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Letter to Investors



Christian Nolting Global CIO

Tectonic shifts

Our main hope for 2021 is that the coronavirus pandemic can be put behind us: vaccines now appear to offer a realistic prospect of this. But the debate about the policy response to the coronavirus pandemic, and its social and economic implications, is likely to continue for some years. Great crises historically have usually taken a long time to be fully understood: academic economists are still arguing about the handling and implications of the Great Depression, nine decades later.

However, as we go into 2021, we cannot wait for a full analysis. Instead, we need an initial framework to start considering what the aftermath of the coronavirus will mean for the economic, social and investment outlook.

To do this, we have structured this outlook to give four different perspectives on what the crisis has meant. We look at this issue from the perspective of individuals, businesses, the political economy and the global world order.

The political, economic and investment impacts of the pandemic seem rather different when seen from each of these four perspectives.

One immediate concern is not just to identify these impacts but also evaluate their degree of reversibility in 2021. (To what extent, for example, will professional and clerical workers go back to offices?)

But, while the short-term outlook for recovery is important, we also need to see the pandemic and its implications over a longer time horizon. As well as creating new problems, the pandemic has also accelerated or exacerbated many pre-existing economic and investment trends. And, running through all these trends, four "Ds" (4Ds) are often to the fore: divergence of income, wealth and economic progression within and between economies; digitalisation and its impact on how individuals, businesses and governments operate; demographics as long-term pre-existing shifts in population distributions change political and economic priorities; and, finally, debt – both public (as government fiscal deficits balloon) and private.

We need to see the pandemic and its implications over a longer time horizon. 4 "Ds" – divergence, digitalisation, demographics and debt – will be issues of continuing importance.

Looking at coronavirus in a long-term context has two broad implications for investment.

If you see this not just as a short-term recovery issue, but also as a response to structural changes around economic and investment relationships – the "tectonic plates" on our cover – an investment response needs to be not just tactical, but also strategic. We believe that the best way forward is through a strategic asset allocation (SAA) process that can both understand the changing relationships between asset classes and mitigate the uncertainty around their future development.

Both within an SAA, and also in satellite investments to existing portfolios, we think it makes sense to invest in key themes that will play an increasing role in long-term global development. As we explain, we have been developing key themes since 2017 and now have ten, which sit within a triangle bounded by technology, demographics and sustaining the world we live in (TEDS for short). For reasons we discuss, sustainability – often in the form of ESG investment – is likely to be even more important in years to come. This year we deepen our sustainability view by launching a new key theme on the blue economy. Other key themes of particular relevance for 2021 could include cyber security, 5G, healthcare, millennials and resource stewardship.



Christian Nolting Global CIO

Instant Insights

2021 in a nutshell

- We will not see a return to life "pre-COVID": the "tectonic plates" have really shifted.
- The pandemic has had impacts on individuals, businesses and governments that will be difficult to reverse.
- The pandemic has also accelerated some pre-existing long-term trends.
- Divergence, digitalisation, demographics and debt the 4Ds are issues that will remain very important in 2021.
- Long-term changes will demand a strategic, rather than purely tactical, investment approach.
- This will be best done through strategic asset allocation that can incorporate changing relationships between asset classes.
- Investing in key themes in the TEDS triangle (technology, demographics, sustainability) also should yield results.



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Impact #1

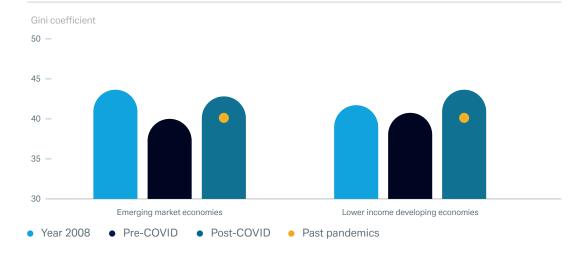
Our daily lives: no return to the status quo ante

The impact of coronavirus on individuals has varied enormously by geography and income group.

Many professional, administrative and managerial workers around the world have used digital technology to work remotely – at a time when manual and care workers (or those without digital access) have had to go out to work, balancing worries about disease infection and job insecurity. In many emerging markets, lock-downs may have been shorter, but problems of inequality have been highlighted here too. Figure 1 looks at trends in the Gini coefficient, a measure of inequality, for both emerging markets overall and lower-income developing economies.

Figure 1: The pandemic may have reversed recent progress on reducing inequality within emerging market and lower-income developing economies

Source: IMF, Deutsche Bank AG. Data as of October 2020. Gini coefficient, in %, is a simple average among country groups. Past pandemics include SARS (2003), H1N1 (2009), MERS (2012), Ebola (2014) and Zika (2016).



Different population groups will also have different experiences over the next few years. But several key themes will run through most people's experience, long after the worst of the coronavirus pandemic is behind us. We focus below on three results of the crisis.

Result #1: The growing role of the state

An increasing presence of the state in people's lives will be due to several factors.

Economic crisis has led to a greater role for the state in unemployment or wage support and this looks likely to be extended in many cases until at least mid-2021. This is unlikely, however, to be able to fully offset structural changes in employment or relative wage levels. Questions around the merits of individual responsibility vs. social security nets will persist and be an important subject for political debate.

The pandemic has underlined the importance of the state in healthcare provision (even if provision is usually private). Concerns about disease control and populations' health are not going to go away: healthcare is one of our key themes, discussed on page 22.

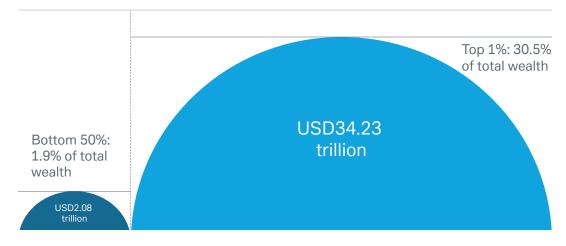
Another long-term issue, certain to go well beyond 2021, is the role of technology in delivering state support, e.g. through payments to individuals via central bank digital currencies, which we discuss on page 12.

Result #2: Inequality in sharper focus

One underlying issue will be particularly debated in the aftermath of the coronavirus crisis. The crisis has increased the role of the state but has also revealed its shortcomings, in the form of long-term increases in inequality – with more abstract numbers around wealth and income inequality (Figure 2 shows U.S. household wealth inequality) translating during the pandemic into more brutal social divergence in public healthcare access, infection rates and disease outcomes. So we may see renewed discussion around social issues such as universal basic income, even if extended budgetary pressures would normally tend to discourage government largesse. It seems likely that we will see higher taxation on wealthier individuals, partly to help finance the substantial increase in government budget deficits as a result of the pandemic, but also to address these increasing concerns about inequality. Again, as with many other coronavirus-related issues, this was a pre-existing trend that the pandemic has brought into sharper focus. Concerns about inequality are likely to further intensify if the pandemic results in a sustained increase in unemployment for certain income groups, or if governments eventually have to cut back on social support networks due to budgetary constraints.

Figure 2: U.S. household distribution of wealth by percentile, Q2 2020





Result #3: Infrastructure rethought

Individual behaviours have also been changed by the crisis. The move towards on-line shopping has been much discussed: "farewell to the high street" is a long-term trend simply accelerated by the crisis. But changing lifestyles will have much broader implications.

But a discussion also needs to be had about what sort of infrastructure (another of our key investment themes, page 22) is needed to meet these changed demands. We discuss future real estate trends immediately below, but other aspects need considering too – we may for example see a change in how people move around urban areas, with smart mobility (a key investment theme, page 22) under the spotlight.

Real estate trends already demonstrate the complexity of coronavirus impacts. The problems of retail sector real estate are well documented. Pre-existing pressures from e-commerce have been amplified by the coronavirus and it is difficult to see how trends here can be fully reversed. For office real estate, many transactions will likely remain on pause for a while: firms may change the way that they use office space and the way that they purchase it. In addition to lower total office space demand in some markets (e.g. those with high financial services exposure), we could see shorter lease terms and other financial innovations. Industrial real estate has seen some growth areas (e-commerce fulfilment centres and healthcare). For residential real estate the outlook is mixed – affordability will depend on economic recovery and employment levels, but long-term drivers remain (e.g. secular changes in household ownership and household growth).

Impact #1 Our daily lives – no return to the status quo ante

Consequences:

- Increased presence of the state.
- Inequality in sharper focus.
- Behavioural, lifestyle and business trends impact infrastructure and consumption (millennials and platform economy).



Impact #2

Business reinvention: expect more change

Individuals will start 2021 with hopes of return to the status quo ante – and companies will hope that the scaling down of coronavirus restrictions will lead to a quick recovery in global demand. But, like individuals, companies will not be able to go back to a pre-coronavirus world: they must continue to engage in a process of business reinvention.

Result #1: State support has risks

Extreme times need extreme policies – and the extension of state support to private sector businesses during the pandemic has gone largely unchallenged.

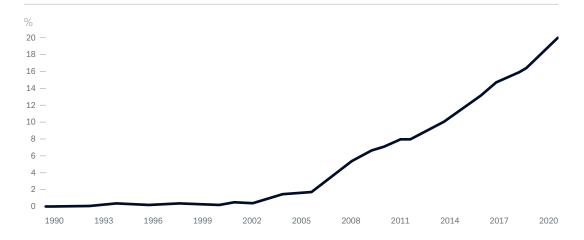
This support has been implicit (e.g. low borrowing costs, labour market support) if not explicit (e.g. equity stakes). But, however it is given, state support has risks.

One risk is that, in this era of rapid change, state support ultimately limits the ability of an economy to reinvent itself and ultimately thrive. Firms need to be allowed to prosper or fall back as the economic forest renews itself, as the 19th century English economist Alfred Marshall put it. The Austrian economist Joseph Schumpeter had a blunter turn of phrase: he referred to it as "creative destruction".

State support can hinder this process of renewal, although temporary support is welcome if a firm's business model is clearly sustainable. Again, this is a problem that goes back way before the policy response to coronavirus but has been reinforced of late. Ever since the global financial crisis (2007 onwards) triggered radical monetary policy, very low interest rates have helped keep many companies afloat. But in many cases this may have encouraged them to take on debt to conceal underlying operational problems (as Figure 3 illustrates for the U.S.). The worry is that the economy will suffer through an increasing number of these no longer competitive firms, with the existence of government equity stakes in some firms or employment commitments potentially making economic restructuring more difficult. Regulatory commitments made as a result of state support may also complicate matters. Investing in firms that do not have a viable "post-COVID" operating model does not seem like a sensible long-term strategy and from a broader economic perspective hinders an efficient allocation of capital.

Figure 3: U.S. companies: well-established firms with debt servicing costs that are higher than profits

Source: Datastream, Deutsche Bank AG. Data as of December 1, 2020. Firms that have had an interest coverage ratio of less than 1 for three consecutive years and are over ten years old.



Result #2: ESG - onwards and upwards

The pandemic has demonstrated a continued commitment by many governments to environmental, social and governance (ESG) issues and continuing growth in investor interest. This defied initial concerns that a more brutal operating environment would result in the ditching of environmental and social and governance standards as firms desperately tried to reduce costs and survive. This has not happened, with continued strong inflows into ESG-managed assets throughout the year: Morningstar, for example, recently estimated that sustainable fund assets now accounted for 9.3% of total fund assets. We expect the share of ESG investments to continue to grow around the world.

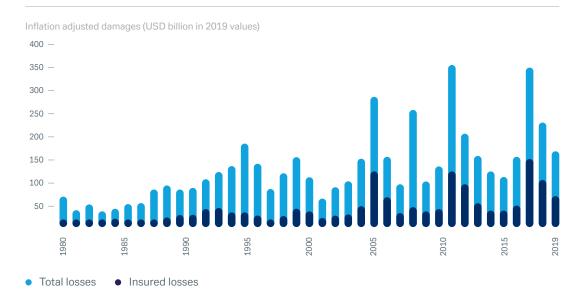
Continued growth in interest in ESG investment can be ascribed to four factors.

- A growing realisation that an unstable operating and living environment may be partly due to failures in environmental management, which can and should be rectified. Growing interest in the dangers around climate change has broadened out into increasing concerns around declining biodiversity and the possible impact of this. An interesting way of translating concerns around extreme climate and other events is provided by Figure 4 which shows the rise in business losses as the result of such events over the past four decades.
- Demographics means that younger investors' interest in ESG is translating into higher levels of investment as well as political engagement. (One of our key investment themes is millennials, see page 22.) Media coverage of, for example, the climate movement is a striking example of their political engagement. But younger demographics are also engaging economically, through their investment as well as consumption choices.
- An increasing body of ESG legislation and compliance requirements exist not just in Europe but also around the world. By this, we do not mean simply the broad sustainable development goals and other commitments from the United Nations and other global regional bodies. Complementing this, more specific and granular regulation is now requiring firms not only to change their physical operational models (e.g. to reduce pollution), but also their financial models and commitments to meet ESG criteria.
- Increasing evidence that ESG investment can boost long-term investment returns.

 More transparent and consistent ESG data and investment classifications will help clarify remaining issues here.

Figure 4: Losses due to extreme weather events

Sources: Munich RE, Deutsche Bank AG, Data as of December 1, 2020.



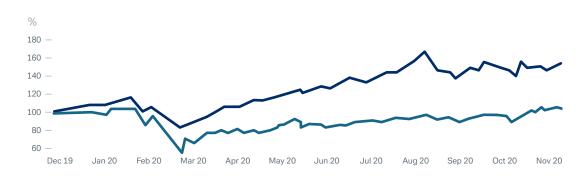
Underpinning this will be an environmental and social component to much of the talk about post-pandemic rebuilding – "build back better" is the phrase used in the U.S. and UK ESG, and some of its components, remains one of our key investment themes for 2021 (page 22).

Result #3: Tech still has a role to play

Business has been on the receiving end of changing consumer needs during 2020 with the pandemic initially producing some clear winners for most of the year (e.g. big tech, healthcare, online delivery services) and some losers. Big tech played a key role in holding up equity markets for much of 2020. Figure 5 compares the performance of S&P 500's ten mega-cap stocks (usually tech-centred) and the index with these stocks excluded.

Figure 5: How ten mega-cap stocks drove the U.S. market rally in 2020

Source: Bloomberg Finance L P, Deutsche Bank AG. Data as of December 1, 2020. Market capitalizations rebased to December 31, 2019 = 100



Mega-cap stocks
 S&P 500 ex mega-cap stocks

Towards the end of 2020, vaccine development news led to significant relative equity sector price moves as markets factored in hopes of a faster-than-expected economic reopening and recovery and these preferences are likely to change again during the course of 2021.

As sector preferences have been reassessed, one question has been whether tech will continue to play such a dominant role in equity market performance. Some arguments against tech (in an investment context) are founded on a belief that a return to more normal working conditions will reduce demand for tech services, but this seems unlikely – working conditions will not completely reverse, and tech is too deeply embedded in what we do. As we note on page 21, many of our key themes are tech-focused and include specific technology issues such as artificial intelligence and cyber security. At a market level, many tech stocks do also still offer the major benefits of apparently resilient earnings and strong balance sheets.

Market sector preferences started moving towards the end of 2020, and will change again during the course of 2021. But there are still good reasons to like tech over the longer term.

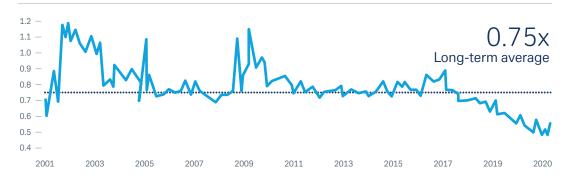
Result #4: Earnings recovery is key

Markets are likely to remain volatile in 2021 as the progress of vaccine rollouts (and the economic damage from coronavirus) continues to be reassessed. Switches in equity sector and style preferences will continue: trends may be fleeting and market optimism could turn to pessimism. (For example, at the time of writing we do not know the length of immunity to infection that the various new vaccines will give: if the immunity is only short-term, or vaccine implementation proves more difficult than expected, then markets may get more pessimistic again about market prospects.)

In short, we would suggest taking a balanced style here: "growth" stocks (strong performers for much of 2020 and previous years) are unlikely to be completely displaced by "cyclicals" or "value" stocks as the world economy gets back on its feet. Figure 6 illustrates the price/earnings discount of "value" to "growth" stocks – note that this has been widening for four years, not just during the pandemic. As was shown in late 2020, hopes around the reopening of the economy can benefit "cyclical" stocks, but an outright outperformance in "value" stocks will require higher yields, something that does not appear very likely in the years to come as a result of the crisis – although higher inflation cannot be ruled out.

Figure 6: Price/earnings (P/E) valuations for "value" stocks have fallen further behind "growth" stocks





Ultimately, however, market hopes of sectoral recovery will need to be backed up by a recovery in earnings. For the developed economies, this process could be rather a slog – in Europe, earnings may not be back to 2019 levels before 2023 – but in the interim European Small and Mid Caps may be an effective way to benefit from the reopening of the economy. For many emerging markets, particularly in Asia, stronger economic growth means that the process of earnings recovery could be rather faster, to the advantage of both firms and investors in them. This will add to the case for emerging market equities (and also emerging market corporate bonds). Stronger earnings growth remains essential to return valuations to more normal levels, and progress here will be evident during 2021.

Impact #2 Business reinvention: expect more change

Consequences:

- State support limits an economy's ability to reinvent itself.
- ESG supported by stronger commitment and demand.
- Stock markets remain tech-centered, but cyclical has its appeal.

¹ "Growth" stocks are those thought likely to grow faster than the market average, for example technology. "Cyclical" stocks are those that usually benefit when the economy enters an upswing with early birds often including metals, mining, chemicals and consumer services. "Value" stocks are regarded as those trading at a lower price than their fundamental value.

Impact #3 The political economy: seeing in 4D

So, from the perspectives of individuals and companies, this will not be a return to a precoronavirus world. Governments are well aware of this and must manage most medium-term problems around transition and long-term recovery issues.

As noted, we think that 4Ds – divergence, digitalisation, demographics and debt – will characterise many aspects of the post-COVID world. These 4Ds will come into even greater prominence when you consider future trends in the "political economy" – i.e. when you broaden out economic considerations to bring in social, political and institutional issues.

Result #1: Monetary policy magic prolonged?

The title of our annual outlook last year was "The end of monetary magic?". Our answer to the question was "no", because we believed that although its efficacy might be fading, it remained a crucial policy tool - particularly if supported by fiscal policy. Faced by an extreme situation resulting from the coronavirus pandemic, policymakers dug even deeper into their monetary magic toolboxes in 2020. This was done not only through keeping rates low and monetary authorities' balance sheets large, but also through other interventions in financial markets (for example corporate bonds).

Despite continued worries about the possibly fading power of each additional increment of monetary policy easing, a replacement has yet to be found (despite a general agreement that complementary approaches, e.g. fiscal policy, structural reforms and so on, need to be developed further). A year ago, it was clear that many of the factors hurting economic performance were non-monetary in nature and thus beyond the scope of monetary policy to address or ameliorate: this remains the case and effort still needs to be put into alternative policy approaches. As we discuss in Result #3, fiscal policy will become important in 2021.

Figure 7: U.S. money supply growth reaches records





Result #2: Inflation and other potential policy threats

The immediate threats to monetary policy seem containable. Political consensus is still for highly accommodative monetary policy and the consequence will be low yields for even longer, maintaining the hunt for yield.

We would not be completely relaxed about inflation, however, and this is a potential threat to monetary policy. The immediate threat from inflation at present appears low, given continued spare capacity and still cautious consumers in many markets (driven in part by continuing fears around unemployment). Our forecasts reflect this. But while much attention has been paid to the "Japanification" story (i.e. low growth, low inflation) this is not necessarily how developments will unfold. Concerns remain about high monetary aggregates for example, and an upward spike in yields cannot be ruled out. Changes in the operating model for services companies (given the difficulties around revenue generation in a still rather socially-distanced environment) may also increase upwards price pressures. There are also broader worries about the possible longer-term implications of deglobalisation or regionalisation on price levels.

Other long-term threats to monetary policy remain too. Monetary policy is essentially a blunt instrument and cannot easily deal with issues of divergence within economies or between them (indeed, accommodative monetary policy may make social inequality worse through inflating the value of certain assets). Monetary policy will also run up against structural problems in economies, perhaps caused by demographics (perhaps tending to push up savings, irrespective of accommodative policy) or rapidly escalating levels of debt (see Result #4). Expect discussion on these issues to intensify the longer the unconventional measures remain in place.

The remaining "D" – digitalisation – could be both a threat and an opportunity for monetary policy. Further testing (e.g. via regional schemes already in place within China) and rollouts of central bank digital currencies (CBDC) around the world offer the prospect of much more targeted monetary/fiscal policy – for example, through time-limited and spending-directed transfers. This targeting – particularly if it has a time-limited component – may eventually offer a way out of the so-called "liquidity trap", when low or negative rates reduce the effectiveness of monetary policy through removing the disincentive to hold cash. But continuing uncertainties around the operation of CBDCs must also present risks to monetary policy overall, and the political implications of targeting might also end up eroding the independence of central banks – as some would like.

The immediate threats to monetary policy appear containable, but we should not be completely relaxed about inflation. Divergence, digitalisation, demographics and debt also pose risks to monetary policy – although digitalisation in the form of central bank digital currencies may also create significant opportunities.

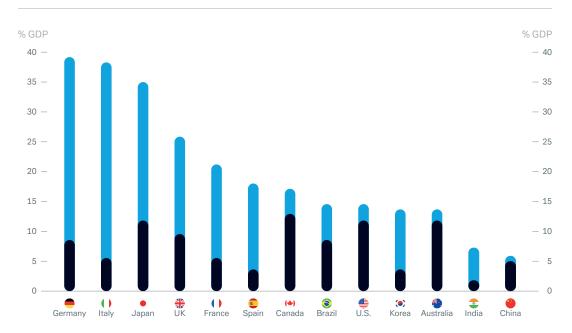


Result #3: Fiscal policy under pressure

Fiscal policy is overtly political in a way that monetary policy has not been in most developed market economies since the 1990s. This politicisation of fiscal policy has a number of implications. First, policy can be subject to a swing in overall sentiment – the general acceptance of massive fiscal stimulus in 2020 on a "needs must" basis may not be sustained for ever, although it is generally much more difficult to screw back the fiscal policy tap than to open it. Second, fiscal policy can get caught up in separate political debates (as did, in late 2020, the fiscal support package in the U.S. and the European Recovery Fund). Third, fiscal policy will have to be seen as directly addressing divergence problems in society, with demographic changes both having an impact on the need for it and also the strength of political voices in play – including those of millennials (a key theme, page 22). Healthcare may remain a priority for fiscal spending but infrastructure (also a key theme, page 22) will also demand attention.

Figure 8: Fiscal measures announced in G20 economies (to September 2020)

Source: IMF, Deutsche Bank AG. Data as of December 1, 2020.



- Revenue and expenditure measures
- Loan guarantees, loans, and equity injections

However these political debates play out, it is difficult to see a situation where we don't see some increase in taxation, given the extent of fiscal measures unveiled in 2020 (Figure 8). In particular, the race to the bottom on corporate taxation – evident since the early 1980s (Figure 9) – may now be coming to an end. Finance ministers around the world will be battling a number of competing priorities: fiscal policy will be operating under great pressure and, as noted above, at a time when the composition of the electorates that ultimately control it is also shifting (Figure 10). There will be continued calls for higher taxes on those perceived as being relatively less affected by the crisis (i.e. higher income earners and the wealthy) – in particular as the latter group may be seen as benefiting from loose monetary policy through rising real asset values. It is quite possible that we shall see rises in taxes, not just on corporates but also on wealthier citizens to deal with perceived inequalities as well as finance increased budget deficits.

Figure 9: Corporate income taxes: are four decades of cuts now over?

Source: OECD, Deutsche Bank A G. Data as of December 1, 2020.

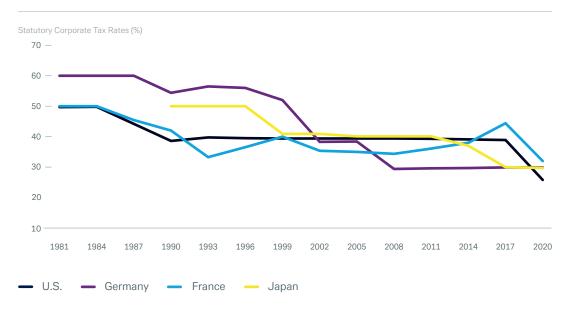
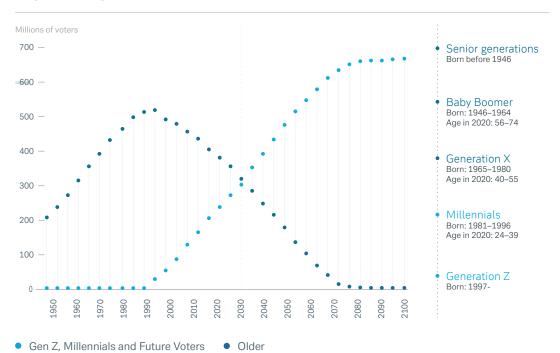


Figure 10: Voting power of different generations is shifting over time

Source: United Nations, Deutsche Bank AG. Data as of December 1, Chart shows combined totals at given points for millennials, Generation Z and future voters, vs. voters born before 1981. Definitions of age groups are given to the right of the chart.



Result #4: Debt escalation

Expansionary fiscal policy and escalating budget deficits have exacerbated an existing trend – as we have discussed in a previous report ("Peak debt: sustainability and investment implications" published in 2019).

Where does this all leave fixed income as an asset class? Rising levels of debt have not so far unsettled the financial markets – there are still willing buyers for government debt – but worries could increase. There will be several reasons for this. Debt taken on in 2020 to deal with coronavirus downturns was in effect replacing lost income – it has not being spent in the hope of stimulating faster growth, as per the Keynesian prescription. And hopes that economies could grow their way out of debt – the usual route – could be stymied by worries about tightening fiscal policies and lack of productivity improvements, until the benefits from tech-related investments (e.g. artificial intelligence and 5G, two of our key themes) start feeding through. It also seems unlikely that inflation will provide much relief. Meanwhile, countries may be facing increasing demographic pressures (as has Japan) increasing debt levels yet further. Eventually markets will get concerned, and the possibility of a spike in government yields during 2021 is a real one, even though the long-term outlook for yields remains lower for even longer, with multiple consequences for all asset classes. Financial repression (i.e. negative real yields) will be a notable consequence.

Escalating fiscal deficits have exacerbated an existing trend for debt levels to increase. Markets currently don't appear that concerned about such borrowing – but don't take this relaxed approach for granted.

Impact #3 The political economy: seeing in 4D

Consequences:

- Monetary magic continues, fiscal policy complements.
- Financial repression.
- Higher debt leads to a new tax debate.



Impact #4

The new world order: winners and laggards

Changes to the how individuals and companies operate, and individual governments' policy responses, will be accompanied by changes to the international environment as, over time, we move towards a new world order.

The immediate world economic outlook is to a great extent dependent on how quickly vaccines can be produced and administered. Our assumption is that we will get broad vaccination in the developed markets from Q2 2021 onwards after priority use in Q1. Vaccination should avoid the need for further mass lockdowns, at least after mid-2021. Pent-up demand and high savings rates will boost the economic recovery, although it is likely to be de-correlated between economies, at least initially.

GDP growth rates are expected to be positive in 2021 after economic contractions in 2020. Forecasts are given on page 26, but exact numbers here will be less important than the structural changes that underlies them. Two questions will remain particularly relevant. First, how long-lasting will be the COVID-related damage? Second, how will the pandemic affect economies' relative economic strength?

The long-term impact of the pandemic may be less severe than the global financial crisis (GFC) as this crisis was caused by an exogenous shock (the virus) rather than internal economic imbalances. Fiscal and monetary policy also reacted more quickly than during the GFC preventing more and worse "second round" effects, for example through the broad introduction of furlough schemes to preserve employment. Even so, we think that the U.S. will not be back to pre-crisis (Q4 2019) levels of output until the end of 2021 or early 2022 and the Eurozone will have to wait until 2022.

Result #1: Asia moves ahead

In contrast, the Chinese economy expanded by an estimated 2.2% in 2020 and is forecast to grow by over 8% in 2021. Many other Asian economies have also done relatively well, with the obvious exception of India (estimated to have contracted by -9.5% in 2020, before an expected expansion of 10% in 2021).

The rise of Asia (in the modern era) is not a new story – it can be traced back over 40 years, to the start of economic reforms in China in the late 1970s, or perhaps even further. The pandemic, here as elsewhere, has simply accelerated an underlying trend. Chinese growth at a time of U.S. economic setback potentially brings forward the time when China's GDP exceeds that of the U.S. China has already marked the end of 2020 with the signing of a major Regional Comprehensive Economic Partnership (RCEP) and the formal release of its next five year plan in March 2021 will give it another opportunity to define exactly where it wants to go from here.

These long-term relative shifts in regional economic power are nothing new, and in recent decades have been manifest in divergent trends in income growth per capita (Figure 11). But short-term relative changes also have an impact. A faster Asian economic recovery will have an immediate impact on the health of EM corporates, where earnings per share estimates are already close to pre-crisis levels, unlike their developed market peers – as Figure 12 illustrates. This adds to the case for emerging markets equities and bonds in 2021, and also in the longer run the importance of emerging markets cannot be ignored.

Figure 11: Income growth per capita over the past two decades: China has delivered

Source: IMF, Deutsche Bank AG. Data to 2019. Data as of December 1, 2020.

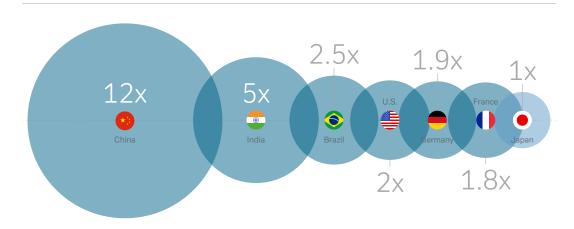
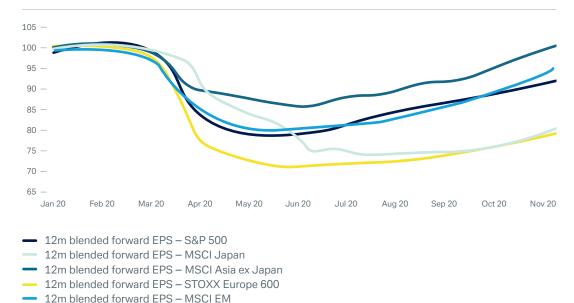


Figure 12: Earnings per share revisions in 2020: Asia dipped less and recovered quicker

Source: Bloomberg Finance L P, Deutsche Bank AG. Data as of December 1, 2020. Rebased so that December 31, 2019 = 100.



Result #2: Developed world divergence?

By contrast, many developed markets start 2021 with quite a lot to prove.

The U.S. election outcome will have multiple implications for economic growth. Some form of fiscal package is likely, and the Senate run-offs in Georgia on January 5 will set out a starting point for the policy agenda (through determining which party controls the Senate). We think that there will be continuing pressure for higher taxes, which the Senate may well accede to, but the Fed policy regime change will help to keep monetary policy accommodative, and the U.S. has a good track record in recovering from crises.

In the longer run the flexible and dynamic nature of the U.S. economy will continue to be supportive of its recovery, and while the focus will be on the struggle between China and the U.S. to be the world's leading global economic power, it is worth also considering possible divergence between major developed markets.

The Eurozone's outlook certainly appears problematic. The European recovery fund should help mitigate to some extent intraregional divergence, once it starts to be implemented in 2021, and shows the potential for European integration. Divergence between and within Eurozone countries will remain a real concern, however, as will (for some of them) levels of debt. The recovery fund is seen as major game changer by many as grants under the scheme would mark a big step from austerity to solidarity. But how the divergence question will be fully addressed in the absence of another external shock remains unclear and the current dissonance between some Eastern European economies and the remaining EU members could be a foretaste of troubles to come. Brexit, now moving toward a possibly disorderly conclusion, shows how disruptive centrifugal forces can be. In the longer run the EU needs to find an answer to the divergence issue, and to the implications of its underlying demographics of an ageing population (in contrast to the U.S.). Digitalisation may provide some signs of progress, however: we may get a decision on the introduction of a pilot project for a digital EUR in the ECB's Strategic Review, due to be announced mid-year.

Result #3: Multilateral goes regional

At the start of the coronavirus crisis there was much talk of severe disruption to global supply chains. In the event, disruption was rather less than many had feared and talk of deglobalisation may be overdone. However, more subtle changes have been taking place, with firms rethinking supply chains, often in favour of more local partners. (Brexit may also have prompted some reevaluation, on a much smaller scale).

Global trade growth was already running out of puff before 2020 (Figure 13), and the ratcheting up of U.S./China trade tensions long predates the pandemic. But what is new is the rise of new regional agreements without even a notional U.S. presence.

Figure 13: Has world trade peaked relative to global GDP?

Source: World Bank, Klasing and Milionis (2014), Deutsche Bank AG. Data as of December 1, 2020.



The November 2020 signing of a regional comprehensive economic partnership (RCEP) between China and 14 other Asian and Australasian countries encapsulates this trend. The RCEP (reached after eight years of negotiation) promises to improve trading ties in the region, mainly through sharp tariff reductions (or removals), although published timelines and data are still sparse. We do not expect any transition to a region-based system (here or elsewhere) to be quick or smooth. Trading partners can fall out over the detail and there will be justified concerns over the dominance of China in RCEP and the region generally – India has been suggesting that firms should follow a "China +1" strategy for suppliers. Digitalisation also opens up new areas for concern in trade or other relationships (e.g. around pharmaceuticals): cyber security is one of our key themes (page 22).

The need for a well-functioning multilateral global framework also remains. The threat of trade conflicts across (or within) regions remains, and the extension of "buy local" policies, as advocated in the past by President-elect Biden and others, is also a potential concern. Even more importantly, a multilateral approach will remain necessary to deal with the challenges posed by environmental, biodiversity and climate change issues – relevant to our key investment themes on ESG, resource stewardship and the blue economy.

Result #4: Currencies reinvented

We could also see a change in perceived currency dynamics. Currencies are usually seen as being driven by multiple factors, both short (e.g. interest rate differentials) and long-term (e.g. relative economic growth). Coronavirus changed this perception in 2020. From March onwards, most major currency pairs were driven largely by changes in overall market sentiment. So, for example, when markets went risk-off on heightened coronavirus fears, demand for USD as a safe-haven currency increased and the currency appreciated – despite a faltering U.S. economy and highly accommodative Fed policy.

Will a return to a more normal economic environment and more consistently risk-on markets reverse these trends, weakening the USD? We would not expect a dramatic shift. A return to a more normal operating environment may ease the link between overall market sentiment and currency movements and perhaps the most important pair for the USD – vs. the EUR – may end up being driven also by weakness in EUR, if Europe's political problems are not resolved. As a result, our end-2021 forecast for EUR/USD is 1.15 – implying a stronger USD than in December 2020.

Other long-term currency trends may be more profound. Watch for example developments in the long-term internationalisation of the CNY, with it perhaps becoming a more important reserve currency in some countries with deep links with China. Digitalisation, in the form of CBDC, could also have an impact on global FX markets in 2021 and beyond.

Further details can be found in our report "Central bank digital currencies – Money reinvented" published in 2020.

Impact #4 The new world order: winners and laggards

Consequences:

- Global economic leadership to change.
- Digitalisation to change the way we deal with currencies.
- Strategic asset allocation (SAA) remains key.



Box 1

Strategic asset allocation in a changing world

We know that effective strategic asset allocation (SAA) contributes the bulk of portfolio returns. Doing it right is particularly important in a world characterised by both temporary and structural changes in asset values.

Sharp market movements during 2020 demonstrated two things. First, they underlined the point that market timing is difficult to get right consistently – and that getting it wrong can be very expensive for portfolio performance. A strategic approach is necessary although it can be complemented by tactical investment decision-making. Second, the interrelationship in asset price values in 2020 showed that a simple and very static diversification cannot guard against market developments – as was shown in the GFC, the prices of multiple asset classes can fall simultaneously. A more sophisticated approach to diversification is needed.

What we believe is that any strategic asset allocation approach has to acknowledge that asset class relationships will change, and that the strength and certainty around some relationships is greater than for others. A strategic asset allocation approach for changing times may need to trade a slightly higher theoretical future performance for a slightly lower – but much more certain – outcome. It may also make sense to complement strategic asset allocation with an additional layer of what we call risk return engineering.



Impact #5

Key investment themes: Diving deeper on ESG

A rapidly changing external environment strengthens the case for looking at key investment themes, as investors look for indicators of long-term trends.

Figure 14: Our key investment themes: the TEDS triangle

Source: Deutsche Bank AG. Data as of December 1, 2020.



As Figure 14 shows, our key investment themes can be compared within the three dimensions of technology, demographics and sustaining the world we live in – in short, the TEDS triangle. The 2020 pandemic has re-emphasised the importance of each of these dimensions. Technology plays an ever-increasing role in many sectors and in our lives – from healthcare through to home working. Investors are also increasingly aware of demographics, which seem likely to have a growing impact on both business and government priorities (and thus spending and investment decisions). Meanwhile, growing interest in sustainability is another pre-existing trend accelerated by the crisis. Of the ten key investment in Figure 14, we think that cyber security, 5G, healthcare, millennials, resource stewardship and the blue economy could prove particularly interesting in 2021.

Our ten themes can be summarized as follows:

Technology

- Cyber security is a prerequisite in a globalized world for example to protect critical
 infrastructure, connected mobility systems and digital healthcare systems as we respond to
 pandemic stress. In the new ever more digitalized work environment, cyber security is essential
 for companies, individuals and governments.
- Smart mobility goes well beyond autonomous driving to bring in traffic management and
 infrastructure. It is a necessary response both to higher levels of traffic and changing patterns
 of urban living. As a result, it will have implications not only for car and components industries,
 but also for energy provision and other sectors.
- Artificial intelligence is the quest to "intelligently" automate repetitive tasks, anticipate human
 action/preferences, and this approach problem solving in a disciplined manner will create
 multiple investment opportunities. Artificial intelligence has an impact on multiple sectors,
 including smart mobility.
- 5G will not only help us work and communicate more effectively, but also "big data" use and boost industrial productivity in many areas including healthcare, automotive, retail, education, and entertainment industries. Its capabilities will therefore go way beyond the scope of previous network "generations" and expand into new industries and uses.

Demography

- Infrastructure is a key driver of long-term growth as well as a means of more immediate fiscal
 stimulus as we "build back better". Infrastructure needs to reflect changing living as well as
 working patterns and will have an important green component. Infrastructure includes multiple
 components from roads and railways to electricity grids, water supply or schools and many
 more. It will shape the world we live in tomorrow.
- Healthcare is a vital component of society, as underlined by the coronavirus crisis. Ageing societies need reliable healthcare systems. Increasing demand and treatment innovation are certain to create multiple investment opportunities.
- Millennials (born in the 1980s and 1990s) have different consumer habits to their elders and have accelerated the move to a digital and sharing economy. With the passage of time, their relative economic and political importance has increased and their investment as well as spending patterns will affect both economic and policy evolution.

Sustaining the world we live in

- ESG (environment, social, governance) investment in general has continued to increase, with growing realization of the challenges we face. Government action has complemented investor interest, with younger generations a driving force.
- Resource stewardship (the management, use and conservation of scarce resources) remains
 key in a world of rising population and increasing wealth. Rising middle class populations and
 urbanization create challenges for investment to address. Tighter regulation by authorities and
 an emphasis on "greening" the waste sector ("recover, recycle, reuse and reduce") is already
 evident and should lead to greater capital expenditures.
- Blue economy is the effective management of the earth's aquatic resources and is essential
 for preserving biodiversity and limiting climate change. Financing models are changing, with
 technology giving us greater understanding of how it works.

Box 2

New key investment theme: The blue economy

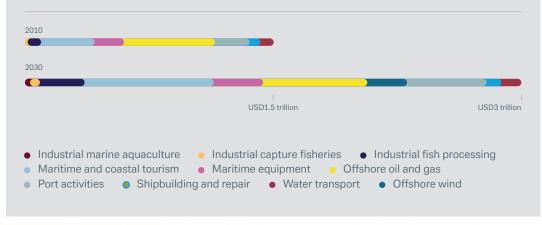
The blue economy – activity in the oceans, coastal regions and fresh water areas – is complex and imperfectly understood. Estimates suggest that it generates around USD2.5 trillion a year in terms of economic value and this is expected to grow.

The "blue economy" faces multiple challenges, some geographically-specific and others broader and more existential – e.g. around the oceans' warming and the impact this has on their ability to ameliorate climate change. Ocean management regimes are fragmentary and suffer from the "tragedy of the commons" (when individual actions worsen the collective situation). Financing systems are also underdeveloped. Current investment challenges include the large weight of government investment and a lack of alignment around taxes, subsidies and other economic incentives.

But we are now seeing more innovative financing schemes for investing in the blue economy. Technology is likely to play an ever-increasing role, not least through providing data. This will allow us to better understand how complex marine relationships work – and how to reconcile enterprise and the environment. This is likely to be through repurposing existing marine industries as well as creating new ones (Figure 15). This is an area where environmentally-minded investors can really make a difference.

Figure 15: Expected contributions to blue economy output

Source: OECD, Niehörster and Murnane (2018), Deutsche Bank AG. Data as of December 1, 2020.





Appendix 1

Our 2021 asset class views summarised (1/2)

Many of the long-term developments we describe in this report will unfold in 2021 and shape the investment environment for the coming year. Low yields for longer, along with a de-correlated economic recovery (with Asia being first in and first out of the crisis) are among the important drivers of our capital market views summarized below.



Core government bonds: don't overweight. U.S. yields forecast to rise slightly, but risk of bigger spike to hit investments. Very low or negative core bond yields elsewhere (e.g. Germany, Japan) restrict scope for gains and portfolio role as diversifier is limited. End-December 2021 forecasts: 10-year U.S. Treasuries 1.00%; 10-year JGBs 0.0%; 10-year Bunds -0.50%.



Investment grade: limited gains. Spreads have now compressed a lot but could be pushed down slightly further by a favourable technical backdrop – including the likelihood of much lower supply in 2021 after the 2020 flood. But yields on offer are low or even negative and continued central bank support is not guaranteed for ever. End-December 2021 forecast spreads: U.S. IG (BarCap U.S. Credit) 90bp, EUR IG (iBoxx EUR Corp) 85bp.



High yield: selective opportunities. High liquidity from central banks helps, at least for now, high carry is an attraction and default worries have not materialised in full. But there are still reasons to be cautious around some coronavirus-impacted industries. End-December 2021 forecast spreads. U.S. HY (Barclays U.S. HY) 370bp, EUR HY (ML EUR Non-Financials) 380bp.



Emerging markets hard currency debt: attractive. Sovereigns appeal on a selective basis but emerging market corporates could appeal more for three reasons: lower duration risk, more granular indices (making diversification easier) and corporates' ability to benefit from a revival in global trade and regional trading pacts – most obviously in Asia. End-December 2021 forecast spreads. EM Sovereign (EMBIG Div) 350bp, EM Credit CEMBI Broad 320bp.



U.S. equities: room for more. Further gains likely but with volatility. Still low interest rates and high liquidity support, with technology-weighting remaining an advantage. Valuations however pushed up by 2020 collapse in earnings and lingering uncertainty about how quickly earnings will recover in 2021. End-December 2021 S&P 500 forecast 3,800.

Appendix 1 Our 2021 asset class views summarised (2/2)



European equities: uphill battle. Earnings recovery may be hindered by Europe's laggardly recovery from coronavirus. ECB will remain supportive but several political risks remain. European corporates' earnings power will only fully recover by 2023 and in the interim less favourable sector composition and hesitant upward revisions suggest a continued discount to U.S. valuation multiples. End-December 2021 Euro Stoxx 50 forecast: 3,500; Stoxx Europe 600: 400.



Japanese equities: reasons for hope. Corporates still supported by strong balance sheets, low leverage and accommodative BoJ monetary policy. Suga government will also support higher information communications and technology investment. But export-oriented firms still have to navigate a difficult external environment. Valuation discount to S&P 500 has been range-bound. End-December 2021 MSCI Japan forecast: 1,100.



Emerging market equities: positive, particularly on Asia. China and regional trade partners benefiting from "first in, first out" coronavirus recovery and South Korea and Taiwan from high technology content. Asian corporate earnings also recovering faster. Regional advantage likely to be maintained as part of secular shift to Asia. End-December 2021 MSCI Emerging Markets forecast: 1,280.



Gold: not a fair-weather friend. Price likely to be put under pressure by global economic recovery in 2021, despite accommodative monetary and fiscal policy regimes around the world still providing some support. Global recovery setbacks and/or increased evidence of inflation could provide temporary gold price boosts through higher investment demand but USD weakness could reverse. Negative real yields should be supportive for gold. End-December 2021 gold price forecast: USD2,100/oz.



Oil: limited price gains. Global economic recovery is slowly boosting demand while OPEC+ efforts to contain supply may falter, particularly given the threat of revival in U.S. shale output. Continued production discipline necessary to reduce inventories to more normal historical levels and set the stage for a sustainable price recovery. End-December 2021 WTI forecast: USD49/b.

Appendix 2 Macroeconomic forecasts

	2020 Forecast	2021 Forecast	
GDP growth rate (%)			
U.S.*	-4.4	4.0	
Eurozone (of which)	-8.5	5.5	
Germany	-6.0	4.5	
France	-9.5	6.5	
Italy	-10.0	5.0	
Spain	-12.0	6.5	
UK	-10.0	4.5	
Japan	-5.5	3.0	
China	2.2	8.2	
India	-9.5	10.0	
Russia	-4.0	3.0	
Brazil	-5.5	2.5	
World	-4.3	5.2	
Consumer price inflation (%)			
U.S.*	1.6	1.8	
Eurozone	0.3	1.0	
Germany	0.4	1.2	
Japan	0.0	0.2	
China	2.9	2.0	



^{*} For the U.S., GDP growth Q4/Q4 is -4.6% in 2020 and 5.0% in 2021. Measure is core PCE Dec. to Dec. – average is 1.4% in 2020 and 1.7% in 2021. Headline PCE (Dec./Dec.) is 1.5% in 2020 and 1.9% in 2021 – average is 1.3% in 2020 and 1.8% in 2021. Source: Deutsche Bank AG. Data as of November 12, 2020.

Appendix 2 Asset class forecasts

Bond yield and spread forecasts	
for end-2021	

101 CHG 2021	
United States (2-year Treasuries)	0.25%
United States (10-year Treasuries)	1.00%
United States (30-year Treasuries)	1.75%
USD IG Corp (BarCap U.S. Credit)	90bp
USD HY (Barclays U.S. HY)	370bp
Germany (2-year Schatz)	-0.80%
Germany (10-year Bunds)	-0.50%
Germany (30-year Bunds)	-0.10%
United Kingdom (10-year Gilts)	0.30%
EUR IG Corp (iBox Eur Corp all)	85bp
EUR HY (ML Eur Non-Fin HY Constr.)	380bp
Japan (2-year JGB)	-0.10%
Japan (10-year JGB)	0.0%
Asia Credit (JACI)	300bp
EM Sovereign (EMBIG Div.)	350bp
EM Credit (CEMBI Broad)	320bp

FX forecasts for end-2021

EUR vs. USD	1.15
USD vs. JPY	105
EUR vs. JPY	120
EUR vs. GBP	0.90
GBP vs. USD	1.27
USD vs. CNY	6.80

Equity index forecasts for end-2021

United States (S&P 500)	3,800
Germany (DAX)	14,000
Eurozone (Eurostoxx 50)	3,500
Europe (Stoxx600)	400
Japan (MSCI Japan)	1,100
Switzerland (SMI)	10,900
United Kingdom (FTSE 100)	6,400
Emerging Markets (MSCI EM)	1,280
Asia ex Japan (MSCI Asia ex Japan)	850
Australia (MSCI Australia)	1,250

Commodity forecasts for end-2021

Gold (USD/oz)	2,100
Oil (WTI, USD/b)	49

Source: Deutsche Bank AG. Forecasts as of November 12, 2020.

Glossary

The blue economy refers to economic activity in the oceans, coastal and fresh water areas

CNY is the currency code for the Chinese yuan.

The consumer price index (CPI) measures the price of a basket of products and services that is based on the typical consumption of a private household.

ESG investing pursues environmental, social and corporate governance goals.

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

Fiscal policy refers to the use of government expenditures and revenues for general or specific objectives.

Keynesian approaches seek to use the level of aggregate demand to influence economic output.

The liquidity trap is a situation, in times of low or negative interest rates, when people prefer instead to sit on cash, hindering the operation of monetary policy.

Marshall, Alfred (1842-1924) was an English economist who is regarded as one the founders of neoclassical theory.

Mega-cap stocks are companies with very large market capitalisations, making them very important in the performance of market cap-weighted indices.

Millennials is a term used to refer to people born in the 1980s and 1990s, although this definition can vary: a common time-frame used is 1981-1996.

Monetary policy traditionally operates through changing interest rates or money supply to achieve objectives.

Morningstar is a corporation providing independent financial research and ratings.

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

Schumpeter, Josef (1883-1950) was an Austrian economist, with work on business cycles and development.

The Stoxx Europe 600 includes 600 companies across 18 European Union countries.

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

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