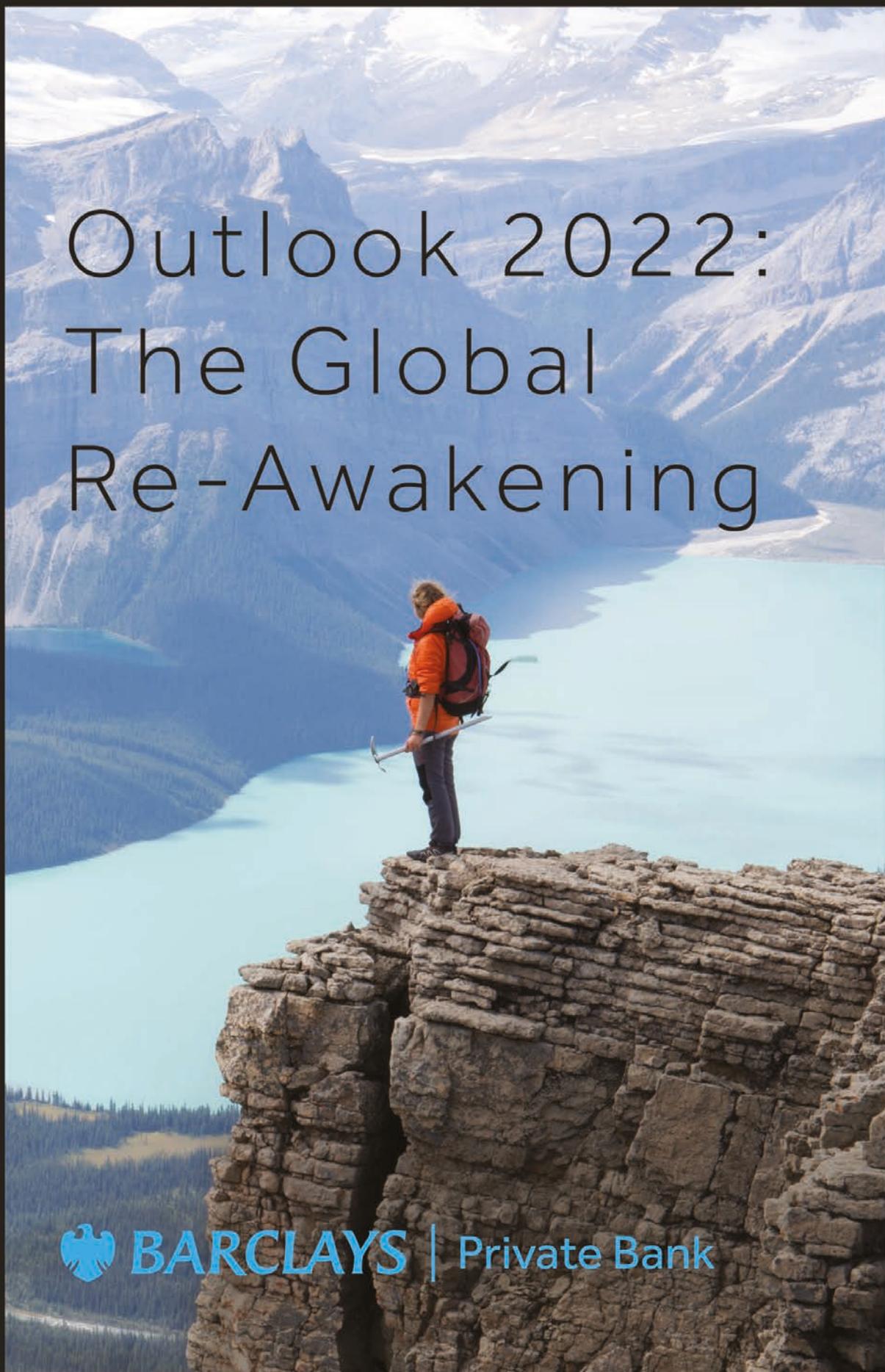




Outlook 2022: The Global Re-Awakening



 **BARCLAYS** | Private Bank

Foreword



After another rollercoaster year for investors, 2022 looks like being yet more of the same – a combination of post-lockdown optimism and short-term economic challenges. Regardless, the long-term case for investing certainly remains robust.

The reopening of economies, largely thanks to the rollout of vaccination programmes, has triggered a strong economic rebound. Any sense of relief and optimism has been tempered along the way by intermittent bumps, and next year is unlikely to be plain sailing either. As the world transitions from pandemic to endemic, investors should prepare for more volatility.

Despite recent turbulence and uncertainty, there is no doubt that the global economy has grown strongly this year, even if the pace is now slowing. We expect post-lockdown inflation to remain elevated in early 2022, but to ease later in the year as supply bottlenecks and other economic frictions subside. With a recovering labour market and revitalised consumer spending, we forecast that the global economy will grow by 4.5% in 2022.

Turning to financial markets, the anticipated pace of rate moves and rising inflationary pressures, are key. In our view, however, concerns over climbing prices may be overplayed. In fixed income markets, higher rates, inflation, and possible credit market imbalances, seem to be the main challenges facing investors. That said, with rate hikes already largely priced in, medium-term bonds appear to offer the most value.

The outlook for inflation will also be a significant influence on equities. Despite above-trend growth, marginally less accommodative monetary policies may weigh on valuations. As a result, we expect returns on the asset class to be more muted in 2022. In the short term, sector rotations will likely come and go, and non-US equities could have an opportunity to shine.

Over the medium term, though, we believe a focus on quality growth companies still makes sense.

Remaining focused on long-term goals is key to successful investing. With this in mind, we are excited to share our updated five-year capital markets assumptions. While lower returns are expected across asset classes, we also see a wider range of opportunities.

But returns and volatility are only part of the equation. In the wake of the UN's COP26 climate change conference, building portfolios that can capture potential green investment opportunities, while simultaneously guarding against climate risks, also matters for investors. Private capital investment is essential in finding climate solutions. With themes and entry points, investors can more easily explore potential investments in this area, for the benefit of portfolio and planet alike.

Thank you for investing with us. It is our privilege to be trusted to preserve and grow your wealth over the long term. Our focus remains on helping you to influence tomorrow, in the very best ways possible.

**Jean-Damien Marie
and Andre Portelli,**
Co-Heads of Investment, Private Bank



Contents

Focus - investment strategy

4 The post-COVID investor outlook as we shift from pandemic to endemic

Macro

- 6 Global outlook: What next for the global economy as pandemic stimulus measures are removed?
- 9 US outlook: Can the US economy keep up its recovery growth spurt?
- 12 European outlook: As the eurozone economy recovers, will rates be slower to normalise?
- 14 China outlook: When will the Chinese dragon roar again?
- 17 UK outlook: Can the UK economy sail through the pandemic winds?

Asset classes

- 20 More muted upside for equities leaves room for sector rotation
- 24 Solving the puzzle of the post-pandemic bond world
- 27 The conundrum facing private market investors
- 30 Our five-year forecast and scenarios: strap up for a two-speed recovery
- 35 How to diversify portfolios and hedge inflation risk: from commodities to bitcoin

Investing sustainably

38 Investing for a greener tomorrow

Behavioural finance

42 Staying on track whatever the weather

45 **Multi-asset portfolio allocation**

46 **Key dates 2022**

Contributors

Julien Lafargue, CFA, London UK, Chief Market Strategist
Dorothee Deck, London UK, Cross Asset Strategist
Henk Potts, London UK, Market Strategist EMEA
Michel Vernier, CFA, London UK, Head of Fixed Income Strategy
Lukas Gehrig, Zurich Switzerland, Quantitative Strategist
Nikola Vasiljevic, Zurich Switzerland, Head of Quantitative Strategy
Damian Payiatakis, London UK, Head of Sustainable & Impact Investing
Olivia Nyikos, London UK, Responsible Investment Analyst
Alexander Joshi, London UK, Behavioural Finance Specialist



Julien Lafargue, CFA, London UK, Chief Market Strategist

The post-COVID investor outlook as we shift from pandemic to endemic

As the world moves on from the pandemic, 2022 is likely to be characterised by slower economic growth, higher inflation, elevated volatility, and ultimately outperformance of equities over bonds. But in this uncertain environment, proper diversification and active management remain key to improve portfolio performance.

A year ago, as a second wave of COVID-19 infections was forcing parts of the world to return into lockdown, we published our Outlook 2021. At the time, our message centred around the importance of favouring a balanced and diversified approach to help navigate a very uncertain backdrop. Fast forward to today and, when looking at 2022 and beyond, our assessment remains broadly unchanged. Yet, the sources of uncertainty have evolved dramatically.

From GDP to CPI

As time passes, both Main Street and Wall Street are learning to live with COVID-19. Adjustments have been made to the way we work, travel, socialise and consume. But, by and large, today's world isn't very different from the one we were in 2019. The rapid discovery of vaccines allowed economies to reopen and activity to resume at speed. However, this "stop and go", on a massive scale, has created unprecedented frictions in supply chains and parts of the labour market.

As a result, inflation (and increasingly stagflation) fears, as well as concerns over the path of interest rates, are at the centre of the wall of worry that investors are trying to climb. We expect these issues to dominate the narrative next year again, at least in the first half.

Forecasting isn't easy

The pandemic and its aftershocks have made forecasting even more difficult than usual. In fact, over the past couple of years, the volatility of the Citi global economic surprise index has more than doubled compared to its historical trend. Yet, as we explained in Outlook 2021 a year ago, many of the disruptions being experienced should be temporary, or, to use a popular word among central bankers, "transitory".

Although 2022 is likely to remain impacted by, hopefully, the tail end of the COVID-19 crisis, beyond that we expect a gradual normalisation, as reflected in our new five-year capital market assumptions (see p30).

From pandemic to endemic

Indeed, starting in 2022, and assuming that vaccine-resistant variants don't spoil the party, we believe that COVID-19's status will transition from pandemic to endemic, making it akin to the seasonal flu. This process won't happen overnight and outbursts of infections are highly likely. But these should only be a marginal drag on global growth, rather than the unprecedented shock seen eighteen months ago. Implications for investors include the effects on central bank policy, inflation, the "TINA" mindset and expectations of lower returns, as we detail below.

"We believe that COVID-19's status will transition from pandemic to endemic... This process won't happen overnight and outbursts of infections are highly likely. But these should only be a marginal drag on global growth"

Central banks' careful U-turn

The first impact will be felt on monetary policies. After doing "whatever it takes" to support their economies, we expect central banks to accompany this transition to the new normal by removing some of the stimuli they introduced during the crisis. While the normalisation process will probably remain relatively slow, the pace will vary from one region to the other. This should translate into increased volatility in rates and currencies markets. It will also likely promote more frequent sector rotations, and pronounced dispersion in stock markets.

Inflation as the wild card

Unfortunately, this scenario is valid only if inflationary pressures don't force central banks' hands. While prices in the sectors most impacted by the pandemic have started to moderate, the recent surge in energy prices has changed the market's perception on inflation. From "transitory", higher prices are now seen as "stickier" with five-year inflation forwards, looking at five-year inflation expectations in five years' time, surpassing 2.6% in the US.

Yet, the consensus is far from discounting inflation of over 3% over an extended period. This appears justified for now, as wages and rents, the real drivers of long-term inflation, are well behaved. While concerns may continue to grow in the first half of 2022, we would expect inflation to be less of an issue in six months' time, preventing a sharp tightening of monetary policies.

TINA is alive and well

From an asset allocation's perspective, this normalisation process still favours equities over bonds, in our view. Although stocks valuations may appear rich on some metrics, the equity risk premium remains in line with its historical average, and continued earnings growth should provide support to equity markets. In addition, stocks tend to offer a better hedge against the inflation risk than most fixed income instruments. As such, we believe that the TINA (there is no alternative) motto will remain in place in 2022.

Lower returns still

Twelve months ago we argued that investors should prepare for lower returns ahead. While this year has been kind to equity holders, it has been much more challenging for those that were heavily invested in low-risk bonds, or in cash.

We expect 2022 to be an average year at best, with upside being constrained by demanding valuations across most asset classes. To escape this trend, we believe investors need to expand their universe, both vertically (focusing more on sector and stock or bond-specific opportunities) and horizontally (with the inclusion of private markets and alpha-based, market-neutral strategies).

“We expect 2022 to be an average year at best, with upside being constrained by demanding valuations....To escape this trend, we believe investors need to expand their universe”

Taking the long view

When near-term visibility is poor, it may be wise for investors to focus on their long-term objectives. With that in mind, we refreshed our five-year capital market assumptions, which are used to inform our strategic asset allocation. Over this period, we expect the above "new normal" to take shape, bringing growth closer to historical trends and interest rates gradually higher. These assumptions ignore any potential unforeseen shock and are, of course, subject to periodic revisions.

Our message for long-term investors is that being and staying invested continues to make sense, although one should be prepared for more elevated volatility, and potentially slightly lower-than-average returns.

ESG to remain at the forefront

Similarly, environmental, social and governance considerations are here to stay, and will likely continue to influence investors' choices in 2022 and beyond. They will also potentially play a key role in directing additional government spending, while contributing to volatility in the commodity space as the energy transition gathers pace



Henk Potts, London UK, Market Strategist EMEA

What next for the global economy as pandemic stimulus measures are removed?

Inflationary pressures and supply-chain disruptions should ease gradually, laying the foundations for the global economy to post above-trend growth in 2022, even if governments and central banks curtail their support.

In order to revive the global economy from the devastating impact of the coronavirus pandemic, policymakers injected enormous doses of fiscal and monetary “medicine”. Fortunately, this has proved to be successful, with activity this year bouncing back at the strongest post-recession pace in more than eight decades.

As we look towards 2022, we anticipate above-trend global growth as the recovery phase plays out. However, many risks might derail the recovery: the path of the pandemic is unclear, inflation appears to be more ingrained than many hoped, growth in some key regions is slowing and policy normalisation is back on the agenda.

The question for investors is how quickly the fiscal and monetary policy remedy will be withdrawn, and whether the patient, or global economy, can stand again unaided?

A year of successes

This year will go down in the economic annals as one of exceptional growth. A mixture of the improving health situation, relaxing of restrictions and ongoing aggressive policy support allowed the global economy to expand by around 6.1%. This is far better than the 4.7% we predicted at the start of the year. It also compares with an average annual growth rate of 2.7% between 2000 and 2019.

“This year will go down in the economic annals as one of exceptional growth”

The biggest vaccination programme in history has been the key to the surge in activity. Around 7.3 billion doses have been administered across 184 countries, as at the date of writing. The latest figures show that more than 30 million doses are being dispensed each day. While not eradicating the virus, the vaccines have proved to be highly effective in breaking the chain between case numbers and severe illness. Consequently, and even though booster shots may be needed, hospitalisations, intensive care unit occupancy levels and deaths have all fallen in regions with elevated vaccination levels.

Figure 1: Growth forecasts

Real GDP growth forecasts, year on year (%)

Real GDP, % year-on-year, calendar-year average			
	2020	2021F	2022F
Global	-3.2	6.1	4.5
Advanced	-4.9	5.0	4.0
Emerging	-1.9	6.8	4.8
US	-3.4	5.5	3.8
Eurozone	-6.4	5.1	4.0
United Kingdom	-9.7	7.0	4.3
China	2.3	8.0	5.3
Japan	-4.6	2.0	3.3
Brazil	-4.1	4.8	1.0
India	-7.1	8.8	7.4
Russia	-2.9	4.1	2.5

Note: Weights used for real GDP are based on IMF PPP-based GDP (5-year centred moving averages).

Source: Barclays Research, Barclays Private Bank, October 2021

COVID-19 challenges remain

Victory over the virus is far from assured, particularly given the wide dispersion of vaccination rates. Advanced economies have rapidly outpaced those in emerging and developing economies. While the US, EU and UK have fully vaccinated more than 50% of their population, in excess of 50 countries have failed to achieve the goal of 10%, by the end of September. African countries, in particular, languish at the bottom of the league table with less than 5% of citizens fully vaccinated.

Along with the global distribution challenge is a broad range of unknown factors, including efficacy against variants, length of immunity and long-term side effects. As such, the path to herd immunity (thought to be 75% of the population vaccinated) is likely to continue to be a challenging one.

Our expectation is that the virus will evolve to become endemic, rather than being arrested. Production facilities and transportation hubs will continue to be impacted in areas where vaccination rates are low or in regions that are pursuing a zero-COVID-19 strategy. This disruption will continue to affect global supply chains and, in turn, growth prospects in 2022.

Inflation should be less of a concern by the end of 2022

Given the broad range of both demand-pull and cost-push inflationary pressures, it's perhaps no surprise that year-on-year inflation has risen significantly since the second quarter of the year. The relaxation of restrictions unleashed pent-up demand. Supply bottlenecks, in areas such as computer chips, container shipping and labour shortages, are also keeping inflation measures higher for longer than central bankers had hoped.

Price pressures are also coming from ultra-accommodative monetary policy and the flood of fiscal support. Technical and statistical factors, along with surging commodity prices, have added to short-term price pressures.

While a number of factors suggest that some of the inflationary pressures are transitory, there is evidence that implies price pressures may be more persistent than originally projected.

The level of spare capacity in many economies reduced as the economic recovery gathered pace. Labour and logistical obstacles have seen production struggling to keep pace with demand and inventory building. Lower participation rates in workforces have resulted in wage inflation becoming more ingrained than anticipated. Supply and demand imbalances suggest that commodity prices may remain elevated for some time.

Nonetheless, in the medium term, supply-chain disruption is expected to ease as restrictions are removed and capacity increases. Labour supply ought to pick up among the inactive older and younger populations as furlough programmes are closed, schools reopen and medical risks diminish. Price pressure should also moderate as global demand is likely to rebalance away from goods into services.

The rapid digitisation and ongoing investment in technology may also help to dampen long-term price pressures.

“In the medium term, supply-chain disruption is expected to ease as restrictions are removed and capacity increases”

But upside risks remain

The upside risks to our inflation forecasts could be generated by a prolonged period of supply-chain disruption, or labour market stress in the scenario where a shortage of supply allows workers to demand higher wages.

Will central banks bow to the inflationary pressures?

How long central bankers can stretch the term “transitory” and stomach the spike in prices will be fundamental for policy rates and growth prospects in 2022. If price pressures trend back towards mandated levels in the second half of next year, as we expect, the impact on rates of the current elevated inflation data may be subtler than market pricing indicates.

While policymakers are clearly keen to normalise policy, we do not think that central bankers will embark on an overly aggressive or extended rate-hiking cycle. The first stage of normalisation will be to taper the extraordinary measures implemented during the pandemic, such as asset-purchase programmes, as announced by the US central bank this month.

Following the closure of the pandemic-related packages, central bankers' attention will turn to interest rates. While hikes may come earlier than previously projected, rates are likely to settle below neutral levels and remain some way beneath their historical averages.

Regional growth drivers to change

While the world is likely to grow robustly in 2022, we acknowledge that the peak of the pandemic recovery has passed. The fading of the one-off boost from economies reopening and reduced impact from fiscal support, will weigh on year-on-year comparisons.

“While the world is likely to grow robustly in 2022, we acknowledge that the peak of the pandemic recovery has passed”

There are clear signs that the two largest economies have already achieved their highest growth rates in the recovery. In the US, we expect a significant step down in growth in the first half of next year and its economy to generate growth of around 2% in the second half. That said, a forecast annual growth figure of 4.0% is still very respectable. China's zero-COVID-19 strategy, moderation in credit growth and energy shortage leads us to expect that growth will ease to 5.3% in 2022, from 8.0% this year.

Even after accounting for the slowdown in the US and China next year, we still think global growth will be supported by the robust recovery in economic areas such as Europe and India. After a slow start to 2021, momentum in European activity has tangibly accelerated over the past few months. Progress on vaccinations, rebounding consumer spending, the accommodative central bank and the fiscal support provided by disbursement of the Next Generation European Union (NGEU) fund should allow Europe to grow at 4.3% next year.

Another bastion of growth in 2022 is likely to be India, as its economy continues to bounce back from a second coronavirus wave. Indian exports have been rising, while the agricultural sector recovers and service sector rebounds. We expect the Indian economy to grow by 7.4% next year.

Robust recovery set to continue in 2022, then revert to trend

Considering the relatively accommodative policy stance, recovery in labour markets and strength of the global consumer, we predict that 2022 will deliver another year of impressive growth, with the global economy growing by 4.5% (see figure 1).

“We predict that 2022 will deliver another year of impressive growth, with the global economy growing by 4.5%”

As we start to contemplate the landscape beyond next year, the global economy exiting the recovery phase and policy normalisation regulating activity, lead us to anticipate an orderly decent back towards the long-term trend averages.

Henk Potts, London UK, Market Strategist EMEA

Can the US economy keep up its recovery growth spurt?

With consumers ready to spend their pandemic savings, a surprisingly strong labour market and buoyant economic growth, inflation fears and a gradual tightening of central bank policy seem unlikely to spoil the recovery.

The US economy surpassed its pre-pandemic level in the second quarter (Q2), as the relaxation of restrictions, extraordinary policy support, and pent-up demand drove robust household consumption and vigorous business spending. We estimate that the US economy grew at 5.5% in 2021 (see figure 1).

The US growth rate appears to have peaked in Q2 with the highly transmissible Delta variant weighing on activity. Simultaneously, supply-chain bottlenecks have been disrupting production and waning fiscal support has led to a softening of final demand.

Prospects for 2022 will likely be determined by the level of domestic consumption, the size of additional fiscal spending, and the easing of supply constraints. The trajectory of policy normalisation will also play an important role in deciding the growth profile for the world's largest economy.

US consumers happy to spend

The key driver of the US economy continues to be consumer spending. US retail sales numbers demonstrating the health of the recovery in August continued in September. Headline retail sales rose 13.9%¹, compared with the same period a year ago.

The increase in sales was driven by spending by students returning to school and workers to offices. There was also strong demand for clothing, general merchandise and non-store retailers. Another factor that may have driven sales of goods was the higher COVID-19 caseloads in August and September, which likely redirected spending away from services.

Figure 1: US economic forecasts

US economic forecasts, year on year (%), 2020-2022

US economic forecasts, year on year (%)			
	2020	2021F	2022F
GDP growth y/y (%)	-3.4	5.5	4.0
CPI inflation (%)	1.2	4.5	3.2
Unemployment rate (%)	8.1	5.4	3.9
Gross public debt (% of GDP)	132.8	128.9	126.5
Private consumption (%)	-3.8	7.8	2.9

Note: All data are calendar-year averages, except gross public debt, which is an end-year figure.

Source: Barclays Research, Barclays Private Bank, October 2021

With stimulus effects fading we would expect year-on-year (y/y) sales growth rates to settle at lower levels once spending patterns normalise. Nevertheless, the outlook for the US consumer remains positive given the high levels of underlying demand, huge accumulation of excess savings during the pandemic and positive labour market recovery. We project private consumption growth of 2.9% in 2022, helping to support growth prospects next year.

Optimistic on output expansion prospects

We remain optimistic about US growth prospects. One reason for this is that households are expected to spend the vast savings gathered during the pandemic. Since the start of the pandemic, US consumers are estimated to have saved an extra \$2.7 trillion². While recent data show that spending has been outpacing income growth, households have not

¹ NRF reports 0.7% rise in US retail sales from August to September, National Retail Federation, 18 October 2021 <https://www.retail-insight-network.com/news/nrf-us-retail-september/>

² \$2.7 trillion in crisis savings stay hoarded by wary consumers, Bloomberg, 17 October 2021 <https://www.bloomberg.com/news/articles/2021-10-17/-2-7-trillion-in-crisis-savings-stay-hoarded-by-wary-consumers>

partaken in a wholesale spending spree over the past few months.

“Since the start of the pandemic, US consumers are estimated to have saved an extra \$2.7 trillion”

In September, the saving rate came in at 7.5%³, still way above pre-pandemic levels, although substantially below the April 2020 peak of around 35%. We continue to expect these saving levels to be reduced over time and contribute to growth, although it may take longer than previously projected for this money to find its way into the tills of retailers.

Labour market on the mend

The strength of the labour market also directly affects household consumption levels. The US labour market recovery has been remarkable over the course of the past year, but recent reports suggest that the revival has been running out of steam.

The US unemployment rate fell to a post-pandemic low of 4.6% in October, compared to a peak of 14.7% in April 2020. However, we are mindful that this improvement is partly a reflection of a lower participation rate. The latest employment report also highlighted the uptick in hours worked and a robust increase in average hourly earnings.

While non-farm payroll figures fell short of expectations over the summer months, the softness was primarily due to supply issues rather than demand. We project that these supply constraints should resolve themselves in the coming months with coronavirus case rates falling, schools reopening and the scaling back of extended unemployment benefits. These factors should encourage the inactive younger and older populations to join the workforce and reduce the shortfall.

By the end of the next year, we anticipate that the US economy will have recovered the 22.4 million jobs lost during the pandemic. Furthermore, we anticipate that the US unemployment rate will approach 3.8% by the end of 2022, and be back to the multi-decade low of 3.6% in the

last quarter of 2023. This is very close to the multi-decade low of 3.5% seen before the pandemic.

Fiscal spending package expected to boost long-term growth prospects

The Biden administration has pushed for a sizeable expansion in federal spending and tax credits focused on a wide range of areas from surface transportation, to elderly care and education. To fund these policies, the administration proposed raising taxes on upper income households and corporations.

Political momentum is building towards a scenario where another dose of fiscal spending may provide a boost to activity. Both chambers of Congress have now passed a budget blueprint that includes up to \$3.5 trillion⁴ in additional infrastructure spending over ten years under budget reconciliation.

We do not believe, however, that a package of this size is feasible, given the Democrats' narrow majority in Congress and the division among their moderate and progressive wings. Instead, we think a scaled-down package of \$1.75 trillion in additional spending over ten years, \$1.05 trillion of additional revenue raising measures, and \$700 billion in additional borrowing, is more likely. This would provide a modest boost to gross domestic product (GDP) growth rates in the coming years and could leave the level of GDP around 1.3% above our current baseline at the end of 2026.

Inflation to finally come under control in 2022

US inflation has been more resilient than expected, hitting a 30-year high last month. The headline consumer price index (CPI) increased by 6.2% y/y in September, while core inflation rose 4.6% y/y⁵. The latest inflation report demonstrated further weakness in used cars, hotels and airfares, due to continued COVID-19 disruption in consumer facing and travel related services, but this was offset by strength in energy, food and shelter costs.

We estimate that US inflationary pressure may be higher and for longer than previously projected, with supply-side problems taking longer to resolve. Therefore, we now see CPI peaking at 6.4% in December. However, we still believe that inflation will decelerate next year, with CPI averaging 3.2%.

³ Personal savings rate, BEA, October 2021 <https://www.bea.gov/data/income-saving/personal-saving-rate>

⁴ Senate passes \$3.5 trillion budget plan, advancing safety net expansion, The New York Times, 11 August 2021 <https://www.nytimes.com/2021/08/11/us/politics/senate-budget-plan.html>

⁵ Consumer price index – October 2021, Bureau of Labor Statistics, 10 November 2021 <https://www.bls.gov/news.release/pdf/cpi.pdf>

“We still believe that inflation will decelerate next year”

US Federal Reserve may hike rates earlier, but will limit rate rises

Given the progress made on the dual mandate of maximum employment and 2% average inflation over time, it's no surprise that the US Federal Reserve (Fed) took the first steps towards normalising its monetary policy. As expected, the central bank formally announced the moderation in the pace of asset purchases in its November meeting. The reduced level of purchases suggests that the programme will conclude by late Q2 2022.

Once the bond-buying programme has been completed, investors will quickly turn their focus to interest rates. The prospect of rate hikes in 2022 is likely to be determined by the path of inflation. If upside risks to inflation do materialise then the Fed would have a clean slate to lift the policy rate in the second half of the year. Conversely, if, as expected, supply constraints ease and some of the idiosyncratic price increases associated with the economy reopening reverse next year, then we would expect the start of the hiking cycle to be delayed, possibly until mid-2023.

More importantly still, for investors, is where rates settle and not the timing of the first hike. The latest “dot plot” projections from the Federal Open Markets Committee participants point to a target range for the federal funds rate of 1.75-2.0% by the end of 2024. This would be well below the committee's estimated neutral rate at 2.5%.

Initial growth surge to ease

Inevitably, the US economy will ease back from the astonishingly high sequential growth rates achieved in the initial recovery from the pandemic. With policies remaining supportive, service sectors providing growth opportunities and employment prospects strengthening, we remain upbeat around US economic prospects in both 2022 and 2023, with an estimated growth rate of 4.0% and 2.3% respectively.

“US inflationary pressure may be higher and for longer than previously projected, with supply-side problems taking longer to resolve”



Henk Potts, London UK, Market Strategist EMEA

Will eurozone rates be slower to normalise?

As consumer spending and labour markets recover, supply-chain disruption and elevated inflation hinder growth prospects. The path back to normalisation in monetary policy may take longer than in peer economies.

After a prolonged period of restrictions and a relatively lacklustre vaccination programme, Europe's delayed recovery finally started to gather momentum in the second quarter of 2021. The medical outlook is much improved, consumer activity bounced back and the labour market recovery has been stronger than expected. That said, the economy is not yet back to pre-pandemic levels and faces challenges from supply constraints, the energy crisis and elevated inflationary pressures.

After contracting in the first quarter (Q1) 2021, economic activity rebounded at a healthy rate in Q2. Real gross domestic product (GDP) grew 2.2% quarter on quarter, primarily driven by household consumption, accounting for 1.9 percentage points of the gain. That momentum is likely to have continued through Q3 2021, which is expected to be the peak of the recovery. For the calendar year 2021, we estimate the region will have grown at an impressive 5.1% (see figure 1).

Consumer spending supports growth

With restrictions incrementally lifted from May, many Europeans seized the opportunity to go to restaurants, shop and travel. The resumption of this activity helped sales bounce back from the very depressed levels of the lockdown.

Despite elevated inflation levels, fading reopening effects and surging energy prices, the outlook for consumer activity still remains positive. Eurozone consumers are estimated to have accumulated almost €400 billion of excess savings¹ during the course of the pandemic. The latest data show that consumer confidence is improving and the saving rate is starting to decline. Household consumption should also benefit from a more active labour market. We estimate that private consumption will be around 5% in 2022, compared with 3% in 2021, helping to support growth.

Figure 1: Eurozone economic forecasts

Real GDP growth forecasts, year on year (%), 2020-2022

	Eurozone		
	2020	2021F	2022F
GDP growth y/y (%)	-6.4	5.1	4.3
CPI Inflation (%)	0.3	2.5	2.5
Unemployment rate (%)	7.9	7.9	7.5
Gross public debt (% of GDP)	99.6	100.6	99.1
Private consumption (%)	-7.9	3.0	5.0

Note: All data are calendar-year averages, except gross public debt, which is an end-year figure.

Source: Barclays Research, Barclays Private Bank, October 2021

Bounce in jobs stronger than expected

The rebound in the eurozone's labour market has been faster than expected, with few signs of long-term scarring that many had once feared. The number of furloughed workers has fallen and hours worked have returned to pre-crisis levels in most sectors and countries in the region. The unemployment rate fell to 7.5% in August², which is only 0.4% above the level set March 2020, the lowest since the introduction of the euro.

The unwinding of job retention schemes and the return of discouraged workers are likely to increase job seekers and put renewed pressure on the labour market. We anticipate that a further gradual improvement will be possible next year, with the unemployment rate finishing the year at 7.4%.

¹ \$2.7 trillion in crisis savings stay hoarded by wary consumers, Bloomberg, 17 October 2021 <https://www.bloomberg.com/news/articles/2021-10-17/-2-7-trillion-in-crisis-savings-stay-hoarded-by-wary-consumers?sref=YCfhPld>

² Unemployment statistics, Eurostat, August 2021 https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Unemployment_statistics

Economic recovery frictions hit inflation prospects

Europe's industrial sector is clearly being impacted by supply bottlenecks. Manufacturers are struggling with a shortage of components and availability of materials. They are also navigating the disruption in global shipping that has been causing delays and creating chaos for just-in-time supply chains, while pushing up producer prices. The share of producers experiencing supply-side constraints is near to all-time highs. We predict that many of these supply complications will ease as global restrictions are removed and capacity increases over the next few quarters, but are still likely to be a drag on production levels in 2022.

Supply bottlenecks, strong demand and surging energy prices pushed eurozone inflation up 4.1% year on year in October. The latest inflation print was a 13-year high³ and consensus sees it rising into year end. The energy component has been a key driver, with growing cost-side pressures from the rapid rise in crude, wholesale gas and electricity prices. Services inflation has also been accelerating, as seasonal price cuts have been lower than previous years as strong demand increased companies' pricing power.

We continue to expect headline inflation will moderate over the next year, averaging 2.5% in 2022. The risk to our forecast remains to the upside, particularly if the supply-side disruption continues longer than expected and rising energy prices feed through to underlying inflation, which, in turn, might drive wage inflation.

Eurozone central bank policy

The European Central Bank (ECB) Strategy Review, published in July, gave the central bank greater flexibility. The policy revamp has raised the ECB's inflation target to 2% over the medium term and allows for a temporary and moderate overshoot.

This change has encouraged market participants to speculate that rates in the region will remain low for longer. The road to policy normalisation in the eurozone therefore, is expected to be a considerably slower and longer journey than their US or UK counterparts.

We expect the ECB to end its €1.85 trillion pandemic emergency purchase programme (PEPP) in March 2022⁴. However, the central bank will remain accommodative by either expanding the asset purchase programme (APP) or establishing a replacement programme that would continue to buy assets next year.

The ECB's expansive quantitative easing exercise is anticipated to last until 2023 at which point the central bank may start to guide markets to the possibility of a rate hike. We envisage that a rate hike in the eurozone is unlikely to materialise before the end of 2023 or beginning of 2024.

Fiscal support for pandemic recovery

Disbursements from the €750 billion Next Generation EU (NGEU) fund, along with the €1.1 trillion EU long-term budget⁵, should help support growth in the eurozone and help to transform the economy over the next few years.

The recovery fund pledges to mitigate the economic and social impact of the pandemic and make European economies and societies greener, more digital and more resilient. The Recovery and Resilience Facility (RRF) makes up the bulk of NGEU and offers loans and grants to member states for investment and reforms up until 2026. Governments are entitled to request the payment of instalments up to twice a year after achieving the corresponding milestones and targets.

The package of projects, reforms and investments is focused on key policy areas, including the green transition and digital transformation; smart, sustainable and inclusive growth and jobs; social and territorial cohesion; health and resilience; education and skills policies for the next generation.

Leaders have stressed the importance of full and timely implementation of the recovery fund in order to be successful. Italy and Spain are expected to be the biggest beneficiaries, and may receive around €280 billion. The monitoring of relevant milestones and targets are a key element of the process. If the European Commission discovers countries have failed to meet their objectives, they can suspend all or part of the payment until the member state has taken the necessary action.

Encouraging growth outlook

The combination of plentiful fiscal and monetary stimulus, private consumption growth and a recovery in business investment, should continue to support above trend growth over the next couple of years. We believe that eurozone growth will be a very credible 4.3% in 2022 and then 2.5% in 2023.

³ Euro zone inflation rises to 4.1% for October, hitting a new 13-year high, CNBC, 29 October 2021 <https://www.cnn.com/2021/10/29/euro-zone-inflation-rises-to-4point1percent-for-october-hitting-a-new-13-year-high.html>

⁴ What is the pandemic emergency purchase programme (PEPP)?, European Central Bank, 28 July 2021 <https://www.ecb.europa.eu/explainers/tell-me/html/pepp.en.html>

⁵ Long-term EU budget 2021-2027 and recovery package, European Council, October 2021 <https://www.consilium.europa.eu/en/policies/the-eu-budget/long-term-eu-budget-2021-2027/#>



Henk Potts, London UK, Market Strategist EMEA

When will the Chinese dragon roar again?

Growth has slowed in China, after booming in the first quarter of 2021, suffering from a slump in the property market, energy supply shortages and the effects of a zero-COVID-19 strategy. Growth will likely remain below-trend until authorities boost stimulus, possibly later in 2022.

China emerged from the COVID-19-induced recession ahead of its peers with output back to its pre-pandemic levels in second quarter of 2020. The early reopening of its economy, rapid industrial production and booming exports resulted in a record-breaking annualised growth rate of 18.3% in the first quarter (Q1) of 2021¹. However, growth rates have slowed sharply since as pressures from the slump in the property market, energy crisis and its zero COVID-19 strategy took their toll.

China's economic growth in Q3 was the slowest in a year, with gross domestic product expanding by 4.9%² compared to the 7.9% increase registered in Q2. Underneath the headline number, industrial production rose 3.1%, retail sales popped up 4.4% and fixed asset investment rose 7.3% over the first nine months of the year³.

As the world's largest exporter, China has benefited from the robust rebound in global demand. Appetite for both COVID-19 products (masks, medical and IT supplies) and non-COVID-19 products has soared over the past year, with exports registering around 39% growth year on year (y/y), in the first half.

Look forward to 2022, we expect coronavirus-related exports to contract as populations become vaccinated and restrictions are eased. We also anticipate that non-COVID-19 export growth will moderate next year to around 5% y/y, down from the lofty levels of around 25% in 2021.

Figure 1: China economic forecasts

Real GDP growth forecasts, year on year (%), 2020-2022

China			
	2020	2021F	2022F
GDP growth (%)	2.3	8.0	5.3
CPI Inflation (%)	2.5	1.2	2.3
Unemployment rate (%)	5.6	5.2	5.2
Consumption (pp)	-0.5	5.4	3.6

Note: All data are calendar-year averages, except gross public debt, which is an end-year figure.

Source: Barclays Research, Barclays Private Bank, October 2021

Property market

In an effort to cool the housing market and reduce the risk of financial imbalances developing, Chinese authorities have tightened access to financing for real estate developers and reduced the pace of mortgage lending to home buyers. The property sector has also been reeling from the troubles faced by the debt-laden property giant Evergrande.

The slowdown in the real estate sector is likely to worsen in the coming year and may see a 2-5% contraction in property investment by Q1. This decline will inevitably put pressure on China's immediate growth profile, given that housing activity (including construction and property-related goods and services) accounts for around 30% of gross domestic product⁴ (GDP).

¹ China's economy stumbles on power crunch, property woes, Reuters, 18 October 2021 <https://www.reuters.com/world/china/china-q3-gdp-growth-hits-1-year-low-raising-heat-policy-makers-2021-10-17/>

² China's economy stumbles on power crunch, property woes, Reuters, 18 October 2021 <https://www.reuters.com/world/china/china-q3-gdp-growth-hits-1-year-low-raising-heat-policy-makers-2021-10-17/>

³ China's GDP growth slows as property and energy crisis hurts, Bloomberg, 18 October 2021 <https://www.bloomberg.com/news/articles/2021-10-18/china-s-gdp-growth-slows-as-property-and-energy-crises-hurt?ref=YFCfhPII>

⁴ Can China's outsized real estate sector amplify a Delta-induced slowdown?, CEPR, 21 September 2021 <https://voxeu.org/article/can-china-s-outsized-real-estate-sector-amplify-delta-induced-slowdown>

Energy crunch

A mixture of local and global pressures has created a major shortage of energy in China over recent months. Supply was impacted by the rush to hit energy-control targets, power-generation deficits on coal shortages and unstable renewable supply. The supply and demand imbalance was further exacerbated by burgeoning demand for Chinese manufactured goods as the global economy emerged from the pandemic lockdown.

Around two-thirds of Chinese provinces have introduced power rationing, forcing many manufacturers to slow, or even stop, production. Energy-intensive sectors, such as cement, steel and chemicals, as well as downstream car manufacturers, have faced the greatest impact from the energy shortfall.

“Energy-intensive sectors, such as cement, steel and chemicals, as well as downstream car manufacturers, have faced the greatest impact from the energy shortfall”

Outlook for energy

Even with the government relaxing energy-control targets (total energy consumption and reducing energy intensity), rationing of the industrial sector will likely persist into 2022, given the colder winter and air-quality assurances for the winter Olympics being held in the country. We project that the energy shortage will create a 50 basis point drag on growth through Q1. In an effort to offset some of the supply deficit, China is likely to expand its natural gas imports in coming months, potentially exacerbating supply issues in the global natural gas market.

The slowdown in the supply of credit is also impacting growth prospects. The expansion in credit growth in September was the slowest since 2003. The weakness is a reflection of sustained low levels of household loans, persistent shrinkage in shadow financing and contraction in government bond issuance relative to last year. This reduction has particularly weighed on credit-intensive sectors, with fixed asset investment growth almost halving this year compared to the 25.6% recorded in the first quarter of 2021.⁵

Shift to services

For the past forty years China’s astonishing growth rate has primarily been driven by a mixture of robust manufacturing, exports and state investment. While these pillars of growth will continue to be important, it is anticipated that services will be the main driver propelling Chinese economic expansion over the next few decades. As such, economists closely monitor the growth rates of domestic consumption.

Unfortunately, the recovery in consumer spending has been far shallower than expected and continues to weigh on growth figures. China’s zero-COVID-19 strategy has encouraged authorities to introduce strict measures to moderate travel and reduce social interaction. These restrictions have held back sales across service sectors. The mixture of limitations on movement, changes in consumer behaviour and higher precautionary savings have also kept savings rates at elevated levels. Retail sales growth in September was nearly half the pace registered in July.

We expect retail sales averages to moderate further in 2022, with y/y growth of 6%, lower than the 8% registered in 2019 and 12-13% pencilled in for 2021. Long term, we believe the growing middle class population, rising urbanisation (70% of citizens by 2030) and wage increases will support both domestic and international growth.

Regulatory crackdown

The ramping up of regulatory control is a further factor that has impacted activity and investor sentiment. China has been tightening its grip on the technology sector, with regulators launching investigations into suspected monopolistic practices.

The State Administration for Market Regulation has focused its attention on internet-based platforms. The regulator has imposed harsh restrictions and demanded that firms overhaul their operations. In August, measures were imposed to restrict children’s online gaming time to three hours a week. The technology industry is not the only sector which has been facing greater scrutiny, with China also banning private education companies from going public or making a profit. A review of casino operators in Macau also sent a shockwave through the sector.

⁵ China’s fixed-asset investment up 25.6% in Q1, The State Council of the People’s Republic of China, 16 April 2021 http://english.www.gov.cn/archive/statistics/202104/16/content_WS6078f621c6d0df57f98d7edb.html

The rationale put forward by authorities for the measures are threefold: first, to guide resources away from the internet sector and back into core technology sectors; second, to better protect consumers and mitigate social issues; and third, to address data and national security issues.

While the intensified regulatory interventions may have affected related equities, the broader macroeconomic hit has been less pronounced. Households are expected to switch their consumption away from afflicted areas. The higher levels of uncertainty are expected to reduce IT services growth and provide a short-term impact on services employment. But we believe that the worst from the regulatory shocks may now have passed.

“The broader macroeconomic hit [from regulatory interventions] has been less pronounced...we believe that the worst from the regulatory shocks may now have passed”

Growth profile

With the two main drivers of property and exports output easing, and only a gradual pace of recovery in consumption and investment, we think that Chinese GDP growth will moderate to 5.3% in 2022 (see figure 1), from 8% in the prior year. With few signs that authorities are prepared to abandon a zero-tolerance policy, the emergence of a new COVID-19 variant continues to be the biggest risk to growth.

Despite the downward pressure on activity, the People's Bank of China, at least in the short term, is expected to focus on maintaining liquidity in the financial system through its medium-term lending facility. We predict that further injections of liquidity are more likely than a cut to its benchmark loan prime rate, or further reduction in the reserve requirement ratio.



Henk Potts, London UK, Market Strategist EMEA

Can the UK economy sail through the pandemic winds?

The UK has bounced back vigorously from the worst of the coronavirus-induced recession. However, global supply-chain constraints and Brexit-related shortages have forced the central bank to act already, putting the UK at risk of another slowdown.

The UK economy has enjoyed a far stronger recovery than was initially envisaged at the start of the 2021. The successful vaccination programme, relatively early reopening of the economy, robust household consumption and bigger-than-expected fiscal package have all contributed to the bounce back from the depths of the recession. However, the backdrop for 2022 will be more challenging due to the supply chain/Brexit disruption, elevated inflation and higher taxes/interest rates.

UK output has edged back towards pre-pandemic levels over the past few months. In August, gross domestic product (GDP) was just 0.8% shy of that achieved in February 2020¹. The final lifting of restrictions, in the middle of July, paved the way for the recovery in consumer-facing services. Hospitality, leisure and retail are close to pre-crisis levels, although travel and transportation have continued to lag behind.

The recovery in business confidence has failed to keep pace with consumers. While business investment was 12.8%² higher in second quarter (Q2) than the year earlier, it is still significantly below where it was in Q4 2019.

Labour market

On the positive side, the UK labour market continued to improve in Q3. The number of employees on payrolls in September hit a record 29.2 million³, thereby surpassing the February 2020 levels for the first time in the pandemic. According to the Office for National Statistics, in the three months to August, unemployment fell to 4.5%, although this figure does mask the fact that more than a million people were still participating in the job retention scheme.

Figure 1: UK economic forecasts

Real GDP growth forecasts, year on year (%), 2020-2022

United Kingdom			
	2020	2021F	2022F
GDP growth y/y (%)	-9.7	7.0	4.2
CPI Inflation (%)	0.9	2.4	3.6
Unemployment rate (%)	4.5	5.0	5.4
Gross public debt (% of GDP)	93.4	94.7	94.5
Private consumption (%)	-10.8	4.3	6.6

Note: All data are calendar-year averages, except gross public debt, which is an end-year figure.

Source: Barclays Research, Barclays Private Bank, October 2021

Supply has been returning to the workforce with falling numbers of inactive people, albeit the decline has slowed, leaving an excess of around half a million relative to pre-pandemic levels.

Headline wage growth for the three months to August was 7.2%⁴, although when taking into account base and compositional effects, the Office for National Statistics (ONS) estimates a rather wide range for underlying pay growth of 4.1-5.6%.

¹ GDP monthly estimate, Office of National Statistics (ONS), 13 October 2021 <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/august2021>

² Business investment in the UK: April to June 2021 revised results, ONS, 30 September 2021 <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/businessinvestment/apriltojune2021revisedresults>

³ Labour market overview, UK: October 2021, ONS, 12 October 2021 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/october2021>

⁴ Average weekly earnings in Great Britain, ONS, 12 October 2021 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/october2021>

Outlook for the workforce more stable

The outlook for the UK labour market is certainly more stable than it appeared at the start of the year. At the height of the pandemic, economists feared that UK unemployment could surge to around 9%. Even with the ending of the furlough scheme, unemployment is unlikely to swell due to the record number of job vacancies (1.1 million) advertised in the Q3, although there are concerns around the mismatching of skills.

We estimate that the unemployment rate will creep up into year end, finishing at 5.6%. For 2022 and 2023, we expect that the UK labour market will gradually improve, unemployment averaging 5.4% (see figure 1) and 5.1% respectively.

UK consumer

After a strong start to the year, retail sales have lost momentum over the summer months, although in August they were 4.6% higher⁵ than their pre-coronavirus levels. The recent weakness may be attributed to a combination of global/Brexit supply-chain pressures, rising prices and the switching of consumption to services from goods.

Across the retail industry, almost 20% of businesses recently reported that they were unable to get the materials, goods or services needed from within the UK in the last two weeks, according to the ONS. In addition, a number of retailers reported that a lack of staff has been infringing upon their ability to trade. While department stores have registered some of the biggest declines, online retailers are continuing to thrive. In August, the proportion of online sales increased to 27.7% of all purchases, up from 19.7% in February 2020 .

In 2022, household consumption will battle against opposing forces. Pent-up demand, high levels of savings, and the resilient labour market suggest that consumer spending is likely to remain elevated next year. However, inflationary pressures on disposable incomes, higher taxes and the impact of interest hikes might all dampen demand.

“However, inflationary pressures on disposable incomes, higher taxes and the impact of interest hikes might all dampen [consumer] demand”

Business disruptions

The impact of Brexit has been somewhat overshadowed by the global health crisis, but has clearly been exacerbating some of the supply-side constraints. The sourcing of materials, labour and even energy have proved to be tangibly harder to deliver, due to extra friction created by the decision to leave the European Union. We assume that Brexit-related disruption will act as 0.5 percentage point (pp) drag on annual GDP as the economy adjusts to the new trading conditions.

Tax

The UK government has laid out extensive plans to increase corporate, dividend and national insurance taxes over the next few years. In the biggest revenue raising exercise since the 1970s, the tax hikes equate to more than 1.6% of national income.

In April 2022, the new Health and Social Care levy will come into effect and the additional 1.25pp will be paid by both employers and employees. Initially, the levy will be added to national insurance, but from April 2023 it will become a separate tax. It is estimated that it will raise £12 billion per annum and will be ring-fenced for health and social care costs.

Alongside the corporation tax rise to 25% from 19% as at April 2023, investors and business owners will also be affected by a 1.25pp increase on all dividend rates. While the higher taxes will help facilitate the investment required by the overburdened health and social care system, these measures are unlikely to support short-term growth prospects.

Inflation

September’s inflation print demonstrated continuing price pressures, with the headline consumer price index (CPI) rising 3.1% year on year⁶. The latest figures do not include the spike from petrol prices, or the regulator’s 12% energy price cap increase that came into effect in October, which looks set to add an additional 0.4 percentage points to inflation. We expect many retailers will try to pass on higher input costs to consumers, and anticipate food and clothing inflation will rise in 2022.

⁵ Retail sales, Great Britain: August 2021, ONS, 17 September 2021 <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/august2021>

⁶ Consumer price inflation, UK: September 2021, ONS, 20 October 2021 <https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/september2021>

The prospect of a prolonged gas squeeze suggests that further increases in the energy cap will be on the cards next year, before declining in 2023. The increase in the energy component alone leads us to project that headline CPI will peak at 4.7% in April, before decelerating back to 1.6% in April 2023.

“The increase in the energy component alone leads us to project that headline CPI will peak at 4.7% in April, before decelerating back to 1.6% in April 2023”

Taking these changes into account, we estimate that CPI will average 3.6% next year and only gradually move back towards 2% in 2023. The upside risk to these forecasts is likely to emerge from supply shortages in the labour market, specifically driven by the end of economic migration from the EU.

Rates

The acceleration in inflation expectations is most likely enough to convince the Bank of England’s Monetary Policy Committee (MPC) to raise interest rates in order to maintain credibility. We therefore believe that a near-term hike is highly likely.

In all probability, the hiking cycle looks set to begin with a 15 basis point (bp) increase at the December MPC meeting. This may be followed by up to two hikes in the first half of next year. A lot will depend on the incoming data on the job market, as well as on inflation. At this point, we don’t think the base rate will go as high as 1% in the next 12 months. Instead, the BOE may try to maintain a lower base rate level for some time after the first hikes.

That being said, given the broad-based risks to the recovery and the wide range of headwinds facing the economy, it’s also conceivable that any hike may have to be reversed in 2023.



Julien Lafargue, CFA, London UK, Chief Market Strategist; Dorothée Deck, London UK, Cross Asset Strategist

More muted upside for equities leaves room for sector rotation

As global growth slows from exceptionally high levels and a period of sub-par equity returns looks likely at the asset class level, where do opportunities lie and how should investors position portfolios?

We remain constructive on equities in the coming year, in absolute terms and relative to bonds. However, we expect returns to be more muted, as the economy slows from very elevated levels and prospects for the growth/inflation mix deteriorate.

Economic momentum is slowing

While global growth momentum has peaked, we believe it will remain robust in coming months. That said, momentum is likely to rotate from the US to the rest of the world, supported by the reopening of economies, further progress on the vaccination front and continued accommodative monetary and fiscal policies. In the G7 economies, we expect growth to slow from around 5.1% in 2021 to 4.0% in 2022, which remains well above trend growth of 1.4%.

We believe that this environment will be accompanied by a modest rise in nominal yields and inflation, which is unlikely to hurt the economy and derail financial markets. Long-term rates remain well below trend nominal GDP growth of around 3.5%. Our economists forecast a gradual increase in US 10-year yields to 1.50% by the end of the year, and 1.65% by next September.

This environment of above-trend growth, low rates and accommodative policies, should support risk assets and warrants a modest pro-cyclical stance in portfolios.

Investment risks

However, the growth/inflation mix has deteriorated since August, fuelling concerns of stagflation among investors. Macro data have disappointed since August, especially in the US and China, while inflation expectations have been sticky in the US and rising in Europe.

The main risks to our base case scenario are:

- 1) a disappointment in global growth, driven by resurging COVID-19 cases and the reintroduction of lockdowns, as well as a China slowdown;

- 2) a more persistent rise in inflation, putting pressure on central banks to tighten policy. As we move away from a post-COVID-19 recovery to a mid-cycle phase, inflation might be stickier than generally assumed. Additionally, supply-chain disruptions and labour shortages may persist for longer than expected, and the increase in energy and input costs might put more strain on businesses with more limited pricing power.

All in all, we feel that the risks to inflation and nominal yields are skewed to the upside, and portfolios should be positioned accordingly, see *Our five-year forecast and scenarios: strap up for a two-speed recovery* in this issue.

Equity market outlook: earnings versus valuations

We believe that markets will continue to be supported by earnings growth in 2022, albeit at a slower pace. We also expect modest multiple contraction to persist as the growth/inflation mix deteriorates. According to IBES estimates, bottom-up analysts anticipate earnings growth to slow from 49% this year to 8% next. Given the macroeconomic backdrop, these expectations look reasonable. Factoring in some multiple contraction, to account for the risk of a growth slowdown and/or an inflation shock, would justify mid-to-high single-digit total returns for global equities in 2022.

Earnings

The stellar performance of equities since their March 2020 lows was driven by multiple expansion as earnings contracted. However, since January, this trend has reversed and equities have been driven by earnings growth, as economies have reopened, while valuations have contracted.

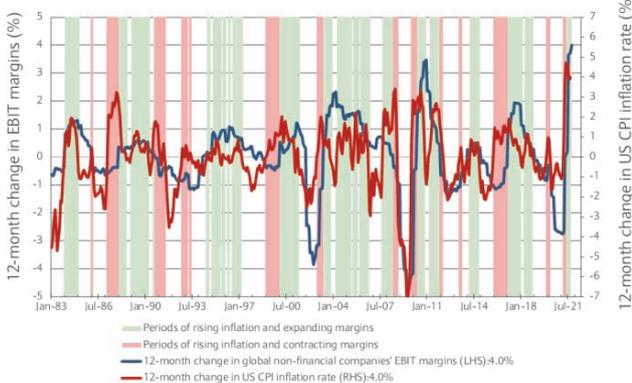
Earnings have outpaced price gains in 2021, on the back of strong margin expansion and modest revenue growth. With non-financials' EBIT margins (earnings before interest and taxes) at a decade-high of 11.5%, up from 7.5% in December 2020, the room for further significant margin

expansion looks limited, especially in the context of rising input costs.

However, our analysis suggests that in times of rising inflation, companies have generally had the ability to pass on higher input costs to customers and protect profitability. In fact, since 1983, such a scenario has played out 70% of the time (see figure 1). As such, we expect top-line growth to be the main contributor to earnings next year, helped by stable-to-modestly higher margins.

Figure 1: Non-financial companies’ ability to increase margins in times of rising inflation

Non financial companies’ EBIT margins (earnings before interest and tax), versus the US consumer price index inflation rate (12-month changes) since 1983



Source: Refinitiv Datastream, Barclays Private Bank, October 2021

Valuations

From a valuation standpoint, equities may look rich on certain measures, but they are in line with their historical average relative to bonds. Global equities trade at 18-times forward 12-month earnings, versus 16 times on average over the past 30 years, and down from a recent high of 20 times last January. Relative to bonds, stock valuations are in line with history, with the global equity risk premium standing at 4.1%, essentially in line with its 20-year average.

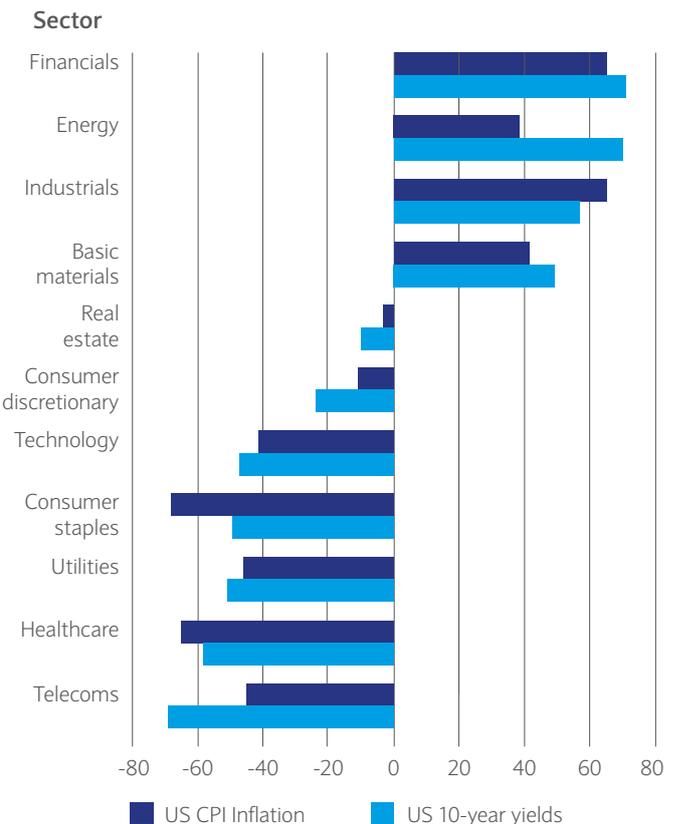
Allocation views

Over the medium-to-long term, we maintain a preference for quality, structural growth and idiosyncratic risk. Coming into a period of sub-par returns, active management and skilful stock selection will be key. However, over the short-term (less than six months), rotations between sectors and styles may persist.

Given our expectation of above-trend growth, with the risks of inflation and yields skewed to the upside in the coming months, financials, energy, industrials and materials appear well positioned. Indeed, these sectors tend to benefit from strong cyclical momentum and have been positively correlated with yields and inflation (see figure 2)

Figure 2: Correlation of equity sectors’ relative performance against bond yields and US CPI

Correlation of global sectors’ relative performance versus the US 10-year Treasury yields and the US consumer price index over the past five years (12-month changes over five years)



Sources: Refinitiv Datastream, Barclays Private Bank, October 2021

Because the previously-mentioned sectors' top-line growth is influenced by specific factors (such as oil and basic resources prices for energy and miners, and interest rates for financials), their profitability can be more easily protected. This is why they have been more able to increase margins in times of rising inflation. In addition, industrials should benefit from an increase in capital spending, fuelled by the economic recovery and digitisation of manufacturing processes.

Conversely, an increase in interest rates could be detrimental to the more defensive parts of the markets, which tend to be treated as bond proxies by investors. Utilities, consumer staples and communication services appear particularly exposed.

Finally, the healthcare and technology sectors continue to exhibit very attractive long-term growth prospects. However, their performance could be challenged in the short-term should interest rates rise.

Banks: tactical opportunities remain

In the near term, we believe that financials, and banks in particular, should continue to benefit from a rise in interest rates and a solid macroeconomic backdrop.

Despite their outperformance of over 20% in the past 12 months, global banks are still trading at a steep 45% discount to the market on a price-to-earnings basis. This compares to a 26% discount, on average, over the past 20 years. The broadening recovery should support their fee income businesses, boost their loan growth, keep a lid on credit defaults, and lead to a continuing reversal of loan loss reserves, while also placing upward pressure on bond yields and net interest margins.

There is a tight correlation between banks' relative performance and long-term bond yields (see figure 3). Out of the 20 sectors we examined globally, global banks' performance appears most tightly correlated to higher bond yields. While a possible flattening of the yield curve remains a risk for banks' relative performance, we see economic growth as a more significant driver of earnings and relative performance in the short term.

Figure 3: Banks tend to outperform when bond yields rise

Global banks' relative performance against US bond yields (6-month changes) since 2004



Source: Refinitiv Datastream, Barclays Private Bank, October 2021

Technology: selectivity is increasingly required

During the worst of the pandemic, the GICS technology sector became a "risk-off" trade and a "place to hide", due to the visibility it offered. As the global economy continues to recover, we believe that its risk-off status may be challenged. This might put pressure on the sector's valuations, in particular if bond yields rise and work against the long duration of its cash flows.

Technology trades on a substantial 52% premium to the broader market, over two standard deviations above its 15-year average, which leaves it exposed to potential disappointments. While we continue to see attractive long-term opportunities within the sector, we believe that increased headwinds (greater regulatory oversight and possible far-reaching tax reforms) may weigh on sentiment and penalise parts of the industry in the short term.

Implications for regional equity allocations

Based on regional markets' sector composition, our sector preferences point to increased support for non-US markets in the first half of 2022, and more specifically to Europe, including the UK, followed by Japan and emerging markets. Indeed, Europe and Japan, and to a lower extent emerging markets, have a greater exposure to the most cyclical parts of the market, with Europe and emerging markets being more heavily weighted towards financials.

Historically, non-US equities have tended to outperform in times of improving economic growth. With the dollar being a contra-cyclical currency, these periods have often coincided with a weaker dollar.

Stock picking can add value

Our sector and regional views are top-down driven, and do not reflect the potential for idiosyncratic opportunities at the stock level, which we expect to remain a key source of alpha in 2022. Indeed, we have observed that in the past six-months or so, the environment has become more attractive for stock pickers, compared with the second half of 2020 or first quarter of 2021.

Between April 2020 and February 2021, stocks in Europe and the US were strongly correlated with each other, as the market was driven by COVID-19 fears and macro-related risks. However, since February, we have seen a significant decline in correlations, suggesting a higher dispersion of returns among stocks, and therefore more opportunities for stocks pickers to generate alpha (see figure 4).

Figure 4: US equities have been less correlated in recent months

The average correlation of US stock returns versus S&P 500 returns since 1986



Source: Refinitiv Datastream, Barclays Private Bank, October 2021



Michel Vernier, CFA, London UK, Head of Fixed Income Strategy

Solving the puzzle of the post-pandemic bond world

The question for 2022 is at what speed will yields “normalise” and what does “normal” look like? Another important focal point is how various segments of the bond markets behave as fiscal and monetary support is withdrawn. The answer will dictate prospects for the asset class.

This has been a rollercoaster year for global bond markets, one characterised by a gradually improving global economy, COVID-19 setbacks, inflationary fears, distress within the Chinese property sector and increasingly hawkish signals from central banks.

In this precarious environment, the Bloomberg Global Aggregate Bond index was in negative territory in 2021. It is little comfort for investors that the index has never performed negatively in two subsequent years over the last 20 years, given the unprecedented challenges ahead.

Transitory versus stickier inflation

The narrative of the US Federal Reserve (Fed) throughout 2021 was to look through a limited period of higher transient inflation, and not to respond with premature rate hikes in line with their new framework of average inflation targeting (FAIT). For now it appears that inflation is likely to be stickier than initially anticipated.

Higher inflation already on the cards

Personal consumption expenditures (PCE), the Fed’s main inflation gauge, is less impacted by higher shelter costs (15% versus 40% in the consumer price index). The central bank has already indicated that higher rents and house prices are worth monitoring, as they may reflect the impact of lower unemployment rates. In fact, the Fed has already raised its forecast for PCE, to 2.3% in 2022, while it expects the unemployment rate to decline to 3.8% by the end of next year.

Will the Fed lose its patience?

For now, the bar for the Fed to push hikes forward seems high. First, the Fed’s own inflation forecast points to a moderation of inflation going into 2023 (PCE: 2.2%). Second, Fed chair Jerome Powell is likely to put much more emphasis on a broad-based, and inclusive, recovery of the US labour market. In doing so, he may be willing to accept a longer period of higher inflation.

Another Fed U-turn possible?

The risk that the Fed needs to adjust tack on rate hiking in 2022, similar to during the hiking cycle of 2018/2019, is significant. Back in 2019, the Fed resisted for a while only to initiate the infamous “Fed U-turn”, dissolving the then inverted curve. Should inflation prove to be more persistent, the rate curve might steepen to reflect the risk that the Fed may fall behind the curve.

What might trigger a change?

The Fed will ultimately be guided by inflation expectations. For now, the 5 year forward inflation breakeven rate, which measures expected inflation for the five-year period starting in five years’ time, still trades below levels seen prior to 2014, at around 2.5%. Only rates above the 2014 highs might potentially put more pressure on the Fed to act earlier. The central bank is also likely to observe inflation surveys like the ATSI (Aruoba term structure of inflation) calculated by the Philadelphia Fed. This measure, at 2.25%, is higher than seen in 2020, but doesn’t point to excessive long-term inflation.

Two steps forward one step back

Since the September Federal Open Market Committee meeting, it appears that more Fed members favour a first rate hike in 2022. While these are mostly non-voters, persisting inflation would strengthen the case for a hike next year. The rate market is already pricing in two hikes for 2022. While this is not impossible, we see a higher probability of one hike later in 2022.

Inflation and slope in focus

On the long end, we believe rates may spike above 2% but this should be only temporary. Our view stems from two main factors: first the inflation path, and second the yield curve pattern. As mentioned previously, we believe inflation won’t run away. On the curve side, it’s important to assess what the fair level of the long-term fed policy rate might be.

During recent decades, the Fed's neutral rate has regularly been revised down. In 2012, the neutral rate in real yields was 2%. Only a substantial change of estimates over long-term trend growth, increase in labour force growth, and change in structural inflation dynamics would lead to a higher neutral rate, as per the Laubach-Williams model. Without this, the Fed may find the urgency to counteract the large debt overhang and lower trend growth with the help of a lower equilibrium rate.

Given this overarching uncertainty, we see a high probability of rate volatility, with the curve steepening in the next few months before potentially flattening as the market starts pricing in more hikes later in 2022.

“We see a high probability of rate volatility, with the curve steepening in the next few months before potentially flattening as the market starts pricing in more hikes later in 2022”

Risks abound

Outside of our base case, the risk of persistent and elevated inflation and higher rates should not be ignored. On the other hand, some probability has to be given to a scenario of lower growth related to the ongoing pandemic which would lead to lower yields.

UK central bank less calm

In the UK, the Bank of England (BOE) seems to support a faster start to the normalisation phase. As explained in our UK macro outlook (p17), inflation in the UK has reached record highs and is expected to surpass 4% in the next few months. On the back of a determined BOE, the market has started to price in a rate hike this year, with an additional 80-100bp increase in the base rate by the end of 2022.

Breakeven inflation rates price in an average retail price index rate of around 4% over the next 10 years, a level last seen in 1996, implying an extended period of excessive inflation. When considering that long-term inflation has been between 2.4% and 3.2% in the past 10 years, this appears very aggressive in our view.

Higher rates to protect the consumer?

In addition, the BOE is likely to consider the impact hikes may have on UK consumers and companies, especially if they lead to a stronger sterling.

BOE: only one opportunity to fail

Finally, a faster-than-expected hiking cycle would likely be followed by an accelerated tapering of the quantitative easing programme. This, in turn, may coincide with large planned gilt issuance by the UK Treasury, and cause unnecessary supply overhang. The Bank of Japan and the ECB can testify that policy errors are almost impossible to reverse, and the BOE will probably think twice before entering onto too aggressive a rate-hike path.

A base rate around 1% by year end, as implied by the rates market, leaves room for disappointment in our view. As such, short-to-medium term rates seem to offer value, while the longer end is likely to be torn between the two forces (inflation and growth risk), causing UK yields to experience a wide trading range going into 2022.

Italian bonds with more support

The ECB and European rates seem to feel the least pressure. While the deposit rate should remain unchanged, most of the discussion is likely to revolve around the format of a new asset purchase programme succeeding the current PEPP (pandemic emergency purchase programme) and APP (asset purchase programme).

According to reports, the new programme need not be bound to allocation keys. Instead, it may be designed to accommodate smaller and more indebted countries. At least from a monetary aspect this should provide support for spreads of peripheral countries like Italy or Portugal. As such, bonds from these countries may offer some value in an otherwise ultra-low yield environment.

Which bonds defy inflation

We often get asked which fixed income sub-asset class performs well during periods of higher inflation and higher trending yields. Historically, two bond segments have provided more stable performance against this backdrop: Inflation-linked bonds and high yield.

Inflation-linked bonds are expensive

Although they eliminate the inflation component, “linkers” would be less effective in a situation where an increase in yield rise would be not induced by higher real yields, just like during the 2013 Fed tapering process.

In addition, the inflation protection comes at a cost in the form of the breakeven yield which, as discussed above, is already well over 4% in the UK. As such, linkers would only be worthwhile if inflation stays durably above 4%, or if “stagflation” materialises.

High yield bonds

Spreads of high yield bonds from developed and emerging markets tend to perform well in a moderate growth environment with higher trending inflation. This is because high yield commodity producers and issuers can push through higher prices to consumers. While high yield bond spreads and CPI have often been negatively correlated, this is not always the case. Indeed, debt ratios, default rates, spread levels, and market yields can all decisively influence subsequent spread performance.

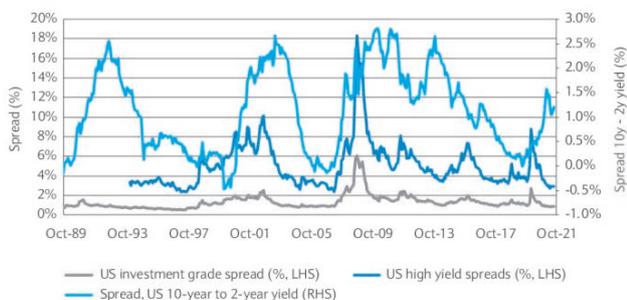
Spreads passed the best times already

The current phase of economic recovery, lower trending default rates and accommodative monetary policies have built a solid backdrop for spreads to compress further. But at current levels (below 285 basis points (bp) in the US high yield market and 300bp in the emerging markets), spreads leave only limited room for substantial compression, in our view. This is also confirmed by past performance, according to the shape of the yield curve.

In addition, history shows that the bulk of the spread compression usually happens before the curve starts to flatten (see figure 1). They then remain relatively stable until the curve starts steepening, again at which point spreads typically widen.

Figure 1: Spreads during curve flattening are relatively stable, with exceptions

Comparison of how US investment grade and high grade spreads perform versus US 10-year to 2-year spreads



Source: Bloomberg, Barclays Private Bank, October 2021

Higher leverage acceptable...for now

Although the pandemic has led to a substantial increase in debt levels (the average net leverage ratio for US investment grade is 2.1 times, compared with 1.5 times 10 years ago), leverage isn't much of a problem, for now.

As we discussed in [October's Market Perspectives](#), corporate behaviour is most relevant here. It's only if companies exploit the low interest rate environment by rewarding shareholders excessively or engage in excessively expensive M&A activities, that debt investors may start to demand a higher compensation in the form of higher spreads.

Another important factor remains the default cycle as spreads have often started to move when default rates bottomed out. According to the rating agency Moody's, global high yield defaults should bottom out in mid-2022.

With all that in mind, we believe corporate bonds can outperform in 2022. But remaining imbalances warrant a more selective approach.

Our verdict

Where does this leave bond investors in 2022? Higher rates, inflation, and possible imbalances in the credit market remain key challenges. With rate hikes already largely priced in, medium-term bonds seem to offer the most value. Meanwhile, we would see any rates move beyond 2% in the US 10-year as unsustainable, and would consider such periods as opportunities to lock in rates.

We would refrain from chasing yield using high beta issuers. Instead, we would stick to a more conservative and selective strategy especially in high yield and emerging markets until spreads become attractive again.

“With rate hikes already largely priced in, medium-term bonds seem to offer the most value”



Julien Lafargue, CFA, London UK, Chief Market Strategist

The conundrum facing private market investors

With yields on government bonds anchored to ultra-low levels, is it time to consider investing in private credit markets to obtain higher yield along with less risky returns?

Private markets have performed remarkably well in the last two years, despite the impact of the COVID-19 pandemic. The combination of accommodative fiscal and monetary policy, lower-for-longer interest rates and the fast-paced recovery in equity markets, have been key factors behind this.

The boost to sentiment is particularly apparent in buyout and venture capital strategies, with one-year horizon net internal rate of returns (IRR) of 45% and 56.4% respectively in March 2021, according to private market researcher Preqin.

Buyout funds to the fore

Driving the performance in buyout funds, in particular, is the recovery in equities, which has reduced the uncertainty around exit values. According to private market researcher Preqin's survey, covering the second half of 2020, 45% of respondents cited concerns over the exit environment going into this year.

However, a general receptiveness to initial public offerings (IPOs) and strong merger and acquisition (M&A) activity have played their part in supporting exit values. Furthermore, special purpose acquisition companies (SPACs) have enhanced the pool of buyers. As a result, the same survey for 2021 sees only 16% of investors concerned about exit values next year.

Technology prospers from venture capital activity

Within venture capital strategies, technology has seen significant growth since the outbreak of the pandemic. Intuitively, this makes sense as COVID-19 has accelerated the trend towards a more digitalised world, where software and cloud computing become the norm as opposed to hardware.

As we highlighted in [Time to consider private market technology](#) in March, technology companies staying private for longer, and offering the potential to access innovation and technology in a more disruptive fashion compared to large-cap tech firms, are noticeable tailwinds for the strategy.

Differing performance of strategies

We mentioned in September's [Market Perspectives](#) the importance private debt can have in complementing traditional credit markets, given a combination of higher leverage and lower yields in this area. Figure 1 illustrates the strong performance of these three strategies.

Figure 1: Private markets performance by strategy

The return for five private market strategies (private equity, private debt, real estate, infrastructure and natural resources) since 2008 shows a wide divergence in performance. The index return is rebased to 100, as of 31 December 2007



Source: Preqin Pro, Barclays Private Bank, October 2021

The prospects for private markets

As we approach 2022, this article explores whether valuations are stretched, the impact potentially higher interest rates might have on private credit, and other avenues may want to consider within private markets given the likelihood of inflationary pressures remaining.

Can private equity and venture capital continue their strong performance given higher valuations? With exit values being supported by equity markets and SPACs, investors continuing to invest capital into private markets, and cash reserves rising significantly, valuations are a key talking point.

However, data from private market researcher PitchBook shows that, at least for buyout investors, opportunities remain. Indeed, the median private equity buyout has taken place at an enterprise value (EV) to earnings before interest rates, depreciation and amortisation (EBITDA) multiple of 13.5 times this year, on a par with 2020 and below 2019 levels.

This also compares favourably to public markets' valuations where, according to DataStream data, the median non-financial US company is trading a multiple above 13.5. In other words, buyout private equity firms are still able to find relative bargains in the current environment.

“The median non-financial US company is trading a multiple above 13.5. In other words, buyout private equity firms are still able to find relative bargains in the current environment”

Fundamentals supportive

What's more, fundamentals still appear constructive. There seems to be consensus that, other things being equal, the recovery should continue next year, albeit at a slower pace than in 2021. This may help private equity's performance, while the longer-term dynamics of continued technical advancement should still be a tailwind for capital strategies.

Interest rate risks

How may private debt respond with the risk of potentially higher interest rates? With inflationary pressures persisting, central banks seem ready to reduce policy support in 2022. On paper, this may increase the opportunity cost of private debt and lead to more defaults, especially if the economic momentum weakens. However, there are three limitations to consider.

First, private debt investors tend to be more insulated from rate rises thanks to floating rates being used in many credit agreements. Second, when thinking about the impact of rising rates on portfolio companies, default risk should be mitigated by a still supportive macroeconomic backdrop. Finally, it is likely that the interest rate hiking cycle will be slow, as policymakers will want to avoid jeopardising what remains a fragile economic recovery.

Therefore, we expect investors to still be able to source businesses/entrepreneurs and provide bespoke lending solutions, in exchange for a higher yield than that achievable in public markets. However, the current environment requires increased scrutiny when selecting direct lending strategies and suggests a focus on higher quality, rather than distressed, debt.

Hedging inflation risk in private markets

While returns from the aforementioned strategies can provide a positive real return, they are not necessarily considered “real assets”. In other words, they may not have a physical inherent worth.

An investor chasing real assets might consider real estate and “smart” infrastructure through private markets as a more direct inflation hedge. Indeed, both have historically performed well during periods of higher inflation and stronger growth (see figure 2).

Figure 2: Real assets can provide an inflation hedge

The monthly average return for various real assets and the S&P 500, in periods of different inflation/growth scenarios, since 2000



Source: Bloomberg, Barclays Private Bank, October 2021

In particular, infrastructure addressing climate change concerns is likely to be in high demand over the next decade. With the sector's rental incomes often tied to inflation, it also provides a natural hedge against inflation. Although real estate struggled last year, due to COVID-19 uncertainty around property usage and deal delays around travel restrictions, the worst appears to be over.

As always, there is no such thing as a “free lunch”, and investors in private markets must be prepared to forgo liquidity and commit to their investments for a relatively long time. Nonetheless, an allocation to private markets should benefit investors in 2022 and beyond. With rising correlation between equities and fixed income, this exposure has the potential improve diversification, while enhancing yields and dampening volatility.

“By asset class, private market returns have been some of the best since the global financial crisis”

Although past performance can’t be seen as an indication of future results, the table below shows this quite clearly. By asset class, private market returns have been some of the best since the global financial crisis (see table).

Asset class returns since 2008

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
Infrastructure 21.4%	High Yield Bonds 19.4%	Private Equity 18.1%	Real Estate 10.4%	High Yield Bonds 19.6%	Listed Global Equities 22.8%	Real Estate 13.5%	Infrastructure 11.9%	High Yield Bonds 14.3%	Listed Global Equities 24.0%	Private Equity 10.9%	Listed Global Equities 26.6%	Private Equity 17.1%	Private Equity 10.7%
Government Bonds 10.2%	Listed Global Equities 34.6%	High Yield Bonds 14.8%	Private Equity 8.5%	Listed Global Equities 16.1%	Private Equity 19.6%	Private Equity 11.8%	Real Estate 11.2%	Natural Resources 11.5%	Private Equity 19.2%	Infrastructure 19.0%	Private Equity 15.1%	Listed Global Equities 10.4%	High Yield Bonds 8.3%
Cash 1.7%	Private Debt 24.5%	Private Debt 14.4%	Infrastructure 8.1%	Private Debt 13.0%	Private Debt 15.1%	Infrastructure 17.8%	Private Equity 10.3%	Private Equity 10.0%	Real Estate 14.2%	Real Estate 6.8%	High Yield Bonds 12.6%	Investment Grade Bonds 7.7%	Infrastructure 9.4%
Investment Grade Bonds -8.6%	Investment Grade Bonds 19.2%	Listed Global Equities 12.7%	Natural Resources 8.0%	Private Equity 13.0%	Real Estate 14.3%	Private Debt 9.8%	Private Debt 4.0%	Real Estate 8.8%	Private Debt 12.2%	Private Debt 2.9%	Investment Grade Bonds 11.3%	Government Bonds 5.8%	Listed Global Equities 7.5%
Natural Resources -11.9%	Private Equity 8.0%	Infrastructure 11.8%	Government Bonds 6.3%	Investment Grade Bonds 11.2%	Infrastructure 11.9%	Listed Global Equities 4.2%	Cash 0.1%	Infrastructure 5.8%	High Yield Bonds 10.4%	Natural Resources 2.1%	Infrastructure 10.7%	Private Debt 3.1%	Private Debt 7.1%
Private Equity -23.8%	Government Bonds 2.6%	Natural Resources 9.8%	Investment Grade Bonds 4.3%	Infrastructure 8.7%	Natural Resources 8.2%	Investment Grade Bonds 3.1%	Listed Global Equities -2.4%	Listed Global Equities 7.9%	Infrastructure 10.1%	Cash 1.8%	Real Estate 8.7%	High Yield Bonds 2.9%	Investment Grade Bonds 4.7%
Private Debt -24.6%	Natural Resources 1.8%	Real Estate 6.6%	Private Debt 3.9%	Real Estate 8.5%	High Yield Bonds 7.3%	Natural Resources 2.6%	High Yield Bonds -2.7%	Private Debt 6.6%	Investment Grade Bonds 9.1%	Government Bonds -0.4%	Private Debt 7.3%	Infrastructure 1.9%	Real Estate 3.9%
High Yield Bonds -26.9%	Cash 0.2%	Government Bonds 5.9%	High Yield Bonds 3.1%	Natural Resources 5.3%	Investment Grade Bonds -0.3%	Cash 0.1%	Government Bonds -3.3%	Investment Grade Bonds -4.3%	Natural Resources 8.1%	Investment Grade Bonds -3.6%	Government Bonds 5.6%	Cash 0.8%	Government Bonds 3.0%
Real Estate -29.9%	Infrastructure 16.3%	Investment Grade Bonds 3.8%	Cash 0.1%	Government Bonds 1.8%	Cash 0.1%	High Yield Bonds 0.0%	Investment Grade Bonds -3.6%	Government Bonds 1.7%	Government Bonds 7.3%	High Yield Bonds -4.1%	Natural Resources 3.5%	Real Estate 0.6%	Natural Resources 2.5%
Listed Global Equities -42.2%	Real Estate -22.5%	Cash 0.2%	Listed Global Equities -7.3%	Cash 0.2%	Government Bonds -4.3%	Government Bonds -0.8%	Natural Resources -8.8%	Cash 0.4%	Cash 0.9%	Listed Global Equities -5.4%	Cash 2.2%	Natural Resources -8.2%	Cash 0.7%



Lukas Gehrig, Zurich Switzerland, Quantitative Strategist; Nikola Vasiljevic, Zurich Switzerland, Head of Quantitative Strategy; Julien Lafargue, London UK, Chief Market Strategist

Our five-year forecast and scenarios: strap up for a two-speed recovery

Combined policy responses to the coronavirus pandemic have helped the economy recover, to a point where inflation is already a concern for many investors. Rising prices, and the start of a rate-hiking cycle, favour equities over bonds in our long-term return projections. But with high valuations, a sober breakdown of return drivers is necessary.

As part of our capital market assumptions (CMA), we provide an outlook for key macroeconomic drivers and the performance of asset classes beyond the typical one-year outlook. Our CMA cover an investment horizon from 2021 to 2026.

While not denying the difficulty of long-range forecasting, we believe that there are a handful of intertwined themes that can help to structure our thinking about the anatomy of this recovery.

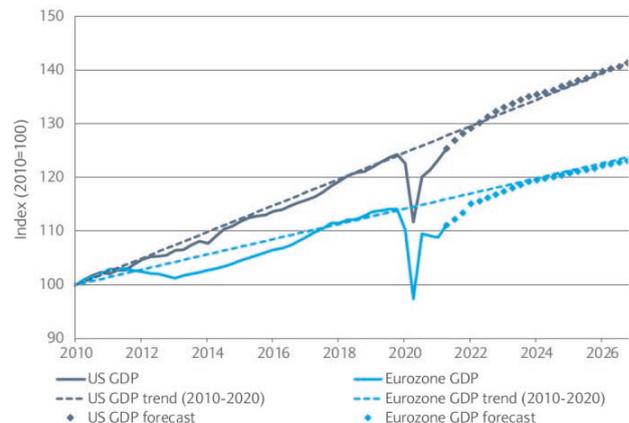
Recovery at different speeds

In terms of economic growth, the recovery has played out differently, both with regards to geography and sectors. We believe that this divergence will remain.

Economies such as the US have experienced aggressive economic and monetary policy stimulus, and are expected to reach their pre-pandemic growth trajectories in 2022. At that stage, the baton will pass from government to private demand sooner than in countries where stimulus has been administered more cautiously.

In the eurozone, pre-pandemic trend output is expected to be reached in 2023. For many economies where policy responses have been less pronounced, and the path to a full reopening of the economy is more shrouded, the journey to the pre-pandemic growth trajectory could exhaust our CMA horizon (see figure 1).

Figure 1: Stimulus speeds up the recovery
Indexed real gross domestic product, including CMA forecasts (last realised data point Q2 2021; forecast until Q4 2026), and linear trends estimated from 2010 to 2019, and extrapolated until 2026



Source: Bloomberg, Barclays Private Bank, October 2021

Fiscal fast-forwarding

Past economic cycles have taught us that there is a certain cyclical dynamic in the way gross domestic product (GDP) is distributed¹. Typically, companies' profits shrink at the onset of a crisis, while employee compensation, with nominal wages being sticky, stagnates and thus grows in proportion to profits. While profits rebound over the course of a recovery, wages tend to grow marginally in the years following the trough.

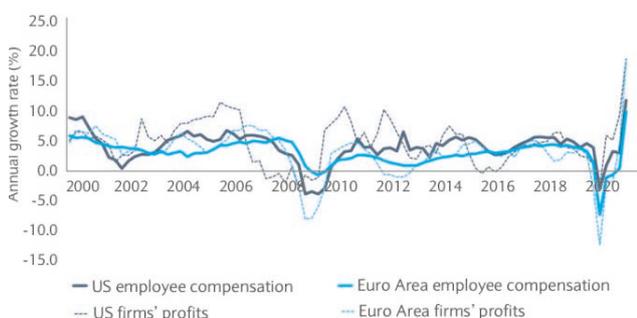
¹ There is more than one way of computing GDP. Here we argue using the income approach, which describes GDP as the sum of employee compensation, company's profits and net government income (taxes less subsidies)

After the bust of the dot-com bubble, the share of US employee compensation in US GDP, as measured by the US National Accounts, continuously fell until the global financial crisis of 2008-09. Thereafter, the share fell again until 2013, when employee compensation started to grow at a faster pace than firm profits.

This time around, the same logic does not hold for America: profits surged in the first quarters of the recovery and so did total employee compensation. Compensation encompasses all sources of income, not just wages. Generous unemployment benefits, or furlough schemes, helped to grow the income share of GDP attributed to employees.

The same difference in crisis anatomy can be observed in the eurozone and the UK: the total income share of both employee compensation and firm profits increased. Public finances paid the bill: tax income less subsidies shrunk significantly. In past recoveries, it would have taken several years until inflationary pressures from wage growth became a hot topic. In this recovery, advanced economies have fast-forwarded through a textbook recovery cycle, price pressures re-emerged only a year after the trough in output (see figure 2).

Figure 2: Massive fiscal stimulus leads to recovery
Annual growth rates of employee compensation and firm's profits (gross operating surplus and mixed income) between the first quarter of 2000 and second quarter of 2021. Together with net taxes (not shown) they aggregate to GDP



Source: OECD, Barclays Private Bank, October 2021

Different inflation dynamics

This fiscal-fast forwarding, and the difference in stimulus application, have strong implications for our inflation outlook. For the US and the UK, we expect central banks to overshoot the inflation target range in the later years of our forecast horizon. Eurozone and Swiss inflation rates, on the other hand, are expected to remain within their respective target range, thus reflecting the reduced risk of overheating in the medium term.

The ongoing push towards greener economies may well drive up inflation rates in the short-to-medium term, driven by a rush to secure access to natural resources, such as aluminium and copper. In the long term, however, we expect the effect of green transition on inflation to be more muted.

Return of the Taylor rule

The speed at which the central banks increase their policy rates, in our projections, is a function of the speed at which economies catch up to the pre-pandemic trend, and the inflation rates they are expected to encounter along the way. In other words, we expect "Taylor rules" to drive our assessment of monetary policy again, and, now more than ever, since the global financial crisis.

Cash rates to fail compensating for inflation

One important implication of the current inflation target overshooting, and its more moderated continuation further into our long-term projection, is that, despite interest rate hikes expected in 2022 and 2023, long-term real cash returns are expected to be negative. This continues the struggle of cash as a means of merely preserving value in portfolios.

To illustrate this struggle, we plot the five-year moving average of real cash returns since 2004 (see figure 3). In the US, just when this metric was about to turn positive, the monetary policy response, and the later surge in inflation, drove real cash returns to an all-time low. But again, the fast-forwarded nature of the recovery should lead to an earlier recovery in real cash returns than observed after the global financial crisis, leading to an average real cash return of close to -1% over our full CMA horizon.

Figure 3: Expected real cash returns remain negative
Five-year moving averages of annualised cash index returns minus headline inflation: historic realisations (January 2004- September 2021) and Barclays CMA projections (2021-2026)



Source: Bloomberg, Barclays Private Bank, October 2021

**CMA macroeconomic determinants:
2021-2026 average projections**

	GDP growth (%)	Inflation (%)	Policy rate (%)
US	2.9	2.3	1.3
UK	2.8	2.1	1.1
Eurozone	2.3	1.6	-0.3
Switzerland	2.0	0.7	-0.5
Emerging markets	4.8	3.8	

Source: Barclays Private Bank, forecasts as of March 2021

Macroeconomic methodology

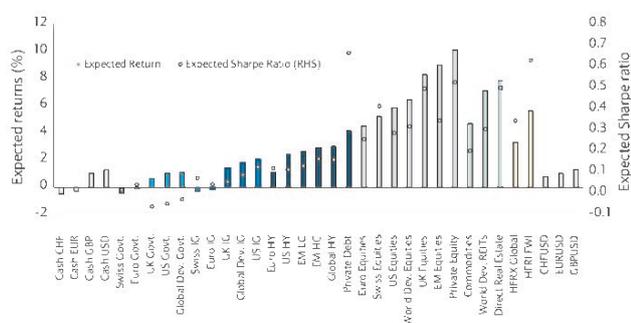
Our modelling methodology for the macroeconomic determinants revolves around long-term anchors such as historic averages and central bank target ranges as well as the blending of different views with regards to the dynamics towards those long-term anchors. By restricting our look-back period for long-term averages to the year 2000, we acknowledge that structural breaks have made economies from today difficult to compare with their pre-globalisation counterparts. By relying on Bloomberg economic consensus data, which aggregates information from almost 70 global banks and blending it with our own expert views, we rely on an extensive body of academic research suggesting that survey-based methods and forecast pooling are a robust and powerful method. See our upcoming methodology whitepaper for more details.

Building expected return blocks

Our methodology for estimating expected returns is based on a simple, yet powerful, framework that breaks down expected returns into three complementary building blocks: income, growth and valuation. The returns of listed assets can all be attributed to these three blocks. For non-listed assets, this is complemented with a fourth block capturing illiquidity premia.

Along with expected return projections, we forecast expected volatilities and correlations. To this end, we have developed a methodology that takes into account the varying behaviour of asset class returns across risk regimes.

Figure 4: Barclays CMA return and risk projections 2021-2026
 Annualised projections for total returns and Sharpe ratios (expected excess returns over cash relative to expected volatility). Estimates from March 2021, for the period of 2021 to 2026



Source: Barclays Private Bank, October 2021

Fixed income: nominal assets when inflation is rising

Speaking about building blocks, fixed income returns are primarily a matter of fixed “income” or the expected level of bond yields. Valuation adjustments have considerable effect on returns for shorter investment horizons, as they reflect changes in prices directly. Over a longer horizon, however, moves in yields and prices will offset each other, to some degree. The growth component is estimated from the spot yield curve, and reflects the return of rolling down the yield curve.

Our expectation for relatively elevated inflation rates, and the start of a hiking cycle, make investing in fixed income a challenging exercise, demanding increasing selectivity. High yield and emerging market bonds can support returns in debt, but their relative attractiveness has decreased compared to previous years.

Government bonds reflect different stages of the hiking cycle

While we expect the US Federal Reserve and the Bank of England to conclude the rate-hiking cycle, for the policy rate, by 2026, the European Central Bank as well as the Swiss National Bank are far from the end of the cycle by the end of our CMA horizon. These discrepancies drive the differences in the outlook for the income component of our government bond total return projections.

Credit spreads to remain low

With increasing issuer risk, spreads over government bonds widen, and so does the income building block while the relative importance of growth and valuation dwindle.

Current spread levels are low by historical standards, driven by ample liquidity in the market. When, as we expect, this liquidity is gradually drained away, we believe the growth impulse will be enough to keep a lid on these spreads. As such, our risk assessment of credit has not changed significantly, limiting the relative attractiveness of riskier fixed income assets compared to government bonds in a portfolio context.

Equities: up when inflation is elevated

Breaking down equity returns into building blocks is straightforward: the income component represents dividends and net buyback yields, growth reflects nominal earnings growth, and valuation the expected change in the cyclically-adjusted price-earnings ratio.

The growth component is modelled by a return to the long-term average earnings growth plus the inflation projection. Given our expectations for above-trend growth paired with a regime of moderately higher inflation, the growth component is the main driver of our equity return projections.

Equity income has come under pressure lately, but we expect it to slowly revert to its longer-term average, as the recovery evolves and companies face less uncertainty with regards to their cash flows. Valuations should turn into a moderate headwind, as we expect a gradual multiple contraction over the course of the CMA horizon.

Attractive longer-term outlook for UK equities

Among developed market equities, UK equities look particularly attractive. This is a function of some catch-up potential in earnings growth in a global recovery, elevated inflation rates and considerably less potential for valuation corrections. The risks for this outlook are predominantly of political nature. A deterioration of the trade relationship with the EU cannot be ruled out, although it is not our base case.

Real assets thrive with inflation

Like bonds and equities, returns of commodities can be broken down to income, growth and valuation blocks. Income represents the interest on the collateral, which is approximated by the return on a three-month US Treasury bill in our case, and is – compared to the others - negligible.

The growth component reflects the shape of the futures curve of the broad commodities aggregate. Growth currently weighs on our projection as the curve is in contango. The most influential component, by far is valuation, and reflects our expectation for future spot prices. Even though prices have increased considerably lately, we believe that commodity prices can go higher. One short-to-medium term driver may be the transition to greener economies, which has the potential to support demand for a number of commodities.

Real estate falls into two categories in our CMA: publicly-traded real estate investment trusts (REITs) and directly owned real estate. We model REITs just like we would publicly-traded equities. In this regard, REITs provide comparable exposure to our income and growth building blocks, but do not suffer as much from the expected compression in valuations, according to our forecast. Direct real estate is estimated, like its listed counterpart, but with an added premium for illiquidity/complexity.

US dollar weakness on the back of inflation differential

Our CMA spans assets from different currency areas. Therefore, we project the four major currencies in the CMA framework: US dollar, euro, sterling and Swiss franc. Our forecasts consist of a view on real exchange rates and expected inflation differentials. The inflation differentials tip the scales against the dollar, in our projections until 2026, leading to moderate weakening against all other CMA currencies.

Regime-driven estimates of long-term risk

To estimate long-term volatilities and correlations, we compute risk-on and risk-off covariance matrices. These regimes are typically characterised by relatively low and high volatility, respectively. Our long-term risk parameters are calculated by combining the regime-specific covariance matrices. The mixing weight determines whether the final matrix will be in line with neutral, historical estimates (equal weights) or biased towards the risk-on or risk-off regime (unequal weights).

In an investment environment characterised by low interest rates, inflation uncertainty, geopolitical risks, and relatively high valuations, we expect to see somewhat elevated volatility in financial markets going forward. Therefore, our long-term risk parameters are estimated by slightly overweighing risk-off regime in our covariance matrix calculations.

Diversification for the long run

By putting together our expected long-term return and risk estimates, the key message is that our baseline scenario is anchored by growth expectations over the next five years, however the road ahead might be bumpy at times. Although equities are preferred to fixed income, the risks should not be neglected. In our view, it is necessary – perhaps more than ever – to build a portfolio that is well diversified across a spectrum of asset classes, including alternative investments such as commodities and private markets.



Nikola Vasiljevic, Zurich Switzerland, Head of Quantitative Strategy; Lukas Gehrig, Zurich Switzerland, Quantitative Strategist

How to diversify portfolios and hedge inflation risk: from commodities to bitcoin

Inflation prospects are a hot topic for investors. To prepare for different inflation scenarios over the next twelve months, we investigate which asset classes might best shield portfolios against inflation surprises. A diversified, multi-asset class portfolio including commodities, inflation-linked bonds, selected equity styles and shorter duration bonds may be one potential solution.

Diversification is the bedrock of a long-term investment process. Crafting a portfolio that will be resilient and robust in different macroeconomic environments, requires careful consideration of key systematic risks. Currently, one of the main questions facing investors is whether the recent spikes in inflation are merely transitory or might become permanent.

Inflation risk in the spotlight

Inflation erodes wealth over time. Historically, sustained inflation has been a headwind for both equities and bonds. Interest rates typically rise with inflation, which, in turn, hurts bond prices. Equity valuations can be hit at higher inflation levels as well. Consequently, the correlation between the two asset classes can move to positive territory when inflation is rising persistently.

Given the elevated levels of inflation and inflation uncertainty, over the short and medium term, it is important to consider which investment strategies might shield portfolios from inflation.

Our analysis is based on asset return sensitivities (or betas) to unexpected inflation over a one-year horizon. Arguably, at any point in time, expected inflation is already “priced in” by financial markets. Therefore, we investigate how to position portfolios optimally ahead of potential significant inflation surprises.

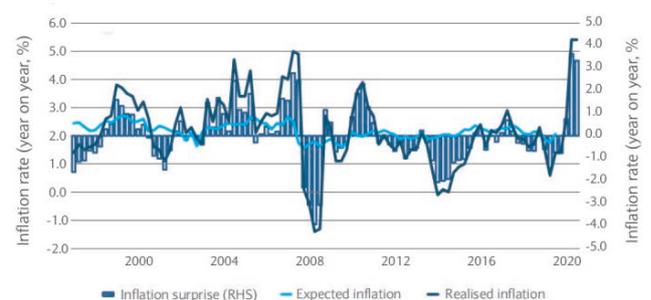
Lulled by the 2010s

Following the global financial crisis of 2008-09, investors witnessed a decade that was characterised by secular stagnation (see figure 1). Weak growth, meagre inflation, low interest rates and quantitative easing left a strong footprint on financial markets.

Ageing populations, suppressed commodity prices, technological changes and reduced production costs due to globalisation, have been the main disinflationary drivers in the last decade. Many investors wondered if inflation would again reach worrying levels in major developed economies crawling back above the central bank target levels.

Figure 1: Expected and unexpected inflation

Realised inflation is based on the US consumer price index. The expected inflation represents the average one-year ahead expected inflation obtained from the Philadelphia Fed’s Survey of Professional Forecasters. The inflation surprise is the difference between realised and expected inflation. The data frequency is quarterly.



Source: Bloomberg, Barclays Private Bank, October 2021

But the genie is out of the bottle

Initially, the pandemic-induced lockdowns and a strong shift in consumer sentiment unlocked additional disinflationary factors. Governments and monetary authorities acted swiftly, with a battery of monetary and fiscal policies.

Following the reopening of economies around the globe, inflation started to pick up in 2021. This was driven by several factors.

One upward pressure on prices comes from strong pent-up demand, high household savings and a massive increase in the money supply. Supply-chain disruptions, including soaring shipping costs and container shortages, only amplified the demand-side effect. Finally, the base effect should not be neglected – low prices twelve months ago boost the year-on-year inflation rate during the re-opening and recovery.

Inflation prospects

In our view, it is unlikely that powerful forces which kept inflation in check during the 2010s will easily wane. Therefore, our baseline scenario is that the inflation rise is only transitory and it is expected to fade away in the short-to-medium term. However, there are several risks that may materialise, and keep inflation elevated for some time.

Geopolitical tensions and trade wars might resurface and offset some of the benefits of globalisation. Consequently, potential “reshoring” and “nearshoring” of companies to, or close to, home markets may increase production costs.

Government debt is at historically high levels, and it is possible that central banks will take a more flexible view of inflation targeting (note that the US Federal Reserve now uses long-term average inflation when targeting) and allow short and medium-term overshooting of the past reference levels.

The greening effect

The transition to green economies may also create inflationary pressures. So-called “greenflation” might emerge from different sources. Fighting the climate risk and reducing the environmental footprint will probably incur higher costs for companies through substantial capital expenditure, and research and development investments.

Higher labour costs associated with wage increases, and costs associated with investments in equality and diversity could be the second factor. Last, but not least, regulatory requirements regarding sustainable development need certain organisational changes, and may incur productivity costs.

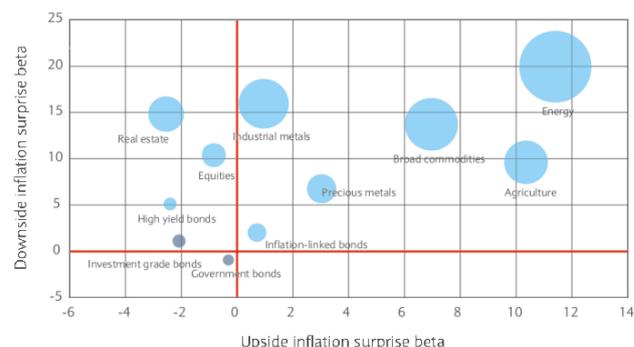
Taming inflation surprises with diversification

Measuring inflation beta, or the sensitivity of an asset class to realised inflation, can help us understand which assets might be used as an inflation hedge. However, to build an effective hedge against unexpected inflation, an understanding of how different asset classes react to, upside and downside, inflation surprises is needed.

In our analysis (see figure 2), we consider only significant deviations from expected inflation (more than 0.5% in either direction). This is because it is difficult to disentangle small inflation surprises from other factors that can influence asset performance, such as economic growth.

Figure 2: Inflation sensitivities of different asset classes

The sensitivities of major asset classes and commodity sub-sectors, from March 1998 to September 2021, to inflation surprises, both to the upside (x-axis) and downside (y-axis). Bubble sizes indicate the degree of sensitivities of asset classes to the realised inflation beta



Source: Bloomberg, Federal Reserve Bank of Philadelphia, Barclays Private Bank, October 2021

Classy commodities

Commodities are the best hedges against upside inflation surprises in our review period. In particular, energy and industrial metals outperform when there is an unexpected spike in inflation. This is expected, as these commodity sub-sectors are the key inputs in the industrial production process.

Precious metals can also be used as an upside inflation hedge. Although they do not perform as strongly as energy when inflation spikes, they are one of the best choices among commodities as a downside-inflation hedge. This is a reason why gold is considered as one of the best portfolio diversifiers.

The convenience of inflation-linked bonds

On an asset classes level, inflation-linked bonds (ILBs) represent the second-best inflation hedge (see *Solving the puzzle of a post-pandemic bond world* in this issue). This is expected as ILBs – by design – automatically adjust in a rising inflation environment.

However, it is important to consider also the breakeven inflation as well, which represents the market-implied future inflation rate.

Short duration might help nominal bonds

On average, nominal bonds are under pressure when inflation spikes because interest rates tend to rise in parallel. However, the losses can be controlled to a certain extent by overweighting shorter duration bonds in a portfolio, irrespectively of their credit risk exposure. However, we note that nominal government bonds provide protection if inflation surprised on the downside.

Hidden equity gems

Investing in stocks provides a direct growth exposure. In the case of rising inflation, companies should be able to pass on higher costs to consumers (see *The post-COVID investor outlook as we shift from pandemic to endemic* in this issue). In practice, this process changes at a different pace for each industry. To gain further insights into how equities react to bouts of unexpected inflation, we extend our analysis to styles.

Our results are intuitive – growth and momentum provide the best protection against upside inflation surprises. Quality is neutral to inflation spikes, whereas value, high dividend and low volatility do not provide protection in strong inflationary scenarios.

In a strong deflationary scenario, none of the equity sectors provides protection. This is because such events typically coincide with an economic recession when equities sell off.

Thinking beyond – thinking crypto

Recently, cryptocurrencies have been flagged by some investors as a potential inflation hedge. We do acknowledge some similarities between cryptocurrencies and gold, such as uniqueness, scarcity, and transactability. However, it is unclear if a parallel can be drawn between the two assets.

Cryptocurrencies are a recent invention and represent highly speculative digital assets. There are many opportunities, but for most investors the risks are prohibitively high. We estimated the historical drawdowns for bitcoin and a basket of cryptocurrencies over the past four years (see figure 3).

These drawdowns illustrate past losses from investing at highs, and the time it would have taken to recover those losses. The maximum historical drawdown is 80-90% and the recovery time is close to three years. Over the same period, global equities experienced drawdowns of up to 35% and much shorter recovery times.

Additionally, we think that the investment landscape is largely under construction and can dramatically change over just a couple of months. It remains to be seen how the crypto universe will consolidate and address potential regulatory challenges in the future.

Figure 3: Comparative risk analysis for equities and cryptocurrencies

The historical drawdowns for MSCI World Net Total Return Index, Bloomberg Galaxy Crypto Index, and Bloomberg Galaxy Bitcoin Index, from August 2017 until October 2021, shows bigger drawdowns for cryptocurrencies over equities. Daily data frequency



Source: Bloomberg, Barclays Private Bank, October 2021



Damian Payiatakis, London UK, Head of Sustainable & Impact Investing; Olivia Nyikos, London UK, Responsible Investment Strategist

Investing for a greener tomorrow

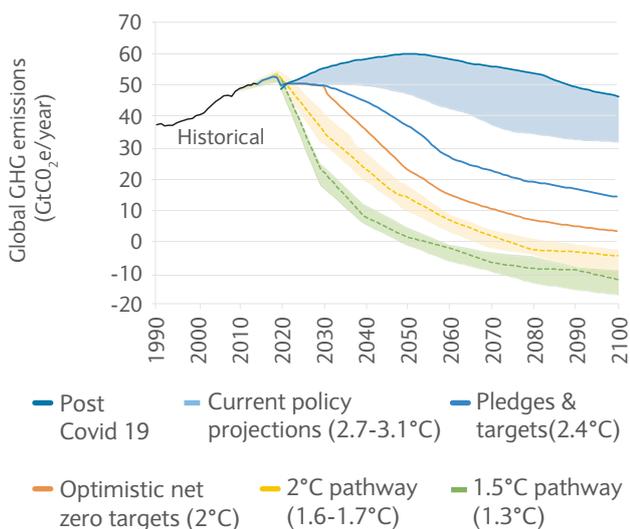
As societies and economies emerge from the COVID-19 pandemic, preventing a climate breakdown is receiving renewed focus. Investors have a critical role, and opportunity, in this effort through how they deploy their capital in 2022 and beyond.

We have been given “a code red for humanity”¹. This was how the UN’s Secretary General explained the final Intergovernmental Panel on Climate Change (IPCC) report before COP26.

The longer we wait to act, the more damage and more likely a climate breakdown will be; and the more difficult it will be to address (see figure 1).

Figure 1: Global warming projections

Global greenhouse gas emissions since 1990 and projected to 2100 under various emissions reduction scenarios based on government pledges and policies



Source: Climate Action Tracker, May 2021

From decarbonising portfolios to decarbonising the economy

As investors, a central part of a climate-ready portfolio is to understand the risks – both physical and transition risks – to the current and potential holdings. We can protect value in the portfolio through a variety of approaches: more detailed analysis of environmental factors via ESG analysis, measuring and cutting the carbon footprint, or reducing exposure to assets at risk from climate change.

However, protecting your portfolio does not protect the planet. Fundamentally, the global call to arms is to decarbonise our economies and human activity. While there will be winners and losers, this does not require an end to progress or prosperity. In fact, often the opposite. It does, however, require a realignment of economic activity.

For this we need more capital to catalyse the changes required. New innovations to be developed. Existing ones to scale. Novel solutions to be invented.

Private capital is essential

Arguably, the UN’s COP26 summit should inspire a step-change in the level of global commitment and action around climate.

But we can’t rely solely on governments, nor charities or corporations, to address climate change. As emphasised in our 2021 *Investing for Global Impact* survey, the vast majority (86%) of respondents, including individual investors, family offices and foundations, agreed that private capital, along with these others, will be essential².

¹ Secretary general’s statement on the IPCC Working Group 1 Report on the physical science basis of the sixth assessment, UN, 9 August 2021 <https://www.un.org/sg/en/content/secretary-generals-statement-the-ipcc-working-group-1-report-the-physical-science-basis-of-the-sixth-assessment>

² Investing for Global Impact, Campden Wealth, GIST Ltd, Barclays Private Bank, September 2021 <https://privatebank.barclays.com/campaign0/investing-for-global-impact-2021/>

Private capital will be vital to funding the solutions spanning three challenges - addressing climate change and energy needs, reducing our environmental footprint, and conserving biodiversity and ecological systems.

But investors should also seek to deploy capital into these themes, because the underlying companies solving them are also building businesses that are among the fastest-growing areas in the global economy. As such, we review these three environmental themes, and explore the opportunities and entry points for 2022 and beyond.

Addressing climate change and energy needs

Energy and climate change are intertwined. The total consumption of energy, across sectors³, accounts for about three-quarters of all greenhouse gas emissions⁴. These, human-caused greenhouse gas (GHG) emissions are central to causing climate change.

“Energy and climate change are intertwined. The total consumption of energy, across sectors, accounts for about three-quarters of all greenhouse gas emissions”

However, this relationship is not inextricable. Shifting to cleaner renewable sources of energy, at the same time as increasing electrification and improving its usage, will be key to addressing climate change.

In 2019, renewables reached almost 27% of global electricity generation⁵. While noteworthy progress, this percentage needs to increase rapidly to ensure that half of all energy generation comes from renewables by the end of the decade. More capital, therefore, will be required to fund this additional capacity.

Alternative forms of renewables

Beyond improvements in familiar renewables (onshore and offshore wind, solar photovoltaics and hydropower), alternative forms of renewables are emerging. Wave, geothermal and hydrogen power are shifting from prototype phases to commercialisation. Government support is accelerating for this. For example, support for hydrogen in primary energy consumers (for instance, China, the EU, UK and US) has driven project investment to an estimated \$500 billion, through to 2030⁶.

Beyond producing greener energy, a successful energy transition requires better access, reliability and use of energy. Renewables have varying degrees of intermittence, so energy storage is critical to ensure full decarbonisation of the energy system. Already, capacity is being added. In fact, compared to 2020, the capacity of new energy storage installations is forecast to more than double by the end of 2021 (reaching 12 gigawatts (GW) from 4.5 gigawatts)⁷. Thereafter, annual installations are expected to exceed 20 GW by 2024 and 30 GW by 2030⁸.

Reducing our environmental footprint

With growing populations and expanding economic development and consumption, the natural environment and its limited resources are under increasing strain. Should the global population reach 9.7 billion by 2050, as some predict, sustaining current lifestyles would require the natural resources of the equivalent of almost three planets.

As the world becomes increasingly urbanised, with 70% of the world's population expected to live in cities by 2050, environmental pressures are likely to increase. Cities and metropolitan areas are hubs of economic growth, occupying just 3% of the Earth's land. That said, they account for 60-80% of energy consumption, 70% of carbon emissions and over 60% of resource use⁹.

³ These include transportation, electricity and heat, buildings, manufacturing, construction, emissions and fuel combustion. Within the energy sector, the largest emitting sector is electricity and heat generation, followed by transportation and manufacturing.

⁴ Historical GHG emissions, Climate Watch, October 2021 https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&chartType=percentage&end_year=2018&start_year=1990

⁵ Renewables 2020, IEA, November 2020 <https://www.iea.org/reports/renewables-2020>

⁶ Hydrogen investment pipeline grows to \$500 billion in response to government commitments to deep decarbonisation <https://hydrogencouncil.com/en/hydrogen-insights-updates-july2021/>

⁷ Global energy storage industry primed to treble annual installations by 2030 despite tightening supply of Li-ion batteries, IHS Markit says, IHS Markit, 4 October 2021 https://news.ihsmarkit.com/prviewer/release_only/id/4882992

⁸ Global energy storage industry primed to treble annual installations by 2030 despite tightening supply of Li-ion batteries, IHS Markit says, IHS Markit, 4 October 2021 https://news.ihsmarkit.com/prviewer/release_only/id/4882992

⁹ Goal 11: Make cities inclusive, safe, resilient and sustainable; UN Sustainable Development Goals, October 2021 <https://www.un.org/sustainabledevelopment/cities/>

Beyond that, ageing infrastructure in the developed world and incomplete infrastructure in developing nations, necessitate construction – often needing cement and steel. Emissions from the production of these materials make up 44% of emissions coming from industrial sources¹⁰. To meet climate goals, cement emissions intensity will need to drop 85-91% globally and steel emissions intensity 93-100% by 2050¹¹.

Similarly, though often overlooked, buildings will be central to achieving climate goals. Together, buildings and building construction sectors produce over one-third of global final energy consumption, and nearly 40% of total direct and indirect CO₂ emissions¹². Existing buildings need renovation, and construction of new buildings must achieve higher energy efficiency and health standards through new materials, techniques and technologies.

We can also look for challenges and opportunities in responsible production and consumption. The dominant linear model of “take-make-waste” is ineffective in economic, environmental and climate terms.

Companies increasingly apply circular thinking and a “Cradle-to-Cradle” concept of Five Goods™ (good materials, economy, energy, lives and water)¹³ to build sustainability into the products and production processes. This aligns with consumer expectations of more transparent, ethical and sustainable goods and services – across a range of industries, notably fashion, plastics, food and the sharing economy.

Today, our world is only 8.6% circular, leaving a massive potential, and need, to increase the global operating models¹⁴. At the same time, a more circular economy could generate \$4.5 trillion in new economic output by 2030¹⁵.

Conserve biodiversity and ecological systems

Following a year of increased focus on climate change, culminating with the COP26 summit, we would flag biodiversity and ecological systems as other key systemic challenges.

In the 2021 World Economic Forum’s Global Risks Report, biodiversity loss and ecosystem collapse were named as one of the top five risks in terms of likelihood and impact in the coming 10 years¹⁶. According to the UN, human activity has significantly altered 75% of the Earth’s surface; there is a cumulative deterioration across 66% of the oceans; and over 85% of wetlands have been lost¹⁷.

Thus far, these primarily have been considerations for risk management, but opportunities for private capital are emerging. Most obviously, there are direct links and value associated with sustainable agriculture.

Agriculture and oceans

According to the UN’s Food and Agricultural Organisation, food production will have to increase by 70% by 2050 to keep up with expected population growth. Therefore, pioneering farmers and agri-food companies, whose innovative and scalable approaches reduce the negative impacts of food production on the environment and society, are expected to benefit from this trend. Similarly, agricultural products that have been harvested organically and/or sustainably should profit from increasing consumer demand.

At the same time, there is a rising tide for the opportunities related to the oceans. Goods and services from the “blue economy” amount to about \$2.5 trillion each year – meaning the ocean might be considered the seventh-largest economy in the world¹⁸.

¹⁰ Chapter 10 - Industry. In: Climate Change 2014: Mitigation of Climate Change. Contribution of WG3 to the AR5 of the IPCC, 2014, World Resources Institute, 19 November 2020 https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter10.pdf

¹¹ Climate action must progress far faster to achieve 1.5C goal, World Resources Institute, 19 November 2020 <https://www.wri.org/insights/climate-action-must-progress-far-faster-achieve-15-c-goal>

¹² Buildings: a source of enormous untapped efficiency potential, IEA, October 2021 <https://www.iea.org/topics/buildings>

¹³ The Five Goods™, William McDonough, October 2021 <https://mcdonough.com/the-five-goods/>

¹⁴ The circularity gap report 2021, Circle Economy, October 2021 <https://www.circularity-gap.world/2021>

¹⁵ The circular economy could unlock \$4.5 trillion of economic growth, finds new book by Accenture, Accenture, 28 September 2015 <https://newsroom.accenture.com/news/the-circular-economy-could-unlock-4-5-trillion-of-economic-growth-finds-new-book-by-accenture.html>

¹⁶ The Global Risks Report 2021, World Economic Forum, January 2021 <https://www.weforum.org/reports/the-global-risks-report-2021>

¹⁷ Nature’s Dangerous Decline ‘Unprecedented’; Species Extinction Rates ‘Accelerating’, UN, 6 May 2019 https://www.unep.org/news-and-stories/press-release/natures-dangerous-decline-unprecedented-species-extinction-rates?_cf_chl_managed_tk__=pmid_I9QCzOSS2BNHpAEKZwtCalerXNFBx.kq21ZH.BHnRAo-1635370140-0-gqNtZGzNA6WjcnBszQd9

¹⁸ Ocean Assets Valued at 24 Trillion, but Dwindling Fast, WWF, 22 April 2015 <https://www.worldwildlife.org/stories/ocean-assets-valued-at-24-trillion-but-dwindling-fast>

Moreover, new research suggests that every \$1 invested in sustainable ocean solutions, will yield a return of at least \$5¹⁹. Much of this growth will be driven by ocean-based policy interventions, as well as ocean-related industries such as energy generation, fishing/aquaculture, shipping, plastics and tourism.

Strong connection to climate change

In both of these cases, the connection to climate change is strong. Nearly a quarter of global emissions come from agriculture, forestry and other land uses²⁰. At the same time, land is a carbon sink, absorbing emissions through the natural cycles. Annually, from 2007 to 2016, this was equivalent to the annual greenhouse gas emissions of the United States²¹, or about 10% of total global emissions²².

Similarly, oceans have the potential to absorb around a third of global CO₂ emissions²³. They also absorb over 90% of excess heat generated, keeping the Earth cool.

Augmenting these natural processes, are emerging “nature-based” carbon capture and storage solutions that can help to sequester more carbon. New opportunities are emerging to protect or increase the capacity of these existing natural carbon sinks which, as carbon prices continue to be established, and increase, will be increasingly attractive.

Deploying capital to catalyse solutions

Uncertainty remains about the shape and nature of economic recovery for 2022. What remains certain is that as the global economy emerges from the pandemic, greenhouse gas emissions will rise again, and continue to increase. At the same time, climate change, driven by human activity, remains a certainty.

If we find a corollary from the pandemic, climate change is global, respects no borders and needs a united response to tackle it. Part of that response will be by private investors, financially astute and/or personally moved, looking to deploy their capital into solutions to this challenge.

With several themes and entry points, in 2022 investors can explore potential investment opportunities, and more importantly allocate, in this area, for the benefit of portfolio and planet alike.

¹⁹ A Sustainable Ocean Economy for 2050: Approximating its Benefits and Costs, World Resources Institute, 20 July 2020 <https://www.oceanpanel.org/Economicanalysis>

²⁰ Climate change and land, IPCC, 2019 <https://www.ipcc.ch/srccl/>

²¹ Climate change and land, IPCC, 2019 <https://www.ipcc.ch/srccl/>

²² Historical GHG emissions, Climate Watch, October 2021 https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&chartType=percentage&end_year=2018&start_year=1990

²³ As oceans absorb CO₂ at a faster rate, bigger challenges emerge, 19 March 2019, World Economic Forum <https://www.weforum.org/agenda/2019/03/oceans-absorb-co2-challenges-emerge/>



Alexander Joshi, London UK, Behavioural Finance Specialist

Staying on track whatever the weather

The outlook for the global economy is positive, but risks remain. Some, like COVID-19, matter more than most and can derail your financial plans. How can investors prepare for, and react to, risks as they materialise, so as to stay on course to reach their goals, whatever the weather?

The outlook for the global economy is positive, and we anticipate above-trend global growth of 4.5% in 2022 as the recovery phase plays out. The world is, however, emerging from a difficult period, and there are still likely to be challenges for investors to navigate.

There is rarely a perfect time to invest, and there will always be risks (upside as well as downside). Risks on the horizon should not, however, deter people from being invested. This article discusses behavioural considerations that may help investors stay on course to reach their goals, even if the journey becomes turbulent.

Start from your goals

Are you clear on your investment goals? Our experts have examined the macroeconomic outlook and asset classes in detail, but before acting on it, investors should first be clear on what it is they are trying to achieve.

With this in mind, investors have a lens through which to consume investment views, and can consider how to capitalise on opportunities, or mitigate risks that may jeopardise their goals.

Additionally, those that are clear about their goals may be better able to manage volatile periods by having a longer term perspective. Those chasing performance for performance's sake may be more susceptible to behavioural biases due to a more myopic approach¹.

Check your confirmation bias

It is good practice when consuming financial news to pay attention to, and actively seek out, views which are different from your own, so as to minimise the likelihood and impact of nasty surprises. Humans have a tendency to seek out or pay more attention to information which confirms their

prior beliefs – the confirmation bias – which can lead to biased decision-making.

A recent survey of 300 financial advisors by Cerulli Associates between May and June², on the biases they observe in investors, revealed that advisors' believed 50% of their clients are significantly affected by confirmation bias. This was second only to recency bias (58%), a related bias, of being overly influenced by recent events. Both figures were far higher than a year ago (25% and 35% respectively), indicating a marked increase in observed biases in investors navigating financial markets during the pandemic. In difficult markets the risk of biases in decision-making is elevated.

Challenge your thinking

An important aspect of robust decision-making is to challenge one's thinking. Particularly when forming an investment outlook, biased thinking may have repercussions in the form of short-term tactical positioning which drags on returns. In addition, biases can affect asset allocation, which may be more significant for an investor's return profile over the long term. This may, for example, be an overweighting to an asset class or sector due to a long held view. A view that might have been correct in the past, but is no longer the case, and to which an investor gives insufficient weight.

A good way to challenge your thinking is to consider what the impact would be if your views were wrong. Where the impact may be material, appropriate hedging may be advisable, as well as diversification, which we discuss later.

So what if some of these risks discussed in this outlook materialise? What should investors do if and when events occur that have possible implications on their portfolios?

¹ Striking a balance, Barclays Private Bank, July 2020 <https://privatebank.barclays.com/news-and-insights/2020/july/market-perspectives-july-2020/striking-a-balance/>

² BeFi Barometer 2021, Cerulli Associates, Survey conducted May-June 2021. <https://www.schwabassetmanagement.com/resource/addressing-surge-client-behavioral-biases>

Think about the impact on your individual portfolio

Investors should remember the primary risk to be concerned about is not achieving their goals. Look at whether events materially affect your ability to reach these goals, and if so how.

In *Solving the puzzle of the post-pandemic bond world* in this issue, we discussed the risk that inflation persists and central banks move more quickly in raising rates. If this were to materialise, it is likely to be worse for growth relative to value stocks, because cash flows of the former are further into the future. As such, when the cash flows are discounted at a higher rate, these companies become relatively less valuable.

But at a portfolio level, the impact is not so clear cut and may not mean that an investor holding growth companies would see the value of their portfolio drastically depressed. Rising inflation will affect different companies in very different ways. It will typically result in higher raw material, wage and debt servicing costs. Companies that can minimise costs, while passing them on to consumers, will do better than companies that do not. Thus companies with higher pricing power may be affected less, even if they fall under a style which inflation is typically bad for.

Avoid acting too quickly without consideration

Whilst a rotation from growth to value might hurt an investor in the short term, this may reverse. While favouring particular investments in response to an event, such as a rate rise may be beneficial in the short term, these may then fall out of favour.

On the other hand, a quality company with a strong fundamental business case and strong pricing power, may be expected to continue to grow and provide a good return for an investor over the long term, regardless of the macro environment. A bottom-up stock picker picks companies on the basis of the strength of those businesses, and not macro factors.

So a knee-jerk reaction to sell those companies in response to a rate hike may not be the best decision in the long term. In the short term it could temper possible underperformance, but when taking a broader view an investor may have sold very good businesses that are still expected to perform well in the long term – remember a business doesn't necessarily stop being a good business just because of higher interest rates.

The lesson here is that not all news has to be binary good or bad, and a portfolio move up or down based on the impact of said news. An investor's individual portfolio is not the market. A tried and tested way to minimise the impact of any one event on an investor's portfolio is to have a portfolio which is well diversified.

Diversification is the best protection

A diversified portfolio remains the best way to protect and grow your wealth across market conditions, due to imperfect correlations between assets, which can reduce risk and smooth returns.

Diversification involves owning a range of securities within each asset class, which is unlikely to respond to market developments in the same way. It can be used to hedge for specific risks; as we discuss in *How to diversify portfolios and hedge inflation risk: from commodities to bitcoin* in this publication, we believe that multi-asset class diversification across commodities, inflation-linked bonds, defensive equities and shorter duration bonds can provide a good inflation hedge.

When we consider the risks to a portfolio, we cannot discount unknown unknowns – risks that we don't know that we don't know. A pandemic, for example, is an event that most investors didn't consider as a risk factor.

Given the unexpected nature and consequences of such events, one way to reduce the possible impact is to hold a variety of asset classes (see asset class returns table on p29). On any given year, it is also difficult to predict the ranking of returns across asset classes, and so holding a range of assets may be a good approach. By diversifying, top-performing investments may help compensate for underperformers.

An emotional buffer

Diversification can also provide the benefit of an emotional buffer. A key insight from behavioural finance is that losses and the prospect of them can have an outsize (adverse) impact on our decision-making. In addition, our natural aversion to losses can induce us to make decisions to stem losses in the short term which may not be in our long-term interest.

An example of this is selling at the bottom of a downturn or cutting risk exposure, despite being a long-term investor and having sufficient liquidity to see it through. In periods of stress, investors' time horizons can feel shortened, possibly

increasing the perceived riskiness of investing. Indeed, loss aversion can lead to decisions which provide short-term comfort, but put at risk long-term investment success.

This makes volatile periods particularly challenging for investors, where the risk of biased decision-making is high.

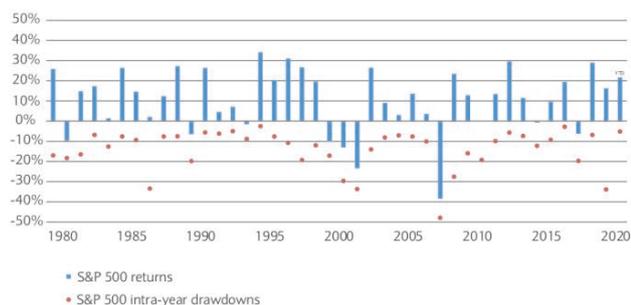
Particularly as volatility is the norm in investing

By offering a layer of protection against volatility, diversification can protect from the emotions that volatility in a portfolio can induce. The benefit is that while others may have their decision-making impaired during a market crisis, holding a diversified portfolio can create the conditions for you to think clearly. Having a clear head is important to make decisions effectively, and capitalise on opportunities that may arise while navigating additional risk events.

Volatility is a normal part of investing (see figure 1), therefore investors need a plan to ride these periods out instead of just reacting to them, so as to reap the benefits of staying invested.

Figure 1: Volatility is the norm

S&P 500 intra-year declines versus calendar year returns. Despite average intra-year falls of 14.2%, annual returns were positive in 31 of 41 years



Source: Bloomberg, Barclays Private Bank, October 2021

Active management is key too

While diversification offers important benefits, diversification in itself is not an investment approach. Just holding a variety of assets and doing nothing more may not maximise an investor's returns for the level of risk they are taking.

Active management of an investment portfolio, with a robust investment process designed to produce investor value over the long term, may be able to generate additional returns for the same or a lower level of risk. An active manager might be able to outperform a benchmark due to factors such as asset class allocation, security selection or a style bias.

As we have outlined, while rate normalisation may come earlier than previously projected, we expect a low-rate environment to persist for some time, with rates settling below neutral levels and to remain some way beneath their historical averages. In addition, lower returns than has been seen in recent years, for a given level of risk, are expected in 2022. These challenges mean that a passive approach to investing may see many clients' portfolios disappoint. As such, being active seems as important as ever.

Is now a good time to invest?

Given the investment opportunities and risks, and that volatility is the norm, investors will ask – is now a good time to invest in the financial markets?

While having a plan and strategies to deal with turbulence is helpful, we understand that investing and staying invested at a time where there are possible risks on the horizon, can be unsettling for some.

Volatility on the journey does not necessarily prevent you reaching the destination. As figure 1 shows, the S&P 500 has posted positive annual returns in 31 of the past 41 years, averaging 10.3%, despite average intra-year falls of 14.2%. This far exceeds the returns that an investor would make from holding cash. As we discussed in *Our five-year forecast and scenarios: strap up for a two-speed recovery article* in this publication, we expect the average real cash return of close to -1% over the next five years.

History shows us that getting and staying invested for the long term provides an investor with the foundation to protect and grow their wealth.

Julien Lafargue, London UK, Chief Market Strategist

Multi-asset portfolio allocation

Barclays Private Bank discusses asset allocation views within the context of a multi-asset class portfolio. Our views elsewhere in the publication are absolute and within the context of each asset class.

	-	=	+
Cash and short duration bonds			
Fixed income			
Developed market government bonds			
Investment grade bonds			
High yield bonds			
Emerging market bonds			
Equities			
Developed market equities			
Emerging market equities			
Other assets			
Alternative trading strategies			
Commodities			

"-" Denotes a cautious view

"=" Denotes a neutral view

"+" Denotes a positive view

Cash and short duration bonds

- Given the ongoing uncertainty and in order to manage portfolios' risks, we maintain a preference for higher quality and liquid opportunities.

Fixed income

- We see only limited opportunities in fixed income
- We maintain a small preference for developed market government bonds as a hedge against possible macroeconomic volatility

- In credit, we prefer the higher quality segment, although as spreads have recovered remarkably from their highs, our risk budget is allocated towards the equity space
- In high yield, selection is key, and our exposure is low given the tightness of spreads. We prefer high yield and emerging market (EM) hard currency debt over EM local currency debt, considering the risk facing their economies and currencies.

Equities

- We believe that equities remain relatively more appealing than bonds in the current environment
- Yet, we remain highly selective in our allocation
- In line with our long-term investment philosophy, our portfolios remain geared towards high quality, cash generative and conservatively capitalised businesses
- As a function of our bottom-up selection, we currently see more opportunities in developed market equities compared to their emerging peers.

Alternative trading strategies (ATS)

- We see limited opportunities in the ATS space as the cost/benefit trade-off can be challenging
- Our focus is on strategies offering diversification benefits thanks to their low-correlation to equity markets.

Commodities

- As a risk-mitigating asset, gold remains the only direct commodity exposure we hold in portfolios
- From a portfolio management perspective, we believe our risk budget is better spent outside of the asset class.

¹ Forex reserves surge \$16.663bn to record high of \$633.558bn, The Economic Times, 3 September 2021 <https://economictimes.indiatimes.com/markets/forex/forex-reserves-rise-to-633-56-billion-as-of-august-27-rbi/articleshow/85897617.cms?from=mdr>



2022 key dates

○ Central banks
 ○ Geopolitical meetings
 ○ International bodies

January	26th Fed meeting	17-21st Switzerland 2022 World Economic Annual Forum		
February	3rd ECB meeting, BOE meeting and inflation report			
March	10th ECB meeting	16th Fed meeting	17th BOE meeting	
April	10th France presidential elections first round	14th ECB meeting	20th France presidential elections second round, Spring meeting of IMF and World Bank	
May	4th Fed meeting	5th BOE meeting and inflation report		
June	9th ECB meeting	15th Fed meeting	16th BOE meeting	
July	21st ECB meeting	27th Fed meeting, Likely ending of Fed tapering		
August	4th BOE meeting and inflation report	Jackson Hole Economic Policy Symposium		
September	8th ECB meeting	15th BOE meeting	21st Fed meeting	
October	2nd Brazilian presidential elections	16th Annual meeting of IMF and World Bank	27th ECB meeting	8th 20th National Congress of the Chinese Communist Party
November	2nd Fed meeting	3rd BOE meeting and inflation report	7-18th UN climate change conference (COP27) in Sharm el Sheikh, Egypt	8th US Senate and House of Representatives midterms
December	14th Fed meeting	15th ECB meeting and BOE meeting	1-18th FIFA World Cup	

Investments can fall as well as rise in value. Your capital or the income generated from your investment may be at risk.

This communication:

- (i) Has been issued by the Investments division at Barclays Private Bank (**Barclays**) and is provided for information purposes only and is subject to change. It is indicative only and not binding. References to Barclays means any entity within the Barclays Group of companies, where “**Barclays Group**” means Barclays and its affiliates, subsidiaries and undertakings.
- (ii) Is not research nor a product of the Barclays Research department. Any views expressed in this communication may differ from those of the Barclays Research department. All opinions and estimates are given as of the date of this communication and are subject to change. Barclays is not obliged to inform recipients of this communication of any change to such opinions or estimates.
- (iii) Is general in nature and does not take into account any specific investment objectives, financial situation or particular needs of any particular person.
- (iv) Does not constitute an offer, an invitation or a recommendation to enter into any product or service and does not constitute investment advice, solicitation to buy or sell securities and/or a personal recommendation. Any entry into any product or service requires Barclays’ subsequent formal agreement which will be subject to internal approvals and execution of binding documents.
- (v) Is confidential and is for the benefit of the recipient. No part of it may be reproduced, distributed or transmitted without the prior written permission of Barclays.
- (vi) Has not been reviewed or approved by any regulatory authority.

Any past or simulated past performance including back-testing, modelling or scenario analysis, or future projections contained in this communication is no indication as to future performance. No representation is made as to the accuracy of the assumptions made in this communication, or completeness of, any modelling, scenario analysis or back-testing. The value of any investment may also fluctuate as a result of market changes.

Where information in this communication has been obtained from third party sources, we believe those sources to be reliable but we do not guarantee the information’s accuracy and you should note that it may be incomplete or condensed.

Neither Barclays nor any of its directors, officers, employees, representatives or agents, accepts any liability whatsoever for any direct, indirect or consequential losses (in contract, tort or otherwise) arising from the use of this communication or its contents or reliance on the information contained herein, except to the extent this would be prohibited by law or regulation. Law or regulation in certain countries may restrict the manner of distribution of this communication and the availability of the products and services, and persons who come into possession of this publication are required to inform themselves of and observe such restrictions.

You have sole responsibility for the management of your tax and legal affairs including making any applicable filings and payments and complying with any applicable laws and regulations. We have not and will not provide you with tax or legal advice and recommend that you obtain independent tax and legal advice tailored to your individual circumstances.

Barclays Bank PLC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (Financial Services Register No.122702) and is a member of the London Stock Exchange and NEX. Registered in England. Registered No. 1026167. Registered Office: 1 Churchill Place, London E14 5HP.

Barclays Bank Ireland PLC, trading as Barclays Private Bank, is regulated by the Central Bank of Ireland. Registered in Ireland. Registered Office: One Molesworth Street, Dublin 2, Ireland, D02 RF29. Registered Number: 396330. VAT Number: IE4524196D. Calls are recorded in line with our legal and regulatory obligations, and for quality and monitoring purposes.

Barclays offers private and overseas banking, credit and investment solutions to its clients through Barclays Bank PLC and its subsidiary companies. Barclays Bank PLC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (Financial Services Register No. 122702) and is a member of the London Stock Exchange and NEX. Registered in England. Registered No. 1026167. Registered Office: 1 Churchill Place, London E14 5HP. Barclays Bank PLC, Jersey Branch is regulated by the Jersey Financial Services Commission. Barclays Bank PLC, Jersey Branch is regulated by the Guernsey Financial Services Commission under the Protection of Investors (Bailiwick of Guernsey) Law 1987, as amended. Barclays Bank PLC, Jersey Branch has its principal business address in Jersey at 13 Library Place, St Helier, Jersey JE4 8NE, Channel Islands. Barclays Bank PLC, Isle of Man Branch is licensed by the Isle of Man Financial Services Authority. Barclays Bank PLC, Isle of Man Branch has its principal business address in the Isle of Man at Barclays House, Victoria Street, Douglas, Isle of Man, IM99 1AJ. Barclays Bank PLC, Guernsey Branch is licensed by the Guernsey Financial Services Commission under the Banking Supervision (Bailiwick of Guernsey) Law 1994, as amended, and the Protection of Investors (Bailiwick of Guernsey) Law 1987, as amended. Barclays Bank PLC, Guernsey Branch has its principal place of business at Le Marchant House, St Peter Port, Guernsey, GY1 3BE.

Barclays Bank PLC Monaco is licensed to operate its activities in Monaco and falls under the dual supervision of the Monegasque regulator ‘Commission de Contrôle des Activités Financières’ (with regards to investment services) and the French regulator ‘Autorité de Contrôle Prudentiel et de Résolution’ (in respect of banking services). The registered office of Barclays Bank PLC Monaco is located at 31 avenue de La Costa, MC98000 Monaco – Tel. +377 93 153535. Barclays Bank PLC Monaco is also registered with the Monaco Trade and Industry Registry under No. 68 S 01191. VAT N° FR40 00002674 9.

Barclays Bank PLC Monaco is a branch of Barclays Bank PLC which is registered in England under No. 1026167, authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. The registered offices of Barclays Bank PLC are located at 1 Churchill Place, London E14 5HP.

Barclays Private Asset Management (Monaco) SAM – 31 Avenue de la Costa, B.P. 4 – MC 98001 Monaco Cedex is registered in Monaco. Tel. +377 93 10 51 51. S.S.E.E. N° 671C06692 –R.C.I. N° 94 S 03039 – Registered VAT No° FR 00 00003617 7.

Barclays Bank (Suisse) SA is a Bank registered in Switzerland and regulated and supervised by FINMA. Registered No. CH-660.0.118.986-6. Registered Office: Chemin de Grange-Canal 18-20, P.O. Box 3941, 1211 Geneva 3, Switzerland. Registered branch: Beethovenstrasse 19, P.O. Box, 8027 Zurich. Registered VAT No. CHE-106.002.386. Barclays Bank (Suisse) SA is a subsidiary of Barclays Bank PLC registered in England, authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. It is registered under No. 1026167 and its registered office is 1 Churchill Place, London E14 5HP.

Barclays Bank PLC (DIFC Branch) (Registered No. 0060) is regulated by the Dubai Financial Services Authority. Barclays Bank PLC (DIFC Branch) may only undertake the financial services activities that fall within the scope of its existing DFSA licence. Principal place of business: Private Bank, Dubai International Financial Centre, The Gate Village Building No. 10, Level 6, PO Box 506674, Dubai, UAE. This information has been distributed by Barclays Bank PLC (DIFC Branch). Certain products and services are only available to Professional Clients as defined by the DFSA.

Barclays Bank PLC. Registered in England. Registered No: 1026167. Registered Office: 1 Churchill Place, London, E14 5HP. Registered Office in India: 801/808 Ceejay House, Shivsagar Estate, Dr Annie Besant Road, Worli Mumbai 400 018. Barclays Bank PLC is a member of Banking Codes and Standards Board of India.