have already priced a material decline in global growth, we do not yet feel it fully reflects our expectations for where global growth will eventually bottom, and how long it takes to return to normal. As with other risk assets, EM will likely rebound strongly when the growth outlook improves and concerns around the coronavirus spread dissipate. Given the current uncertainty for when this will materialise and the more difficult liquidity situation in emerging market assets, we prefer to hold a neutral exposure at this time.

Liquidity continues to be a challenge and therefore any opportunities must be longer term in nature to be attractive to trade

While pockets of value may be found the overall outlook for the asset class is challenged

FX

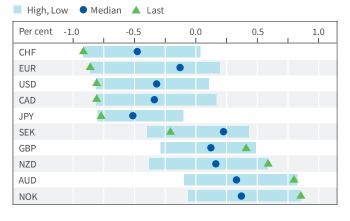
Like other asset classes the spread of the coronavirus and subsequent repricing of the global growth outlook has shaken currency markets. Volatility has increased dramatically through Q1 and the carry trades that looked promising at the start of the year have been shaken loose. Year-to-date (YTD) nearly all major currencies have depreciated verses the USD, with many high yielding Emerging Markets (EMs) depreciating by more than 20 per cent. Despite the dramatic moves, so far central banks have rightly focused policy on the real economy, cutting rates and providing liquidity.

Of course, it's not just the economic implications market participants are considering in currency markets but the portfolio implications also. Cross asset correlations have been nearly as volatile as markets themselves, making portfolio construction increasingly challenging. In crisis, cross

Figure 41. USD, JPY, CHF, EUR & AUD correlation to global equity (rolling 26 weeks)



Figure 42. G10 correlation to global equity (rolling 26 weeks, 5y window)



Source: Bloomberg, Macrobond as at 31 March 2020.

asset correlations tend to move towards the extremes. Figures 41 & 42 show the 6m correlation between G10 currencies and global equity markets (MSCI ACWI). The yen has long been the risk-reducing currency used in portfolios given its low median correlation to global equities. Even with a 5y window, the range of correlation shown as the shaded blue area in Figure 42 has been consistently negative. However, traditional risk reducing positions such as short USDJPY have recently failed to protect portfolios. The breakdown in USD correlation to risk assets in March was sharp, rapidly changing from near neutral correlation to deeply negative due to the dollar shortage described above. If USD correlation to risk assets persists in being lower than that of JPY, short USD positions will be unhelpful to portfolios looking to limit downside as equities fall. Alternatively, investors can look to take a position against those G10 currencies which historically have had a positive correlation to risk assets such as AUD, whose correlation to global equities has strengthened over recent months.

Historically, the USD has been sensitive to significant changes in the global growth outlook, particularly vs EMFX The YoY change in USD has historically had a counter cyclical relationship to global growth, with USD appreciating YoY as the global economy weakens and depreciating as the global economy strengthens. Figure 43 shows this relationship is particularly strong for EM currencies vs the USD, depicted by the red line in the top pane. In a crisis, FDI and exports wane, portfolio flows reverse, and dollar debts become difficult to service. Therefore, it is unsurprising that the USD negative correlation to risk assets should strengthen so significantly as markets price a rapid deterioration in the global growth outlook.

When the global growth outlook and risk sensitive assets decline, the USD appreciates

Beyond the general "safe haven" bid for USD there are a number of potential drivers that underpin the negative correlation to global growth and risk assets. Globally, international investors hold more USD assets than domestic US investors hold of foreign assets. When the global economy is hit and risk assets fall, foreign investors with hedged FX positions find themselves overly short of USD leading to increased USD demand. Because the size of the imbalance of USD assets abroad vs foreign currency in the US is so large, USD buying flows by foreign investors far outweigh the USD selling flow from US domestic investors. In addition to this, EM central banks often need to sell USD and buy their domestic currency to defend it in times of market stress; this stabilises markets but damages sovereign creditworthiness. Selling USD changes the currency composition of their reserve assets and when this imbalance is corrected this can lead to the USD strengthening against other G10 crosses.

Current YoY appreciation in USD has been small vs historic comparisons to growth shocks

As discussed above, major central banks have initiated swap lines with the Fed to alleviate immediate USD funding stresses. However, when you look at the current YoY change in USD, whether that is against EM currencies or G10, USD strengthening could have a lot further to run if we are to see a global slow down anything like that of the GFC. For these reasons we favour a long USD bias against more growth / risk sensitive currencies and restrain our exposure to long JPY.

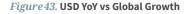




Figure 44. Asset allocation

	Underweight									Ove	rweigh
	-5	-4	-3	-2	-1	0	1	2	3	4	
Equities				-2							
US						0					
Europe								2			
UK						0					
Japan						0					
Pacific Basin ex Japan						0					
Emerging Markets				-2							
Nominal Govt									3		
United States									3		
United Kingdom							1				
Germany				-2							
France						0					
Italy						0					
Japan						0					
Canada						0					
Australia							1				
Credit						0					
US Investment Grade						0					
European Investment Grade						0					
Asian Investment Grade						0					
UK Investment Grade						0					
EUR High Yield						0					
US High Yield						0					
Emerging Govt (Hard Curncy)						0					
Emerging Govt (Local Curncy)						0					
Alternatives						0					
Cash					-1						
Currencies (vs USD)						0					
GBP				-2							
EUR						0					
JPY							1				
CAD						0					
AUD					-1						
NOK						0					
EM FX						0					

The weights in the Asset Allocation table only apply to a model portfolio without mandate constraints. Our House View asset allocation provides a comprehensive and forward-looking framework for discussion among the investment teams.

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