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CIO Insights

Through difficult waters

2020 outlook update

Letter to Investors

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Through difficult waters

With the initial coronavirus wave now contained due to social distancing measures, attention is shifting to the pandemic's longer-term economic implications. Volatile markets are being driven largely by policy interventions and hopes of a vaccine or treatment and thus do not provide an adequate guide to what lies ahead. We need instead to step back and think about both the opportunities and challenges.

The road ahead will be a difficult one and subject to reversals. The last few months have been brutal at multiple levels and it would be unwise to think that we can quickly return to the status quo.

Many will be familiar with a famous quote from the great Italian novel, "The Leopard". One character explains (also during a historical period of great stress) that "everything must change so everything must stay the same". This is what we are now seeing: economic policy and social mores are now changing rapidly, with the hope of returning us quickly to normality.

The immediate economic damage from the shutdown will be major, and we evaluate this and its medium-term investment implications in the first section of this report. In particular, we focus on the likely shape of the economic recovery, how policy will change, and the outlook for asset classes. Now we appear to be past the peak of infection rates, at least for the time being, stresses in many markets (e.g. credit) have somewhat eased but these and others will however need some time to reassess new realities – for example the impact of lower earnings on equities. The separate but also very important oil crisis, with continued uncertainties around the most recent OPEC+ oil production control agreement, still also need to be resolved.

We also look at our 2020 investment themes in the light of the current crisis. These were first published in December 2019, into a rather different world. But they remain highly relevant to the investment environment today and in the remainder of this year.

The crisis has inflicted major damage on the global economy which will have lasting investment implications. It has also set up long-term political, policy, economic and market tensions which need to be resolved.

The second section of the report looks at what long-term changes the coronavirus pandemic may have made to the economic and investment environment. Has, indeed, everything changed in an attempt to preserve an illusion of a return to the status quo? Prophesying the future immediately after a major event is notoriously difficult and the additional problem is that this event is far from over. I do not think that the more extreme recent predictions about changes to social patterns and economic structure will take place – although we will see the impact of technology, especially digitalization, on many areas of life, not just healthcare.

But what I think that the crisis, and the policy response to it, has done is to set up a number of tensions in the political, economic and investment environment that will determine where we go from here. We divide these tensions into four groups: political, policy, economic and market-based.

Political tensions seem to us likely to be focused on the issue of "control" – both at the national level (internationalism vs. nationalism) and, at the level of the individual, on the struggle between political liberalism and social control. Such "control" sources of tension have been very evident during the economic crisis.

Policy tensions will be centred on the degree to which monetary and fiscal policy intervention during the crisis should be reversed, and the likely timeline for this: in other words, whether or not our addiction to intervention can be overcome. One experience from the global financial crisis is that policy "normalization" can take a very long time to achieve. A changing political landscape could make the process even more complicated.

Economic tensions may worsen after the first leg up of the economic recovery has been achieved. We do not expect the initial rapid rate of increase in output to be maintained and relatively sluggish subsequent growth, coupled to the policy debate, will encourage further concern about capital misallocation and the renewed risk of a secular slowdown. One particular concern is that higher levels of indebtedness could weigh heavily on future growth.

Relatively sluggish growth, after the first phase of the recovery, will increase worries around capital misallocation, high indebtedness and the renewed risk of a secular slowdown. We will be moving through difficult waters for some time yet.

Markets, for their part, will remain caught between outbursts of "animal spirits" (as at perceived turning points of the crisis) and a continued need for handholding (by the monetary and fiscal authorities) at times when the going gets tougher. It is worth considering whether this tension is a temporary phenomenon which will eventually dissipate, or whether it is now a structural issue for investors.

In conclusion, one lesson that we can take from the crisis is that – even at times of extreme market stress – long-standing investment rules apply. In the medium-term it is worth having a strategy and sticking to it – either at times of market downturns or the subsequent recovery. In the long term, dangers around market timing mean that Strategic Asset Allocation (SAA) remains the way to deliver sustainable portfolio returns. We explain how we do this, and how the SAA process will incorporate the lessons from the coronavirus crisis, at the end of this report.

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Instant Insights

2020 in a nutshell

- Partial economic recovery expected, then slow growth
- Markets will anticipate improvement, but remain vulnerable
- Post-COVID-19 world characterized by four key stress dimensions

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Macro and policy outlook

Initial contraction and recovery

We expect a partial recovery that is shaped like the mirror image of a square root sign: √.

In other words, sharp initial growth followed by rather flatter growth thereafter – and at a lower level than prevailing before the crisis. The initial recovery is already proving to be staggered between countries, depending on their progress in dealing with the coronavirus, with China leading the way out. In the medium term, this staggered recovery will create some challenges but may also help out in some instances e.g. the early availability of Chinese inputs could help the recovery in European production. Unemployment will however remain a real cloud – either workers without jobs in economies still struggling to recover, or workers on reduced hours in countries where the domestic economy is picking up, but that are still suffering from damaged export markets.

The likely hit to 2020 output from the pandemic remains challenging to quantify, but it is clear that developed economies' GDP levels will all contract in H1, along with some emerging markets. The hoped-for recovery in H2 2020 will, at best, only partially offset the damage from H1. Even on the most optimistic estimates, we seem to be looking at sharp full-year 2020 GDP contractions in both the U.S. and the Eurozone. Within the latter, Italy and Spain seem likely to suffer larger GDP contractions in 2020 (perhaps around -10% and -9% respectively) than France or Germany (-8.5% and -6%). China, benefiting from an earlier recovery, might at best grow by a minimal amount in 2020 as a whole. And, while we will likely see some large rebounds in full-year 2021 growth figures, the sobering fact is that output levels in most economies will still be below pre-crisis levels at the end of next year. We give our initial growth forecasts in Figure 1. These projections are obviously dependent on the duration of remaining lockdown restrictions and could be subject to major revisions.

Figure 1: Our GDP growth forecasts for 2020 and 2021

Source: Deutsche Bank AG. As of April 28, 2020. Real change in %. All forecasts subject to revision.

	2020	2021
U.S.	-5.7	5.6
Eurozone (of which)	-7.5	4.5
Germany	-6.0	4.5
China	1.0	9.0
Japan	-5.5	3.3
World	-2.6	5.4

It is also worth remembering that while the breakdown in OPEC+ production controls has been somewhat overshadowed by the COVID-19 crisis, it has been a major economic disruptor in its own right. The decision by Saudi Arabia and Russia to up production levels in competition for market share pushed down oil prices, and the negative impact of this on financial markets has outweighed any potential economic gains from lower energy prices. Even after subsequently agreed production cuts, the oil market looks likely to remain oversupplied for some time.

In the medium term, the length of current lockdowns (or their necessary reimposition in the case of a second wave of infections) will affect the quality and strength of the subsequent recoveries. For developed economies, the big question may be to what extent industrial structures and employment markets have survived intact. Early indications are that small and medium-sized firms have found the going tougher during lockdowns than their larger peers. For emerging markets, an additional problem as the crisis deepened was an outflow of money from these regions, well before economic data confirmed a downturn; a restoration of investor confidence may be central to growth prospects.

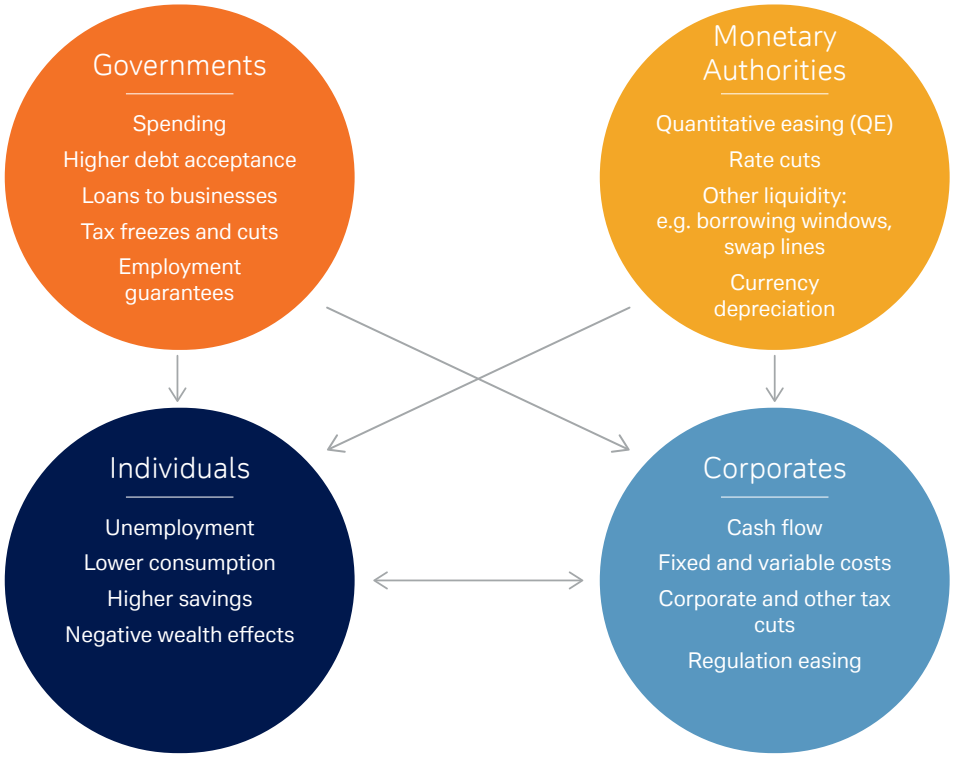
Longer-term growth concerns

In the longer term, much bigger questions remain as to what sort of recovery this will be. In our recent history, most recoveries have been after periods of war or one-off natural disasters (e.g. earthquakes). This has been a rather different sort of economic disaster, in that very little physical infrastructure (or other forms of capital stock) has been destroyed – so the initial impetus from rebuilding will be missing. If you go back further into the past, the concern is that pandemics appear to lead to an increase in precautionary savings as individuals, wholly understandably, remain concerned about what could happen next. This precautionary saving can last for a long time. Japan provides an example of how high savings can coexist with high levels of government debt for many years, with default not the issue (due to low or negative real rates, and a private sector that is conditioned to buy government bonds), but with a damaging impact on growth. In the past, inflation has been the way out of such a trap, but demand-pull inflation seems unlikely in the current situation as increases in government spending (already high) are unlikely to fully offset the fall in overall demand. Supply-driven inflation is possible in some areas – as changes to supply chains, repatriation of production and reassessment of globalisation in general pushes up costs – but seems unlikely to be able to offset the overall depressing effect on prices from contracting or significantly slower growth in demand in the medium term.

We would add another cautionary note. In the past, crises are often presented as opportunities to fix perceived structural problems in the global economy. But experience suggests that, without a major effort (which we hope is forthcoming), such structural problems can often go unresolved, with policymakers more focused on dealing with immediate concerns. Of course, markets will continue to offer opportunities even in such circumstances.

Figure 2: Policies vs. problems

Source: Deutsche Bank AG.



Section 1:
2020 outlook revisited

Asset classes: our views summarized

Further progress on containing the pandemic will underpin asset classes but this will not be a steady upward progress – there are a number of risks, including a possible resurgence of the coronavirus.

Our asset class views are discussed below and are summarized (12-month horizon) on page 8. Our 12-month point forecasts are given in the accompanying tables. Even over the long term, short-term market corrections with high levels of volatility cannot be ruled out.

The case for equities will be supported, in the short term, by continued progress in reversing the coronavirus pandemic and, in the medium term, by the likelihood of low interest rates for a very long time – hence an absence of alternatives. Low rates should allow a move to historically high price/earnings (P/E) valuation levels, supporting higher prices. But this is likely to be an environment where it makes sense to pay more attention to the resilience of a company's balance sheet than valuations per se. Our overall equity market forecasts are given in Figure 3.

We would highlight two equity sectors – one which could prove resilient in the short term and one set to profit from the recovery in the longer term. Healthcare is obviously in focus at the moment but also has strengths that go beyond the current crisis – e.g. innovation, cash-rich balance sheets (that should allow for M&A, dividend payments or share buybacks) and a P/E premium to the global market that is below the long-term average. The sector's earnings durability during periods of economic weakness could also be an argument for its relative outperformance.

The second sector, technology, could benefit from higher capital expenditure and fiscal stimulus. The sector generally boasts relatively strong fundamentals – at valuations that have come down to more reasonable levels. Balance sheets in the sector are characterized by large cash balances and relatively low debt. Technology could also benefit from structural trends that the COVID-19 crisis forces on the global economy – e.g. increased use of digitalization in healthcare, home working and so on.

Figure 3: Equity index forecasts for end-March 2021

Source: Deutsche Bank AG. As of April 28, 2020.

U.S.	S&P 500	3,100	Switzerland	SMI	10,150
Germany	DAX	12,000	UK	FTSE 100	6,100
Eurozone	Eurostoxx 50	3,150	Emerging Markets	MSCI EM	1,000
Europe	Stoxx 600	370	Asia ex Japan	MSCI Asia ex Japan	660
Japan	MSCI Japan	950			

Corporate credit markets initially found the global escalation of the COVID-19 crisis in February and March 2020 sometimes even more traumatic than equities markets. Liquidity dried up in many markets, with markets only brought back to life by considerable ECB and Fed intervention. Market dislocations led to forced selling by institutional investors obliged to reduce risk positions, creating considerable short-term opportunities, and providing a timely reminder that fixed income markets are not guaranteed to be orderly but on the basis of our main scenario (containment of the virus, initial growth recovery followed by slow growth) a repetition of such dislocations can with luck be avoided. Instead, fixed income analysis is likely to return to a more technical approach, but with some outstanding questions (e.g. around emerging market resilience). At present, high yield may appeal with high liquidity and high carry, along with some support from central bank purchases,

helping to offset the risk of higher default rates but there will be opportunities elsewhere too. See Figure 4 for our fixed income forecasts.

Government bond markets face a rather different set of challenges, as illustrated by their reaction to monetary and fiscal support packages over the last few months. Following announcements of rate cuts and securities purchase programmes, 10-year bond yields tended to fall. But when fiscal programmes were announced, 10-year bond yields rose. Fiscal programmes are probably not inflationary in the current environment, given the collapse in demand, but the longer-term effects are uncertain, because of possible shortages of certain types of goods and changes in relative prices. Central banks should be in a position to stop these shifts in relative prices changing into general price increases, by reducing liquidity if needed, but policy errors could happen – and there is the overarching problem of increasing levels of debt. On a 12-month horizon, a slight rise in government bond yields is possible. Forecasts are given in Figure 4.

In FX, we think that within our forecast time horizon USD strength is likely to continue, as will that of the JPY. GBP could be vulnerable to Brexit and economic concerns. As regards commodities, we see some eventual upside for oil prices on a 12-month horizon as demand picks up, but this will take some time and prices will remain below pre-crisis levels. Gold's appeal will continue in this environment. See our FX and commodity forecasts in Figure 5.

Figure 4: Bond yield and spread forecasts for end-March 2021

Source: Deutsche Bank AG. As of April 28, 2020.

U.S.		
UST 2yr	U.S. 2yr yield	0.5%
UST 10yr	U.S. 10yr yield	0.9%
UST 30yr	U.S. 30yr yield	1.3%
U.S. IG Corp	BarCap U.S. Credit	135bp
U.S. HY	Barclays U.S. HY	600bp

Asia Pacific		
JGB 2yr	JPN 2yr yield	–0.2%
JGB 10yr	JPN 10yr yield	–0.1%
Asia Credit	JACI Index	370bp

Europe		
Schatz 2yr	GER 2yr yield	–0.8%
Bund 10yr	GER 10yr yield	–0.5%
Bund 30yr	GER 30yr yield	–0.1%
Gilt 10yr	UK 10yr yield	0.6%
EUR IG Corp	iBoxx Eur Corp all	120bp
EUR HY	ML Eur Non-Fin HY Constr. Index	500bp

Emerging Markets		
EM Sovereign	EMBIG Div	600bp
EM Credit	CEMBI Broad	500bp

Figure 5: Commodity and FX forecasts for end-March 2021

Source: Deutsche Bank AG. As of April 28, 2020.

Gold (USD/oz)	1,800
Oil (WTI, USD/b, 12 month forward)	37
EUR vs. USD	1.10
USD vs. JPY	105

EUR vs. JPY	115
EUR vs. GBP	0.90
GBP vs. USD	1.22
USD vs. CNY	7.00

Asset class views in summary

Core government bonds:
Yields likely to stay low in historical terms. With inflation under control, little incentive for central banks to tighten policy quickly but dramatic increases in government debt issuance could provide some limited upward pull on yields.

Investment grade:
Still appealing, although U.S. and EUR IG affected by questions around corporates' underlying health and potential downgrades, with supply also a potential issue in the U.S.

High yield:
After dramatic spread-widening in March, high yield could now present opportunities with central bank liquidity and carry offsetting risks of higher default rates. But any investment here needs to fit with the individual investor's risk profile.

Emerging markets hard currency debt:
Coronavirus, commodity price weakness, geopolitics and continued U.S. dollar strength have added to the challenges, but downside risks may be largely priced in and Asian debt could benefit from regional re-opening.

U.S. equities:
Coronavirus-generated recession will have an impact on company earnings and capex that could take time to reverse. But persistently low interest rates should help support valuation multiples. Companies with strong balance sheets and resilient cash flows should be better able to deal with bumps ahead.

European equities:
Sharp expected contraction in Eurozone GDP is forcing a major re-evaluation of earnings expectations, with export markets providing no relief. But very accommodative monetary policy, and lack of EUR strengthening, will provide some support.

Japanese equities:
Domestic GDP contraction worsened by Olympics postponement and Japanese firms face other challenges too, including a still-strong JPY. On the positive side, the Bank of Japan is expected to remain very accommodative and local spread of coronavirus has been relatively contained so far.

Emerging market equities:
Increased volatility likely as key export markets prove slow to open up. But early recovery of some Asian economies will help, as will central bank support. USD strength a potential issue for some economies.

Gold:
Continued low interest rates and accommodative monetary policy should provide support for the gold price even if market stresses ease. But the coronavirus experience reminds us that the safe haven appeal of gold is not infinite and that its price can be pulled down by investors reducing positions for liquidity needs.

Oil:
Some room for a recovery in prices (12 month WTI forecast USD37/b) but recovery in demand will be slow and success of OPEC+ output controls uncertain.

Section 1:
2020 outlook revisited

Our 2020 themes reassessed

When we launched our 2020 themes, back in December 2019, it was a very different world. The concern then was sluggish, not negative, GDP growth and how policy makers might compensate for the apparently waning power of central bank intervention: we titled our 2020 outlook "The end of monetary magic?". And, indeed, monetary intervention has been reinforced by substantial fiscal stimulus – albeit to deal with an unexpected growth shock.

The 2020 themes however still have some resonance today, if in a very different world. Our first 2020 investment theme was "Policy pressures need a prudent response". The crisis has created extreme pressures demanding very quick responses and great innovation in fiscal policy, complementing monetary policy. The severity of the current situation has made radical action appear "prudent" now but the long-term implications are unknown. Escalating debt levels and the future difficulties of governments extricating themselves from crisis-era politics could create difficulties ahead.

The pandemic, and the policy response, makes it even more certain that we will be "Living with a low yields world" (our second 2020 theme) for some time yet. "Normalization" of yields is likely to take even longer than previously expected to achieve (in the absence of much higher levels of global inflation, which we do not expect) and will remain subject to potentially major reversals.

The crisis will only add to the pressure to "Find new income harbours" (our third 2020 theme) – at a time when yields remain very low and economic contraction has sharply increased the risk of defaults. In response to the escalation in COVID-19 cases during March, high yield and investment grade spreads rose sharply and while they have now fallen back, questions around market liquidity at times of stress will remain. However, high carry and high liquidity will make high yield potentially attractive and there will be opportunities in investment grade and certain emerging markets too.

Where do recent events leave equities? Looking through the immediate volatility, sustained low interest rates and lack of investment returns elsewhere should eventually boost equities' appeal and should make possible quite high price/earnings (P/E) valuations in historical terms. Our fourth, equities theme for 2020 was a call to "Balance your style" but in the foreseeable future investment style will likely be subsidiary to general moves in the market due to pandemic or other factors. At a sector level, we are currently positive on healthcare and tech.

FX markets have been put under stress by the COVID-19 crisis and this still outweighs some longer-term fundamental drivers e.g. the reducing rate differentials between the U.S. and other developed markets, due to deeper Fed rate cuts. But, in a time of continued economic stress, there is a worry that currency trends will become politically contentious again as countries seek others to blame for domestic weakness: in other words, as we put it in our fifth, FX and Commodities theme for 2020, that "Politics tops policy". Even before the crisis escalated, politics seemed to top policy in the case of the global oil market – with global oil prices dragged down by internal OPEC+ disagreement – and looks likely to remain a driving factor.

Our sixth 2020 theme, focused on long-term investment opportunities was titled "Tech meets ESG" and looked at both resource stewardship (with a focus on waste management) and 5G. Both are impacted by the current crisis. In the longer term, the current crisis may put the focus on ESG issues as a way of fostering sustainable growth (e.g. fair payment for critical workers) but in the shorter-term non-ESG aspects of investing (e.g. risk management) may be of greater interest. On 5G, the crisis may temporarily disrupt roll-outs. But it has also demonstrated the need to build an increasingly powerful digital infrastructure – to which 5G will be a key contributor.

Digitalisation in its broadest sense – in terms of how and where we work, how our social lives are conducted and how our entertainment and other services are delivered – seems likely to have been given a major further boost by this crisis.

Section 2:
The post-COVID-19 world

Four key tensions

Forecasters often veer between projecting major changes to ways of life that will not happen (e.g. widespread predictions in the 1950s about flying cars) and predicting what is in essence a continuation of the present, with slight variations. The post-COVID-19 world may not be radically different from the present but it is certain not to be the same. To understand where it could go, it makes sense to look at the opposing forces that could pull the global economy and society in different directions. These tensions run in four dimensions – political, policy, economics and markets.

Dimension 1: Politics – two questions of control

- The first political question of "control" involves the perceived tension between "multilateralism" vs. "nationalism". Already an important issue before COVID-19, the handling of the crisis has put into sharp focus both the limits of multilateral and regional (e.g. the EU) responses and also the implications of separate national approaches. Post-crisis epidemic-prevention planning could bring tensions to the surface, perhaps with implications for economic relationships too.

- The second political question is the degree of "control" a state should have over its own citizens. Pandemic management has given states a good reason to introduce (or implement) forms of social monitoring and control. These control measures may not quickly be reversed, depending on the region. The impetus given to digitalisation in healthcare will add to the pressure for individual monitoring.

- While improved international medical cooperation is likely post-crisis, it seems highly unlikely to be accompanied by increased economic cooperation (a sort of Bretton Woods 2.0). There is no intellectual consensus, and the U.S. may well not want to show leadership. The crisis may also provide the political "cover" for nationally-based restrictions on immigration or other issues.

- Regional political and economic blocs (e.g. the EU) have not come out of this particularly well, and the crisis could reignite underlying political tensions (e.g. around debt levels). Political failures at a domestic political or regional level could open the door to other actors e.g. China, Russia.

Dimension 2: Policy – an addiction to intervention

- One lesson from the global financial crisis (GFC) is that monetary policy "normalization" is difficult to achieve and takes time. This was evident well before the coronavirus crisis erupted.

- Now the degree of official intervention in economies is many times greater – in both terms of absolute size and also complexity. Monetary policy intervention has stepped up further, and we have different sorts of targeted and highly innovative fiscal stimulus in addition to an overall fiscal boost.

- The markets' addiction to intervention will be difficult to reverse. A relatively short period of disruption could allow the quick withdrawal of some of the more targeted forms of intervention, if governments are disciplined, assuming that most companies and thus jobs can get back to relatively normal operation quickly. But the continuing economic damage – we don't expect developed economies' output to be back to pre-crisis levels until 2022 – will mean that overall policy has to remain very supportive.

- One question is to what extent governments exact a "quid pro quo" for corporate support – for example via pressure to source inputs more locally, in line with the "control" issue above. Such de-globalisation would have an impact on growth and potentially inflation.

- The new policy environment could pull ESG investment in two ways – governments could either step up pressure on companies to adhere to environmental and other regulations, or could loosen them, if they believed that this would make companies more competitive in a less regulated international trading environment. If governments want to follow the first path it is possible, for example, that fiscal measures to support the demand side could have an ESG focus. It is also notable that ESG funds have seen only limited outflows during the crisis so far, compared to other investment themes.

Dimension 3: Economics – stimulus vs. misallocation

- Monetary and fiscal stimulus will help ensure a reasonably strong initial economic recovery, as will some catching up of postponed output/demand. The recent experience of China will provide some guidance on the likely strength of the recovery in other markets.

- But the recovery will be partial and, over the longer term, global growth may only be modest. This will be because of two factors:

  - Inefficient allocation of resources, due to higher levels of state intervention in firms/the economy.

  - Concerns over higher debt eventually pushing up government borrowing costs and (in some cases) adding to worries about future debt "haircuts".

- Changes to globalisation e.g. changed and reduced supply networks, perhaps encouraged by more nationalistic tendencies, may be politically justified as an attempt to make supply chains more secure – but will impact growth and prices.

Dimension 4: Markets – handholding vs. animal spirits

- Markets now tend to be boosted more by official policy intervention than by evidence of other changes in the underlying economic/corporate environment. Animal spirits are therefore very dependent on policy handholding.

- Governments will need to be resolute in reversing some policy measures when economic recovery gains momentum, while identifying and giving support in cases of genuine liquidity problems. If policymakers refrain from such policy reversals, due to worries about the market reaction, this will further impede any return to normality.

- Bailing out specific companies will add an extra dimension to market handholding, particularly if it hits shareholders hard, but they will have to pay some price.

- Markets will also have to get used to radical fiscal policy as well as radical monetary policy (modern monetary theory, MMT, links the two), perhaps adding further to market volatility if worries grow about such policy or its possible side effects.

- In the longer term, this begs the question of how market behaviours can be made to change. A long-term focus on making gains on the back of government policy intervention, rather than from corporate or technological innovation, could result in an inefficient allocation of resources and thus slower growth.

Section 2:
The post-COVID-19 world

Long-term asset class returns and Strategic Asset Allocation

Strategic asset allocation (SAA) remains the cornerstone of our investment approach. It accounts for the bulk of portfolio returns and usually proves a more sustainable source of returns than market timing or security selection.

We have updated our long-term asset class returns in the light of the COVID-19 crisis. We attempt to predict the long-term returns of around 500 asset class indices, across a range of currencies, and their volatility. Asset class returns are one of the trio of key assumptions necessary for effective strategic asset allocation (SAA). The other two are volatility (i.e. the degree of variation of asset prices) and correlations (the relationships between the prices of different assets) and these will also be impacted by the COVID-19 crisis.

At a fundamental level, the COVID-19 crisis and its implications for asset classes underlines the key feature of our strategic asset allocation process: you have to accept and integrate into the process a degree of uncertainty. For example, the forecasts for different asset class returns (see Figure 6 below) will have varying degrees of uncertainty. As a result, a high expected return will not necessarily lead to a high portfolio allocation. There is no point simply basing action on one forecast that may or may not turn out to be true. Instead you have to be clear about which assumptions have a higher degree of likelihood and where we must be more tentative, and then design portfolios based around these varying degrees of uncertainty. Although COVID-19 is in many ways a unique crisis, history from previous crises and other developed knowledge allows us to start to understand its impact on asset classes. These estimates, and the confidence we have in them, will continue to form key building blocks of our SAA process.

Figure 6: Selected future asset class return assumptions for the next 10 years (in local currencies)

Source: Deutsche Bank AG. Data as of March 31, 2020. Returns are % p.a.

U.S. Treasuries, 7-10 year (Bloomberg Barclays U.S. Treasuries)	0.8%	German Bunds, 7-10 year (Bloomberg Barclays German Treasury)	-0.6%
Emerging markets hard currency sovereign (Bloomberg Barclays EM USD Sovereign)	9.0%	U.S. equities (S&P 500)	7.2%
European equities (MSCI Europe)	7.5%	Emerging markets equities (MSCI Emerging Markets)	8.2%

Glossary

The Bank of Japan (BoJ) is the central bank of Japan.

Bunds are longer-term bonds issued by the German government.

An emerging market (EM) is a country that has some characteristics of a developed market in terms of market efficiency, liquidity and other factors, but does not meet all developed market criteria.

ESG investing pursues environmental, social and corporate governance goals.

EUR is the currency code for the euro, the currency of the Eurozone.

The European Central Bank (ECB) is the central bank for the Eurozone.

The Eurozone is formed of 19 European Union member states that have adopted the euro as their common currency and sole legal tender.

The Federal Reserve (Fed) is the central bank of the United States. Its Federal Open Market Committee (FOMC) meets to determine interest rate policy.

The global financial crisis (GFC) is the financial crisis that started in 2007/2008 and lead to a recession in many major economies, originating from an asset bubble in the US mortgage market.

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

High yield (HY) bonds are higher-yielding bonds with a lower credit rating than investment-grade corporate bonds, Treasury bonds and municipal bonds.

An investment grade (IG) rating by a rating agency such as Standard & Poor's indicates that a bond is seen as having a relatively low risk of default.

JPY is the currency code for the Japanese yen, the Japanese currency.

Mergers and acquisitions (M&A) are two key methods of corporate consolidation: A merger is a combination of two companies to form a new company, while an acquisition is the purchase of one company by another in which no new company is formed.

Modern Monetary Theory (MMT) is a heterodox macroeconomic framework that, in some forms, says monetarily sovereign countries are not operationally constrained by revenues when it comes to federal government spending.

The MSCI Europe Index includes large and mid-cap firms from 15 European countries.

The MSCI EM Index captures large and mid-cap representation across 23 emerging markets countries.

The Organization of the Petroleum Exporting Countries (OPEC) is an international organization with the mandate to "coordinate and unify the petroleum policies" of its 12 members. The so-called "OPEC+" brings in Russia and other producers.

Price/earnings (P/E) ratios measure a company's current share price relative to its per-share earnings. In this context, LTM refers to last twelve months' earnings.

Quantitative easing (QE) is an unconventional monetary policy tool, in which a central bank conducts a broad-based asset purchases.

The S&P 500 Index includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

A strategic asset allocation (SAA) process involves setting preferred allocations for asset classes on a medium to long-term time horizon.

Treasuries are bonds issued by the U.S. government.

USD is the currency code for the U.S. Dollar.

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