

SHOOTING THE RAPIDS

Please note that this document may contain technical language.
For this reason, it is not recommended to readers
without professional investment experience.



THE INVESTMENT OUTLOOK FOR 2022



BNP PARIBAS
ASSET MANAGEMENT

The sustainable
investor for a
changing world

TABLE OF CONTENTS

Letter to investors	3
Executive summary	4

MACRO & MARKETS

Shooting the rapids	6
Equities	8
Fixed income	11

SUSTAINABILITY

Does meeting the sustainable development goals require new macroeconomics?	16
--	----

INVESTMENT THEMES

Environmental thematic investing set for strong growth in 2022	20
Distancing sparks even brighter future for disruptive tech	22
China outlook - Some unconventional thoughts	26
Financing economic growth with private debt	28

THE AUTHORS



ROBERT GAMBI

Global head of investments



DANIEL MORRIS

Chief market strategist



ALEXANDER BERNHARDT

Global head of sustainability research



ULRIK FUGMANN

Co-head environmental strategies group



EDWARD LEES

Co-head environmental strategies group



VINCENT NICHOLS

Investment specialist



PAMELA HEGARTY

Portfolio manager, Disruptive Technology



CHI LO

Senior market strategist APAC

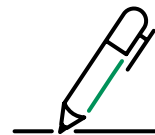


DAVID BOUCHOCHA

Head of private debt and real assets

**ROBERT GAMBI**

Global head of investments



Letter to investors

2021 had more than its fair share of surprises.

Vaccines were supposed to tame the virus, allowing the global economy to safely unlock, but the emergence of new, more transmissible strains of Covid-19 has delayed that process.

Inflation was supposed to stay low, weighed down by spare capacity in the economy, yet it has surprised to the upside due to a global mismatch between demand and supply propelling prices higher, and then by a spike in wholesale energy prices.

And as always, decisions by politicians and policymakers proved newsworthy, with the US Federal Reserve's June press conference and the rise of the 'common prosperity' regulatory agenda in China standing out as key developments that have reset investor expectations.

Markets must dance to the tune of macroeconomic developments on this scale, whether it be the ebb and flow of Covid-19, the surge in inflation or significant policy surprises.

The year opened with the deflation trade in full swing. Bond yields backed up. Cyclical and value stocks outperformed. However, the deflation trade ran out of steam and then reversed, paradoxically just as inflation started picking up.

Indeed, long-term real interest rates are still near the rock bottom levels where we started the year, and with interest rates this low, it is unsurprising that equity multiples and valuations are high.

Beyond these cyclical developments, markets continue to be driven by the evolution of structural themes that capture significant, persistent and widespread changes in activity and behaviour across society.

Arguably, the energy transition is the most important of these – certainly from the perspective of the planet – and here, too, there was a surprise. The year opened with fresh promise of determined policy action on climate change, yet the valuation of green stocks took a tumble.

2022 will no doubt bring surprises, too.

You can probably count on an increased focus on the climate crisis and hopefully, the virus will finally disappear in the rear-view mirror. However, there remains fundamental uncertainty about the path of the economy, whether it be the evolution of the cycle, the stance of policymakers or those secular trends. Moreover, in potentially illiquid markets, any macroeconomic surprises can result in large swings in valuations.

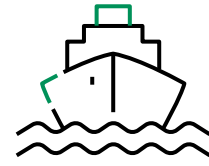
Of course, uncertainty represents an opportunity for our industry. Markets are efficient enough to price in certain outcomes. It is uncertainty that brings scope for active managers to add value for their clients. However, active managers can only consistently deliver healthy returns through differentiated research that supports high-conviction positions.

In 2021, we consistently invested resources to improve our capacity to deliver returns by enhancing our culture and process for developing, stress-testing and ultimately translating investment ideas into meaningful positions in portfolios.

We plan to do the same in 2022. You will not be surprised to hear that sustainability is at the very core of that process; for us, that means actively engaging with companies to deliver real change, as well as actively investing in securities.

We hope that you will be our partner on that journey of financing the transition to net zero.

Executive summary



In our 2022 Investment Outlook, we seek to help investors to navigate the rapids as the global economy stabilises during the next phases of the economic recovery. We also consider the possible broader consequences for macroeconomic policy as the world tackles the social and economic challenges laid bare by the pandemic.

A SUSTAINABLE RECOVERY

We devote a significant section of our outlook to the opportunities we believe the green economic transformation can offer investors.

The current crisis is a reminder that we as investors must align investing with the realisation of sustainable long-term growth. Investing for the long run will be crucial, because the typical 3-5 year investment cycle does not match the lifespan of financing the shift to green hydrogen or the innovation required to achieve e-mobility, restore natural capital and build green infrastructure.

INVESTMENT THEMES FOR THE LONG RUN

Our investment themes for 2022 have both a sustainable angle – energy transition and environmental sustainability – and a focus on long-running trends including healthcare innovation and disruption via new technology.

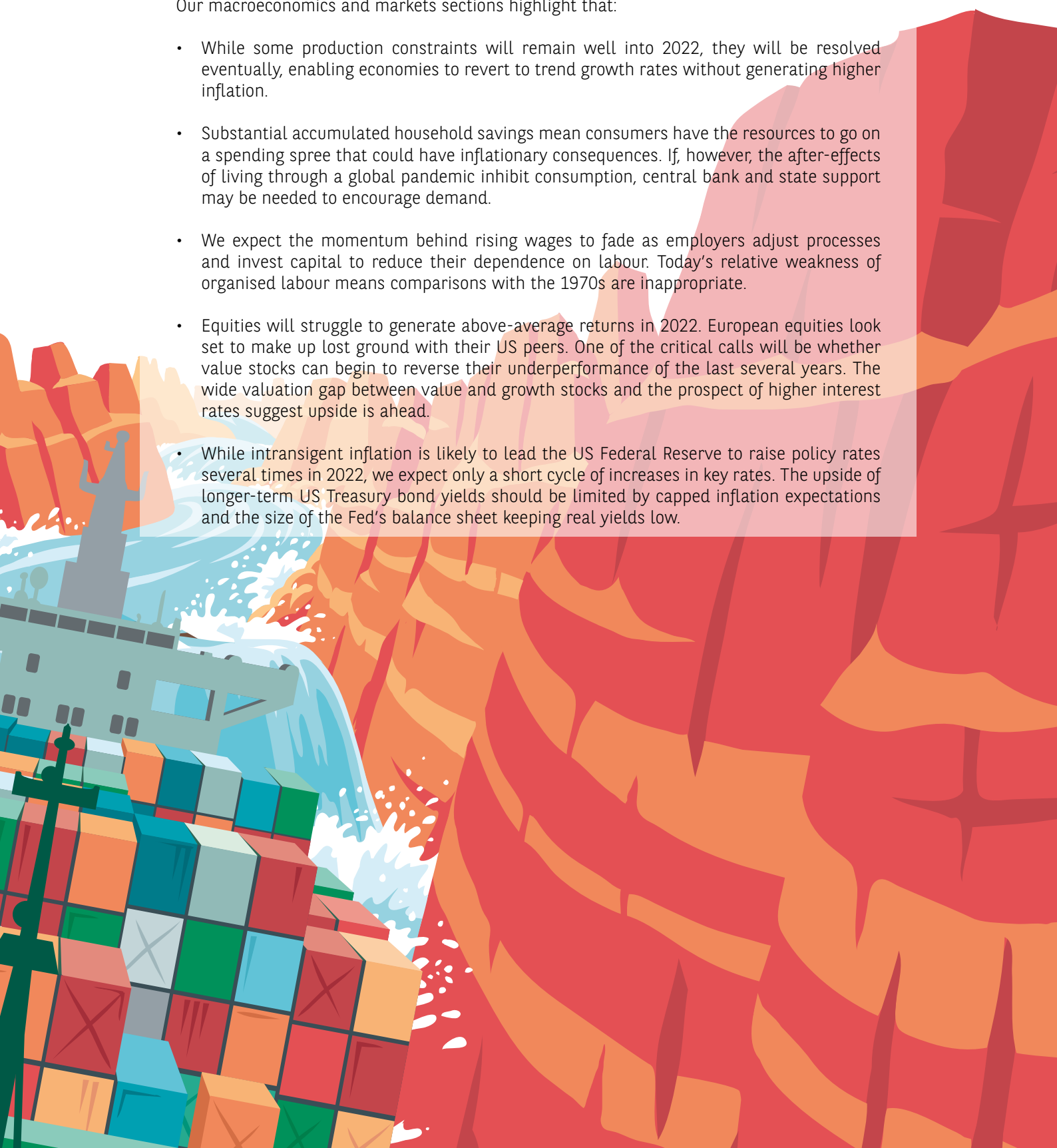
Our regional spotlight focuses on China, the world's fastest growing major economy, home to many innovative companies and a market that increasingly warrants a standalone allocation within multi-asset portfolios.



MACROECONOMICS AND MARKETS

Our macroeconomics and markets sections highlight that:

- While some production constraints will remain well into 2022, they will be resolved eventually, enabling economies to revert to trend growth rates without generating higher inflation.
- Substantial accumulated household savings mean consumers have the resources to go on a spending spree that could have inflationary consequences. If, however, the after-effects of living through a global pandemic inhibit consumption, central bank and state support may be needed to encourage demand.
- We expect the momentum behind rising wages to fade as employers adjust processes and invest capital to reduce their dependence on labour. Today's relative weakness of organised labour means comparisons with the 1970s are inappropriate.
- Equities will struggle to generate above-average returns in 2022. European equities look set to make up lost ground with their US peers. One of the critical calls will be whether value stocks can begin to reverse their underperformance of the last several years. The wide valuation gap between value and growth stocks and the prospect of higher interest rates suggest upside is ahead.
- While intransigent inflation is likely to lead the US Federal Reserve to raise policy rates several times in 2022, we expect only a short cycle of increases in key rates. The upside of longer-term US Treasury bond yields should be limited by capped inflation expectations and the size of the Fed's balance sheet keeping real yields low.



MACRO & MARKETS



DANIEL MORRIS
Chief market strategist

Shooting the rapids



Restarting a stalled global economy has proved an awkward exercise. The most severe (and abrupt) recession since the 1920s and ongoing Covid restrictions have crimped supply, while the enormous fiscal and monetary stimulus has boosted demand. The global economy is now struggling to squeeze robust demand through a narrow supply channel. The restoration of supply chains, reallocation of labour, and rebalancing of supply and demand: These will be the critical factors that determine both economic growth in 2022 and the strength and persistence of inflation.

The support provided by governments and central banks since the outbreak of the pandemic has ensured that the world does not suffer from a lack of demand. Consumer and business confidence is high, households are spending, businesses are investing. The problems faced by the world economy stem from the inability to meet that demand, either because of a lack of components or workers, or because products cannot be delivered. Some of these constraints on production will last longer than others (notably the shortage of semiconductors), but they will resolve themselves eventually, enabling economies to revert to trend growth rates without generating higher inflation.

For most major economies those growth rates next year will be above average (between 4% and 6% in the US and Europe), though the rate will decelerate over the course of the year as the boost from reopening fades and economies finally make up the lost ground from lockdowns.

The impact of 'excessive' demand on inflation will depend partly on its composition

Composition of demand

The impact on inflation of 'excessive' demand will depend partly on its composition. After the initial lockdowns in 2020, goods consumption increased sharply as households splashed out on new TVs or home office equipment while many service-related activities were prohibited. These acquisitions were partly financed by significant government income support, which was in fact so large that even as expenditure rose, accumulated household savings grew to almost double the level before lockdowns.

Most households have for now purchased as many new televisions or laptops as they need, so we anticipate that goods demand will probably moderate in the months ahead. Services consumption, however, should pick up the slack, particularly as in many areas spending is still well below pre-pandemic levels (e.g., live entertainment and spectator sports).

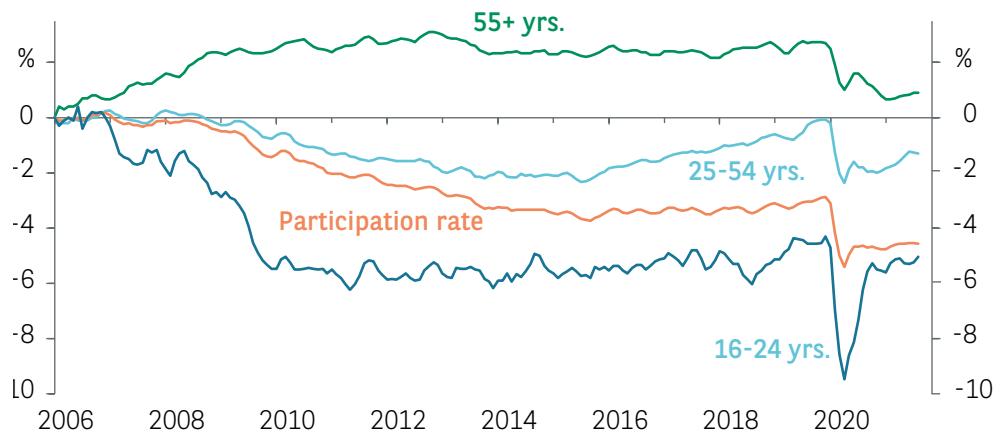
Labour market constraints

While we anticipate that supply chain and production constraints will fade eventually, labour markets may well not return to where they were before the pandemic. A smaller labour force, all else being equal, implies less output and perhaps more wage pressure. While businesses will eventually substitute capital for labour, and productivity should improve, this will not happen immediately.

Labour markets may well not return to where they were before the pandemic

The labour market recovery in Europe should nonetheless happen more quickly and more smoothly than in the US thanks to the greater use of furlough programmes. The American way of firing employees when a downturn begins means that it takes longer for the labour market to recover as employees do not simply return to their old job but have to interview for a new one. In the long run this may be better for economic growth, however, as the 'new' configuration of the labour market may better fit the 'new' economy.

Many market observers have been disappointed by the slow recovery of the US participation rate, which has resulted in too little labour supply relative to the number of jobs available. While the aggregate index has indeed changed little over the last year, there has been more variation depending on the age segment. The participation rate among prime-age workers (24-54 years) had in fact been rising fairly quickly, though it has weakened recently. Moreover, it remains unclear whether the rate will return to the pre-pandemic level. It was only in the last few months prior to the pandemic that the prime-age participation rate had fully recovered from the 2008/9 Global Financial Crisis (see Exhibit 1).

Exhibit 1: Change in participation rate relative to pre-GFC level

Data as at 23 November 2021. Sources: BLS, BNP Paribas Asset Management.

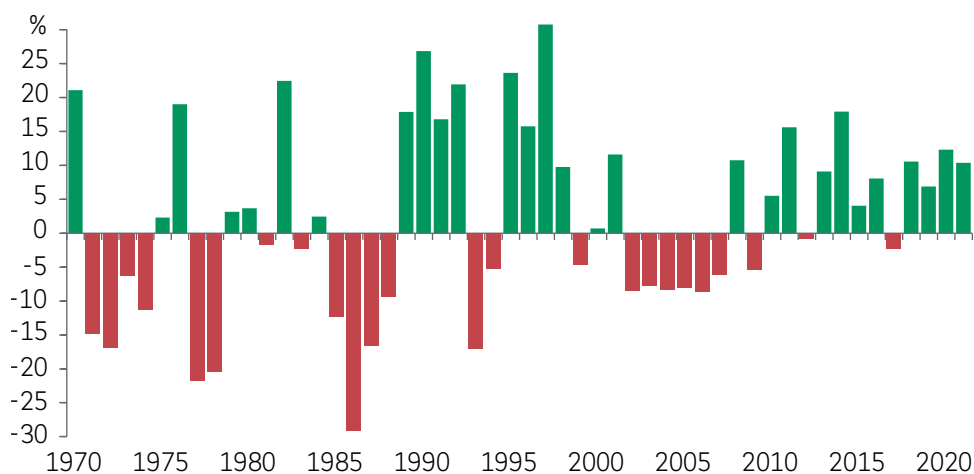
The level for younger workers has returned to the average of the decade prior to the pandemic. It had fallen sharply post-GFC and this rate may simply be the new normal. The numerous anecdotal reports of lack of staff for restaurants, for example, suggests patrons may simply have to be more patient in the future.

These young workers only represent a small portion of the entire labour force, however (12%). The more significant, and potentially permanent shift, has taken place among older workers. The high participation rate prior to the pandemic was actually the anomaly. Following the Global Financial Crisis, shrunken pension pots forced many older workers to seek employment. Twenty years after the equity market low, retirement assets are now much larger thanks to solid growth in asset prices. Moreover, worries about contracting Covid only increase the incentive to opt for retirement rather than work. This suggests that what constitutes full employment now is not the same as it was prior to the pandemic.

| The high participation rate prior to the pandemic
was actually the anomaly |

EQUITIES

This year (2021) is likely to be the fourth consecutive year of US equity outperformance relative to the rest of the world. If history over the last 50 years is any guide, 2022 could see lagging returns as previous US winning streaks have never exceeded four years (see Exhibit 2).

Exhibit 2: Relative performance of US equities vs. MSCI World ex-US

Data as at 23 November 2021. Note: Total return in US dollars. Sources: FactSet, BEA, BNP Paribas Asset Management.

Patterns aside, there are other reasons to foresee US equity returns falling behind other parts of the world next year. As the US opened up earlier than most of the rest of the world, much of the recovery from lockdowns has taken place and GDP growth has already surpassed pre-pandemic levels. As reopening progresses in Europe and spreads through emerging markets, economic momentum should follow.

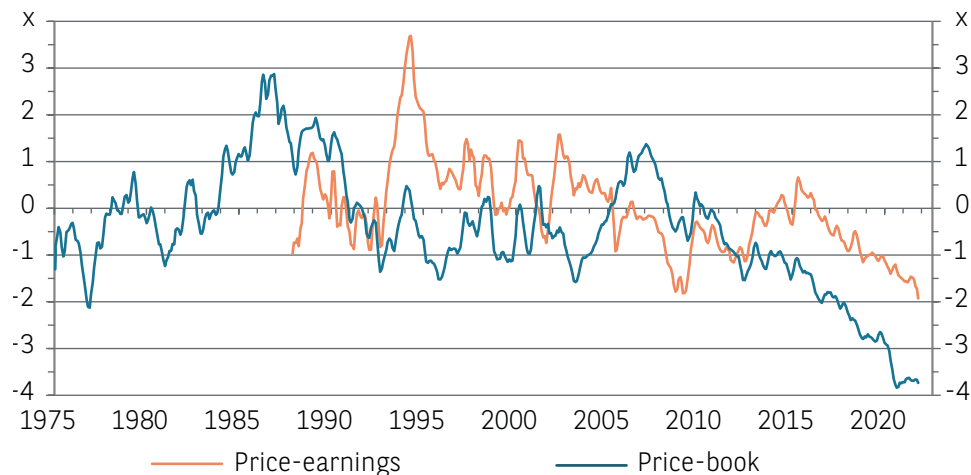
There are other reasons to foresee US equity returns falling behind other parts of the world in 2022

After massive government fiscal support for households and businesses through the pandemic, the fiscal impulse in both the US and the eurozone will be negative in 2022, though in Europe governments will continue to distribute the Next Generation EU funds. Monetary policy will tighten more in the US than in the eurozone, partly because inflationary pressures are higher as a result of the fiscal stimulus. To the degree that higher inflation crimps demand, the US may see household consumption rise at a slower rate than in Europe (though higher gas prices will also be a drag).

Valuations

In absolute terms, US equity valuations are high, but in our view, they do not pose a threat to market returns. Multiples have been boosted by central bank quantitative easing (QE) purchases and as long as those bonds remain on bank balance sheets, and yields remain historically low, we believe multiples will be supported. On a relative basis, however, valuations for European equities versus US equities have reached historic lows (see Exhibit 3). This discount is not merely because multiples for mega-cap US technology stocks are high; most European sectors are trading at a discount to their US counterpart.

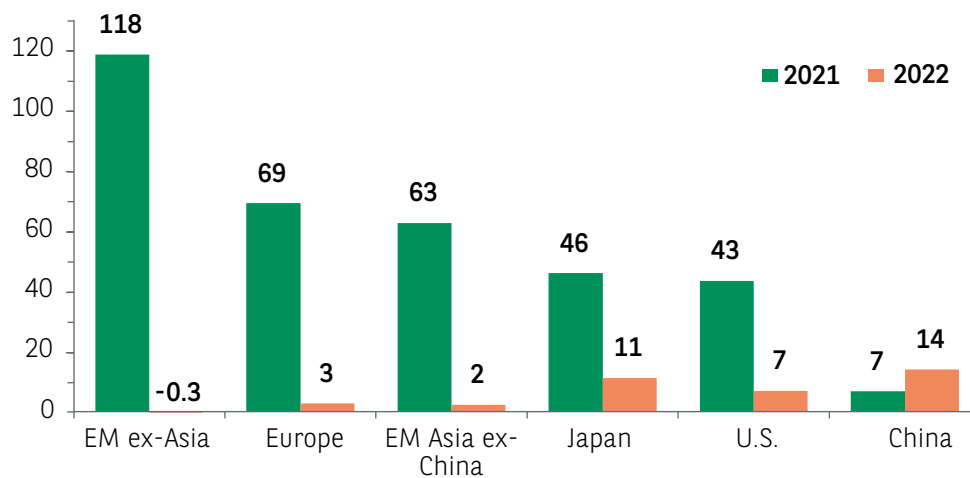
Exhibit 3: Relative multiples, European vs. US equities



Data as at 23 November 2021. Sources: FactSet, MSCI, BNP Paribas Asset Management.

The rising premium awarded to US equities is not obviously warranted given that European equity market earnings growth and performance have kept pace with the US in 2021 and profit expectations for 2022 are similar, and equally modest (see Exhibit 4).

Exhibit 4: Year-on-year earnings growth (%)



Data as at 23 November 2021. Note: local currency terms for single country indices, USD for EM indices, EUR for Europe. Sources: FactSet, BNP Paribas Asset Management.

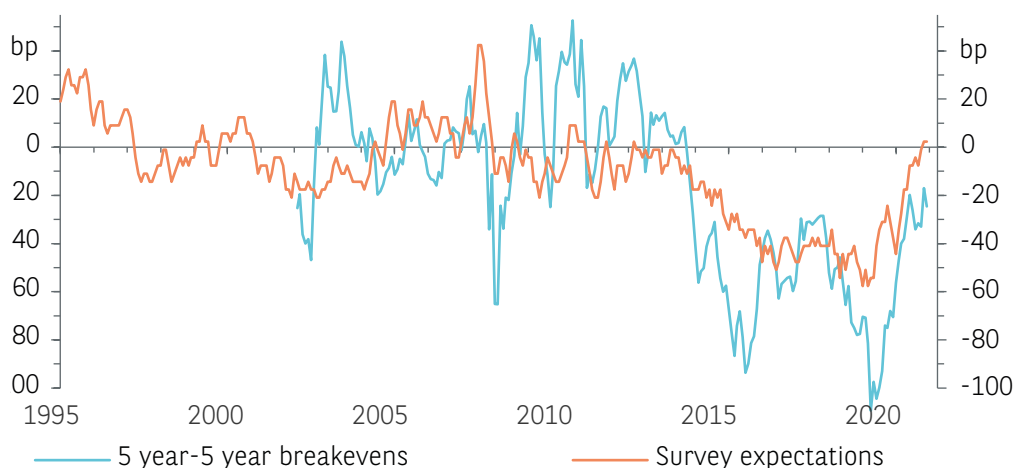
Notably, earnings are forecast to hardly increase in 2021 for the companies making up the MSCI China index, showing that the underperformance of the market in 2021 was not without reason. Other emerging markets, particularly commodity-exporting countries outside Asia and semiconductor manufacturers in Asia, have produced much better growth rates. The high figures inevitably raise the bar for 2022, though, which suggests that above-average returns for equities are less likely.

FIXED INCOME

Inflation

We believe that significant inflationary pressures will persist into 2023, and though they will ultimately be 'transitory', they will be strong enough and persistent enough to force the US Federal Reserve (Fed) to tighten sooner than it has projected. Markets and surveys also reflect the view that the near-term pressures will ultimately fade. Even as near-term inflation expectations have risen, estimates further out are either at the same level or below pre-Global Financial Crisis (GFC) levels (see Exhibit 5).

Exhibit 5: Inflation expectations relative to pre-GFC average (1995-2006)

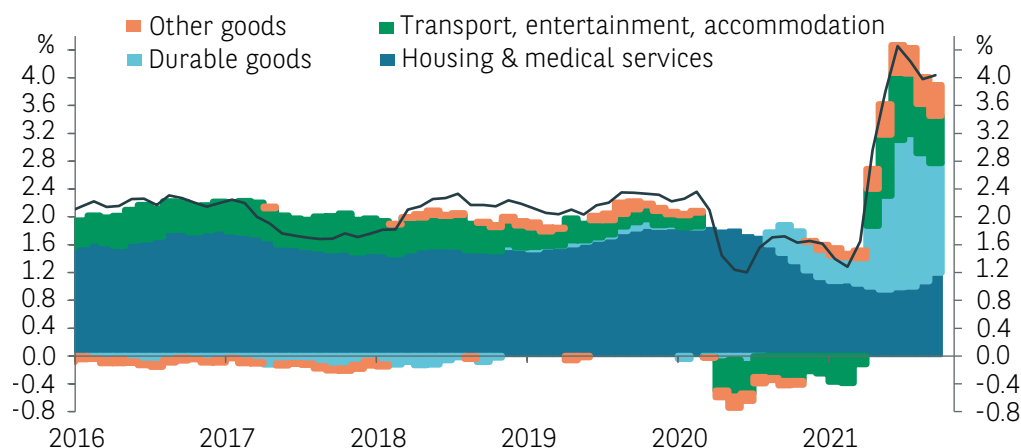


Data as at 23 November 2021. Sources: Bloomberg, University of Michigan, BNP Paribas Asset Management.

These contained (or 'well-anchored') longer-term inflation expectations reflect one of two things: either the 'transitory' inflation narrative, or a belief in the credibility of the major central banks. If inflation looks to be spreading and becoming more entrenched than currently forecast, the belief is that central banks will react to it (albeit belatedly) to bring inflation back down to target. The key concern for investors then would not be medium-term inflation per se, which we believe will revert to target, but the path for policy rates between now and then.

**If inflation looks to be spreading,
central banks will react**

We anticipate that, with supply chain problems persisting, US core personal consumption expenditures (PCE) inflation could top 4.5% in 2022, with durable goods (and in particular used car prices) making up a significant share of the gain (see Exhibit 6). What goes up, however, should come down. Used car prices have risen by 50% since December 2019, but once automobile production recovers it seems likely that prices will revert to pre-pandemic levels, making for disinflationary contributions to the year-on-year index changes.

Exhibit 6: Contribution to US core PCE

Data as at 23 November 2021. Sources: BEA, BNP Paribas Asset Management.

Housing prices, which have a particularly large weight in the US Consumer Price Index (CPI), could lead to more sustainably high inflation as increases in shelter costs tend to be more persistent. There are two mitigating factors, however. One of the more important consequences of the pandemic is the move of many white-collar professionals out of expensive cities to lower cost, higher quality-of-life alternative locations. This has dampened house price appreciation in larger cities and boosted them in smaller ones. Indeed, since December 2019 (according to the FHFA House Price Index), prices have fallen by 3% in San Francisco and risen only modestly in New York, while they have jumped by more than 26% in Austin, Texas and 36% in Coeur d'Alene, Idaho.

With a permanent shift towards working from home, there is likely to be a material shift in demand towards housing. The near-term pressures on prices in these towns will certainly persist, exacerbated by the lack of workers. The new hot spots have the advantage of comparatively low population densities and more space, however. Home building will ultimately increase supply in a way that is not possible in major metropolitan cities and price appreciation should moderate, though sustained demand would pose upside risks for core inflation.

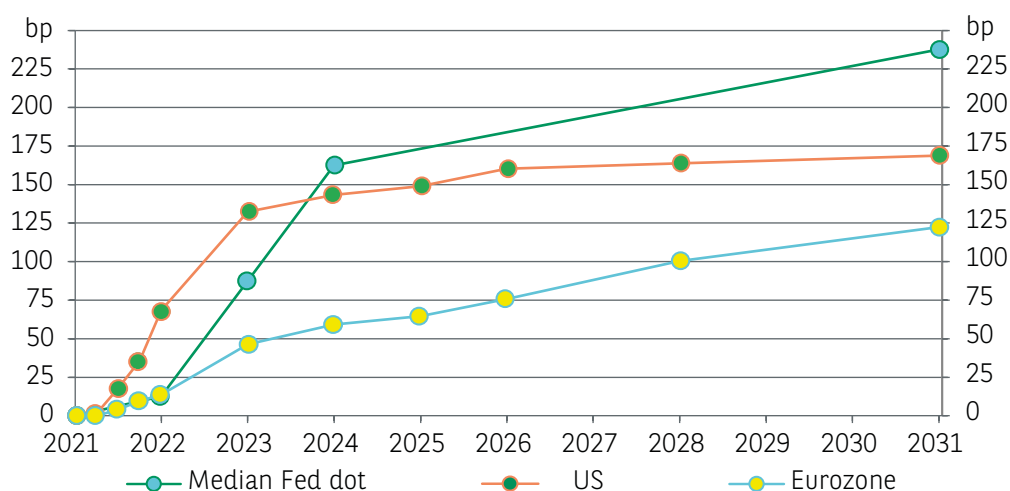
| There is likely to be a material shift
in demand towards housing |

Policy rates

So much of what has happened in the last 15 years has been unprecedented, from the Global Financial Crisis and quantitative easing, to pandemics and lockdowns. Uncertainty about how quickly and smoothly the global economy reaches the next 'new normal' is reflected in interest-rate volatility and divergent policy prescriptions. One example is the dispersion of the FOMC's (Federal Open Market Committee) own projections for the fed funds rate in 2024, which is particularly wide, ranging from 0.6% to 2.6%.

Markets expect the Fed both to tighten rates more quickly (twice in 2022) than the central bank itself projects as inflation persists for longer, and at a higher rate than the Fed will be willing to tolerate. In the eurozone, markets do not foresee two hikes before 2023 (see Exhibit 7). Aside from natural gas prices, there is less inflationary pressure in the eurozone as fiscal stimulus has been smaller and the recovery consequently less strong. The primary uncertainty is how the ECB (European Central Bank) manages the wind-down of PEPP (Pandemic Emergency Purchase Programme) and the strengthening of the APP (Asset Purchase Programme).

Exhibit 7: Policy rate forecasts - Difference from current rate (fed funds for US, deposit rate for ECB)



Data as at 23 November 2021. Sources: Bloomberg, BNP Paribas Asset Management.

We believe market expectations will be fulfilled and that the Fed will be forced to moderate its transitory inflation narrative. The US labour market looks set to reach full employment sooner than expected thanks to participation rates remaining below pre-pandemic levels, and wage pressures will rise as a result. The increase in government bond yields will be more notable out to five years than later, as near-term policy rate expectations rise more than the terminal rate. The increase in longer-term Treasury yields will be limited by capped inflation expectations and the size of the Fed's balance sheet keeping real yields low.

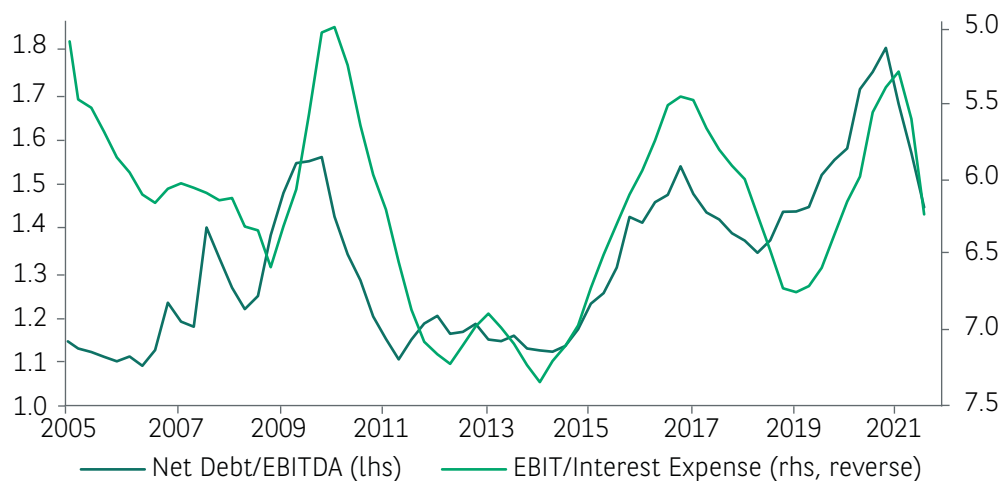
The search for yield continues

Corporate credit

Even as coronavirus outbreaks occasionally brake growth, the global economic recovery is continuing and the macroeconomic outlook is positive, in our view. Earnings growth rates will inevitably decelerate in 2022, and interest rates will rise, but we believe most companies will be able to manage their scheduled interest payments.

Thanks to central bank support during lockdowns, companies were able to raise significant liquidity to tide themselves over the period of collapsed demand. While this lifeline was critical to the survival of many companies at the time, it raised worries about their ability to carry the additional burden once financial conditions normalised. With the strong rebound in corporate earnings, these fears have so far proved unfounded. Net debt to EBITDA ratios have reverted to pre-pandemic levels, as has the ratio of EBIT to interest expense (see Exhibit 8).

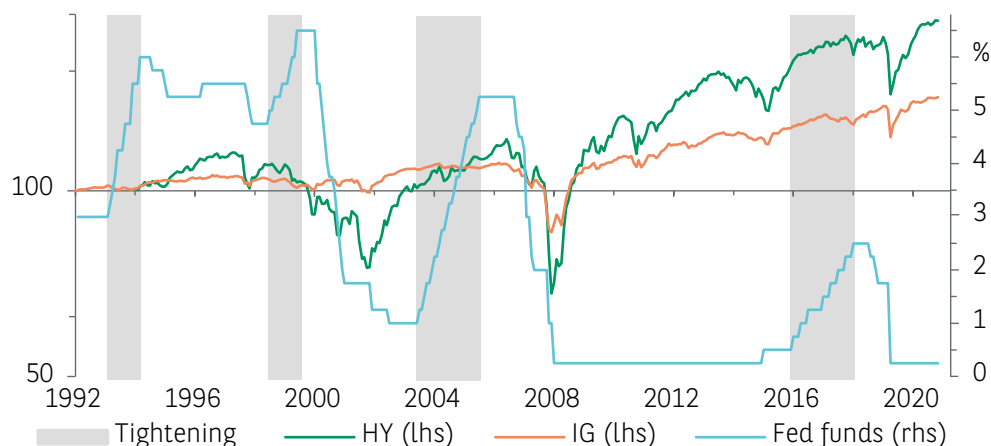
Exhibit 8: Corporate credit metrics (US and Europe average)



Data as at 23 November 2021. Sources: FactSet, BNP Paribas Asset Management.

Investment-grade and high-yield credit typically outperform government bonds during a hiking cycle, particularly at the beginning before policy rate increases are significant enough to slow economic growth (see Exhibit 9). The challenge for investors currently is that low spreads offer little potential for above-average returns. We would anticipate taking advantage of any future sell-offs to increase our exposure.

Exhibit 9: US corporate credit relative performance and fed funds

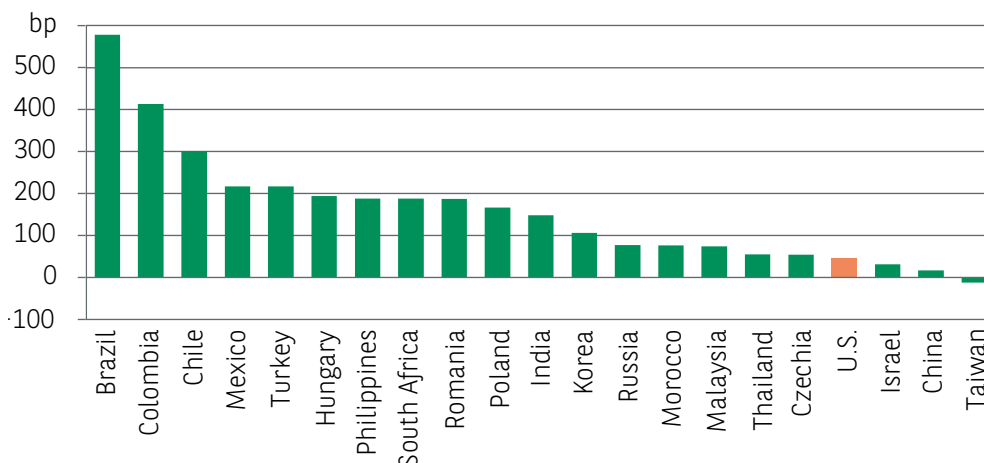


Data as at 23 November 2021. Sources: Bloomberg, BNP Paribas Asset Management.

Emerging market debt

There has been rising divergence in growth and inflation across emerging market (EM) countries. Some — like India, Mexico and the Philippines — have experienced economic contraction and high inflation, while export-oriented economies — like South Korea, Taiwan and Hong Kong — have achieved higher growth and have thus far kept a lid on inflation. The upward pressure on both consumer and producer prices has already forced EM central banks to hike rates. Policy rates are expected to be higher across the board in 2022 (see Exhibit 10).

Exhibit 10: Change in market-implied policy rates in one year's time



Data as at 23 November 2021. Sources: Bloomberg, BNP Paribas Asset Management.

While this is a headwind for EM rates, we believe there are selective opportunities at the long end of certain high-yielding markets. Emerging market bonds still offer more value versus their US peers given their current valuations. While US IG and HY bonds continue to trade at a narrow spread (1% to 2%-tile) relative to their historical range, there is more room for spreads to compress further for EM IG and HY bonds.

Emerging market high-yield bonds look the most attractive from a valuation perspective. Asia high yield in particular has become appealing. While defaults are likely to rise in China from the current low base, spread widening has permeated the entire region, making it appealing on a relative value basis compared to other EM regions and global HY.

The recent sell-off in emerging market currencies has left many starting to look attractive again; on a REER (real, effective exchange rate) basis, EM FX is cheaper now than after the 'Taper Tantrum' in 2013. Latin America and other EM high yielders, as well as oil currencies, still look undervalued. Valuations have also improved for many Asian currencies.

We expect hard currency EM debt yields to rise next year as the recovery momentum swings towards emerging markets and fears over the Delta Covid variant recede.

Developments in China have become more complex. This requires careful navigation given the spate of regulatory changes and news on parts of its economy (e.g., real estate). We expect the government will remain supportive of the economy, and that the People's Bank of China will retain a more dovish policy in the near future.

SUSTAINABILITY



ALEXANDER BERNHARDT

Global head of sustainability research

Does meeting the sustainable development goals require new macroeconomics?



In 2015, world leaders developed 17 Sustainable Development Goals as part of the 2030 Agenda for Sustainable Development. The SDGs set forth a blueprint for fostering a healthy planet and an equitable society – both critical for a healthy economy.

Yet, while accomplishing the SDGs will benefit the economy, we believe insufficient thinking (and action) has been invested into exploring how macroeconomic policy can support their achievement.

Achieving the SDGs and the Paris Agreement will require trillions of dollars in expenditure over the coming decade. Mobilising this capital will require a concerted effort by the public and private sectors and yet, so far, several traditional macroeconomic preconceptions are inhibiting the flow, in particular of public capital.

Arguably, the current 'perfect storm' of crises – Covid, climate change, biodiversity loss and social inequality – creates a similar opportunity for revolutionary thinking. Here, we explore these themes and consider an outlook for how macroeconomic policy may evolve in the future.

In particular, we explore two themes currently being debated in government halls and central bank boardrooms that have the potential to influence sustainable development:

1. Government often manage budgets, similarly to households, with the aim of 'balancing the books'. However, the notion that reserve currency governments with central bank funding cannot default is challenging this view.
2. Central banks are often considered 'independent' players focused on their specific mandates, typically price stability and full employment. This notion is being challenged by the concept of 'functional finance', which argues that government fiscal and monetary policy should be managed with a view towards its impact on the real economy.¹

We explore each of these issues in the following sections.

**MMT reasoning is undeniably sound – if you can create
your own money, you can always pay your bills**

DEBT, DEFICITS AND INFLATION

Modern Monetary Theory (MMT) has garnered headlines in recent months for its claim that government debt levels and deficit spending do not matter as measures in and of themselves since governments with access to a printing press cannot default on their obligations. Instead, MMT posits that the only real governor of public expenditure should be inflation.

This is generally perceived as a controversial position, for two reasons:

- Firstly, many economists and politicians believe government balance sheets should be managed as a household's as evidenced by the common refrain from policymakers related to expensive legislative proposals: "How are we going to pay for that?"
- Secondly, concerns abound that large fiscal expenditures, which might be rationalised by MMT policies, would generate uncontrollable inflation.

To take these concerns in turn, for reserve currency countries such as the US, there are few credible arguments that speak to the absolute importance of federal debt or deficits outside of their potential deflationary or inflationary impact. On the contrary, the MMT reasoning here is undeniably sound – if you can create your own money, you can always pay your bills. This is true even if other policy choices may be preferable in extremis.²

¹ [Functional Finance Definition \(investopedia.com\)](https://www.investopedia.com/terms/f/functional-finance-definition.asp). Note in his original conception of functional finance, Abba Lerner was primarily concerned with using fiscal and monetary policy to manage down unemployment and maintain price stability. The Modern Monetary Theory (MMT) movement has broadened this aim to 'advancing public purpose': [EconStor: Modern Monetary Theory and the public purpose](https://www.econstor.org/record/modern-monetary-theory-and-the-public-purpose).

² The operative word here is choice. A government can choose to default, e.g. to drive home a political point or to avoid some other less preferable outcome. However, it does not need to do so if it can mint its own currency.

Governments have more capacity to spend to achieve the SDGs and the 'Paris' goals

As to inflation, all economists agree it is important to keep it in check since the consequences of runaway inflation³ can be dire. However, the economics profession lacks a 'unified theory' of inflation, which makes resolving this concern difficult. The mainstream argument is that deficit spending of the sort encouraged by MMT-driven policies would lead to runaway inflation; parallels are often drawn between the modern US economy and, for example, emerging and/or historical economies such as Zimbabwe, Weimar Germany or the US in the 1970s where (hyper)inflation was an issue.

We believe two of these analogies are spurious at best on the sole basis that there is almost no similarity in terms of size, dynamism or global importance between 2000s Zimbabwe, 1920s Germany and the US economy of today. Each of these historical inflation crises was unique. Recent history also undermines concerns of excess spending leading to inflation. Again, to use the US as an example:

- Many mainstream economists predicted that after the Great Financial Crisis of 2008/9, quantitative easing (QE) would lead to hyperinflation. These predictions proved to be wrong. Indeed, QE1 was succeeded by QE2 and QE3.
- Relief spending in response to the current pandemic has served to generate short-term inflation, but whether this will endure remains to be seen.
- None of the significant deficit spending in the US across the last several administrations – both Republican (Bush, Trump) and Democrat (Obama) – has led to runaway inflation.

While inflation concerns related to MMT cannot be resolved outright, we believe it is clear from recent experience that reserve currency governments likely have more capacity to spend than previously thought. Indeed, significantly more expenditure by the public sector is needed to address the SDGs and achieve the commitments of the Paris Agreement.

FUNCTIONAL FINANCE

For a long time, monetary policy in particular has been focused on nominal budgetary goals with limited emphasis on the distributional or environmental impacts of related actions. Indeed, many central bankers are ardent supporters of the independence and impartiality of their institutional mandates with regard to climate or other sustainability issues.

Can central banks fight climate change? We believe they have a role to play

A shift in this view is being driven in part by a recognition that impartiality is a difficult line for central banks to walk.

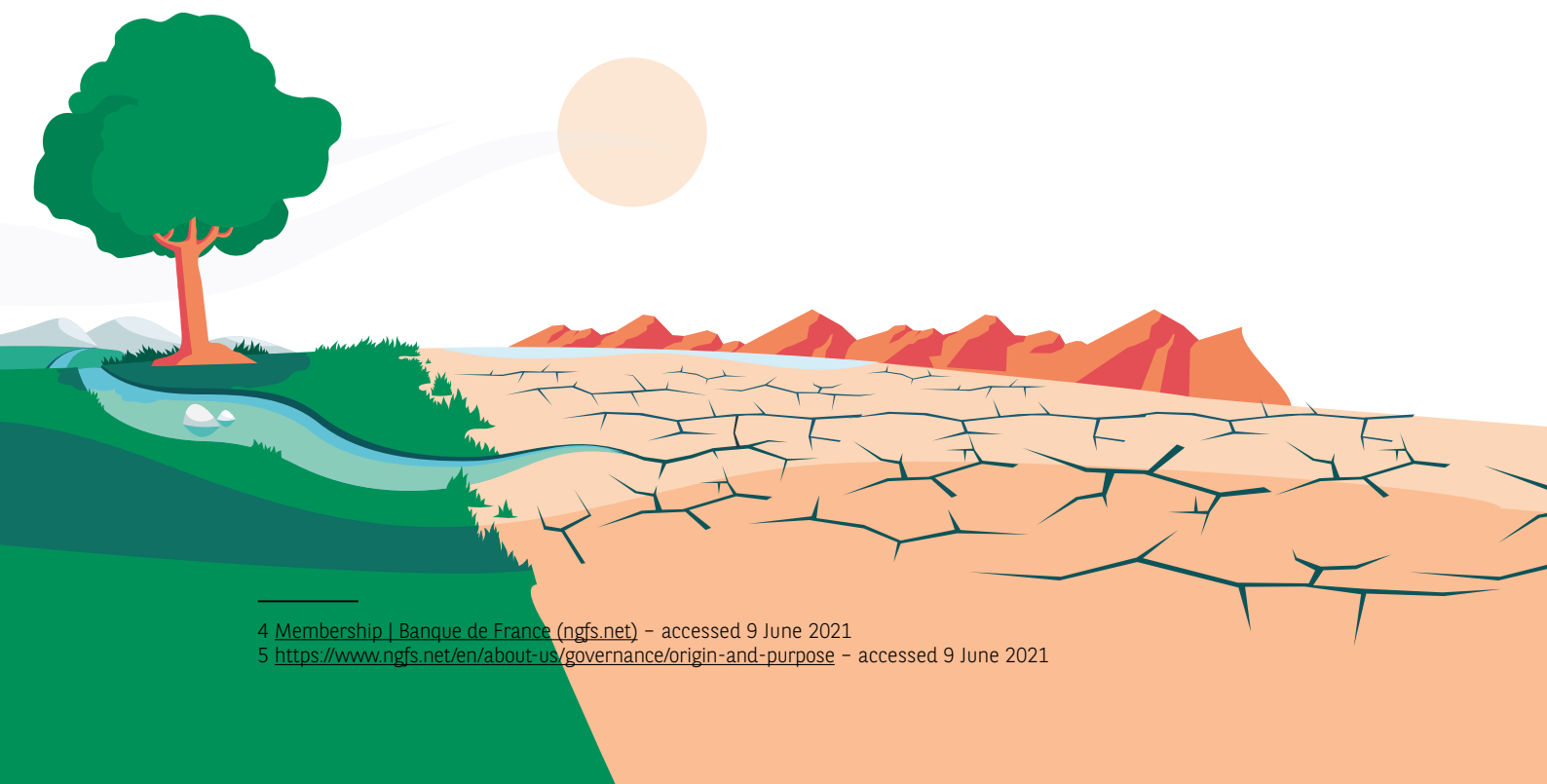
Moreover, central bankers are increasingly aware that real world issues such as climate change can have a dramatic impact on financial markets, and vice versa. Enter the Network for Greening the Financial System (NGFS) – a global group of over 90 central banks and supervisors⁴ that convenes “to enhance the role of the financial system to manage risks and mobilise capital for green and low-carbon investments in the broader context of environmentally sustainable development.”⁵

Research by the macro-financial work stream of the NGFS found that the “physical and transition risks posed by climate change can have substantial macroeconomic and financial stability implications.” This emphasizes the difficulty in disentangling climate change risks from central bank monetary and financial stability considerations.

SDGS, PARIS AND MMT

These actions and statements by monetary policymakers are arguably similar to some of the MMT precepts. While adopting these MMT-like approaches may not be intentional, they nevertheless signal a clear direction of travel in macroeconomic practice towards a more functional and fiscally coordinated remit for central banks.

Whereas central bankers mobilized to address covid using a variety of creative and powerful tools to avert economic catastrophe, we have yet to see the same urgency as it relates to climate. It is the lack of urgency that puts us all at risk. We must use the tools at our disposal – including macroeconomic thinking and policy – to usher in a more sustainable future.



⁴ [Membership | Banque de France \(ngfs.net\)](#) – accessed 9 June 2021

⁵ <https://www.ngfs.net/en/about-us/governance/origin-and-purpose> – accessed 9 June 2021

INVESTMENT THEMES



ULRIK FUGMANN

Co-head environmental
strategies group



EDWARD LEES

Co-head environmental
strategies group

Environmental thematic investing set for strong growth in 2022



While 2020 was one of the best years on record for pure environmental thematic investing, with the theme up by more than 100%, it saw a significant – and healthy – consolidation in 2021. The segment underperformed broader markets by 31% (as of end of October) relative to the MSCI ACWI index, despite company fundamentals improving significantly and regulatory and policy support bolstering its long-term outlook.

Excessive positioning at the start of 2021 in passive exchange-traded funds (ETFs) and a marked rise in interest rate and inflation expectations penalising long-duration growth assets primarily drove the theme's underperformance. Furthermore, inflation resulting from what we see as transitory supply bottlenecks combined with a significant rise in freight rates led to market concerns over margin and profit compression.

Finally, we are finding that investors are struggling to arrive at appropriate approaches to valuing the type of innovative companies generally associated with thematic growth. We apply top-down total addressable market models, technology life cycle theory and long-term discounted cash flow modelling to assess the value of innovative companies.

ATTRACTIVE VALUATIONS

In late 2021, positioning in the environmental thematic universe had fallen to its lowest in three years. Meanwhile, companies in the segment generally had one of the best earnings seasons in 20 years in the context of demand vastly outstripping supply.

¹ Source: Bloomberg, BNP Paribas Asset Management

Valuations for our energy transition innovation universe are now at less than half those of equities in the US Nasdaq index,¹ while having more than 1.7x the earnings growth (3-year compound annual growth).

It should come as no surprise that as we look ahead into 2022, we are upbeat on the environmental theme relative to broader equity markets that are likely to see volatility amid the push and pull of monetary policy actions, the pace of interest rate moves and earnings growth developments. This dynamic should be positive for our environmentally themed long/short absolute return strategy that typically thrives in uncertain and volatile markets.

STOCK SELECTION WILL BE CRUCIAL IN 2022

2021 has seen a historically wide dispersion of performance at the sector level, with the MSCI World Integrated Oil & Gas and MSCI World Financials indices up by 41% and 31%, respectively, while the MSCI Global Alternative Energy index fell by 7%. This in turn has created significant volatility and dispersion between the growth and value styles.

We believe that 2022 could see a substantial reversal of this pattern: Whilst we have subscribed to peak oil and prices overshooting, we believe that oil market rebalancing in combination with demand destruction are likely to see oil prices retrace over the medium to longer term. In view of the volatility in gas and power prices, the world has woken up to the need to accelerate the build-out of renewable energy infrastructure, including wind, solar, energy storage and hydrogen. This is needed to both decarbonise economies and achieve energy and geopolitical security.

**Accelerating population growth, climate volatility,
growing pressure on food systems – this is why investing
in environmental strategies should be a priority**

With population growth still accelerating and, along with climate volatility, increasing the pressure on global food systems, food price inflation is rising. This in part is why investing in the restoration of lands and oceans has become a top priority for policymakers. It is also a core theme within our ecosystem restoration strategy.

Thematically, we see the most attractive investment opportunities in companies that operate with significant competitive advantages, particularly in segments that have high barriers to entry. We also prefer platform businesses that can gain a meaningful operating advantage from upselling and service revenues compared to manufacturing and intermediary goods companies in more commoditised parts of the supply chain, where competition and margins are tighter.

THEMATIC INVESTING CAN HELP DELIVER ON THE COP26 PRIORITIES

The UN Climate Change Conference COP26 has taken encouraging steps towards additional major climate pledges and policy agreements to further the development and deployment of technologies that can help deliver a significant reduction in CO₂ and methane emissions, as well as restore and protect the world's natural capital.

The principal areas of focus at COP26 included:

- Green hydrogen
- Residential solar energy
- Offshore wind energy development
- Energy storage to reduce carbon emissions
- Practical packaging solutions to reduce plastic pollution
- Land-based fish farming to address fish depletion
- Sustainable farming methods to protect the world's soils.

All these areas are investable themes covered by the Environmental Strategies Group at BNP Paribas Asset Management.



PAM HEGARTY
Portfolio manager,
Disruptive Technology



VINCENT NICHOLS
Investment specialist

Distancing sparks even brighter future for disruptive tech



Disruptive trends in technology were already widespread when the pandemic-led social and economic lockdowns triggered a seismic shift in the way we work, buy and communicate. The abrupt transition to socially distant lifestyles has accelerated these trends and sparked booming demand for technology and innovations to support virtual solutions for many everyday interactions.

Many of the digital solutions that have made social distancing both possible and more bearable have presented us with an easier way of life, even when compared to pre-pandemic times. The pandemic has simply sped up a transformation that had otherwise been more likely to evolve over many years.

REMOTE WORKING UNLIKELY TO GO AWAY

Flexible working practices have been around for some time now, and the widespread adoption of remote working is unlikely to be reversed significantly once the pandemic abates fully. The pandemic has also given rise to an uptick in automation, particularly in service industries where social distancing kept many workers away from the workplace for months.

E-commerce has mushroomed, boosting web advertising and electronic payment services. Significantly, it has created a boom in physical and automated warehousing and home delivery. More companies can be expected to integrate their physical and online channels; augmented reality help provides for an easier and more enjoyable shopping experience; and dynamic pricing adjusted for consumer demand looks set to boost earnings and revenues.

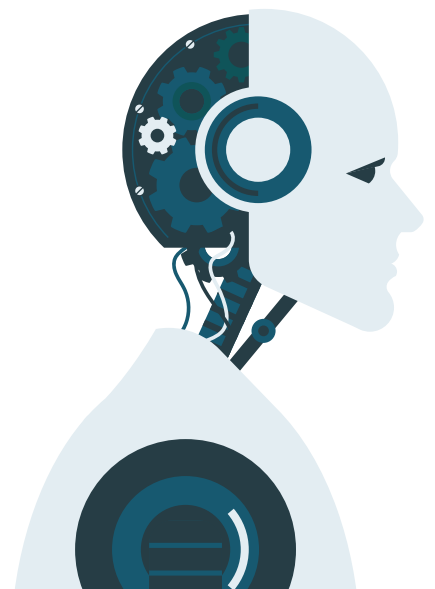
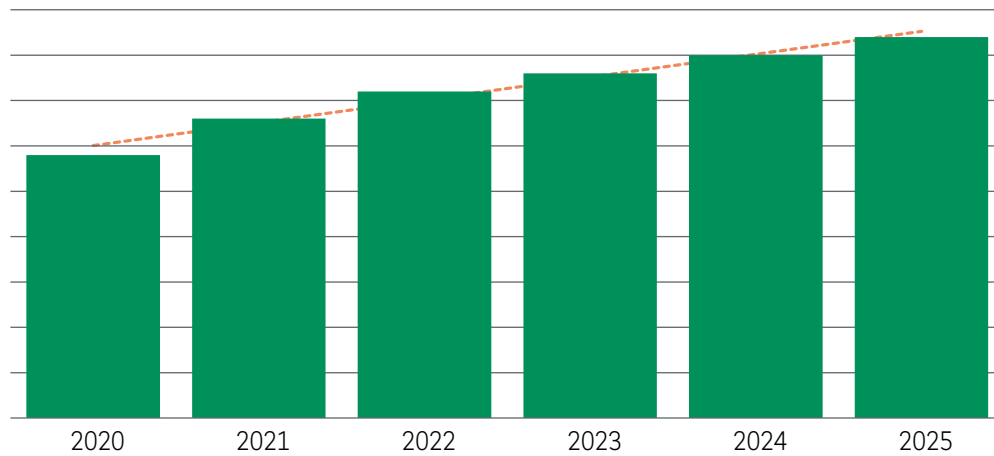


Exhibit 1: The future of e-commerce looks bright on the back of trends such as omni-channel shopping, the rise of visual commerce and data-driven dynamic pricing



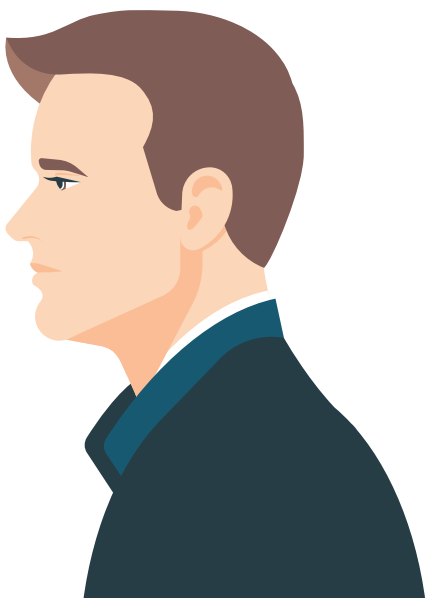
Five trends shaping the future of ecommerce; source: Logiq, via Visual Capitalist; Oct 2021

TECH TOOLS TO OVERCOME COMPLEX PROBLEMS IN MANY SECTORS

Big data, artificial intelligence, data analytics and cybersecurity are all now seen as essential tools to help overcome the complex economic, demographic and societal problems that many sectors face. The digital transformation has become inevitable across society, and nations need to act to prevent the digital divide in their populations from widening.

As with each iteration of the digital evolution, 5G tech is set to transform how we use technology. Its superior speed and scale is expected to open up the market for smart connectivity in homes and businesses further, as well as involve the greater use of big data, AI and the automation of vehicles.

The USD 1.2 trillion bipartisan infrastructure bill recently passed by Congress in the US will be another catalyst. The provision of satellite broadband is also well under way, and promises to extend global internet coverage to rural and remote areas that are not currently well served. This would be transformative for communities, particularly in the developing world.



The tech sector deserves a premium multiple due to its superior growth prospects and returns on invested capital

WITH REGULATORS SCRUTINISING EACH COMPANY, SO SHOULD INVESTORS

Globally, the tech sector faces increased regulatory scrutiny concerning data privacy and the monopoly power of some of the largest platform providers. China has recently seen increased tensions between the government and several tech giants.

In the US, these issues have bipartisan attention and regulatory efforts are gaining momentum. The proposed legislation would usher in sweeping changes both in the way anti-trust regulations are enforced and in how companies run and supervise their platforms. The commercial impact on profitability may vary considerably among the affected targets, so we believe fundamental analysis of individual companies is crucial to assessing the impact on investment cases.

Another concern could be the persistent supply chain shortages and disruptions. These may continue to affect operations for technology companies, particularly those that provide physical goods. To date, Covid shutdowns remain an area of uncertainty. Adding semiconductor supply will be slow due to the time it takes to build and equip new factories. It will also take time for companies and countries to resolve the constraints on shipping and logistics.

However, we expect semiconductor demand to moderate with less consumer-oriented stimulus. Some of the constraints should lift as the year progresses, resulting in supply progress.

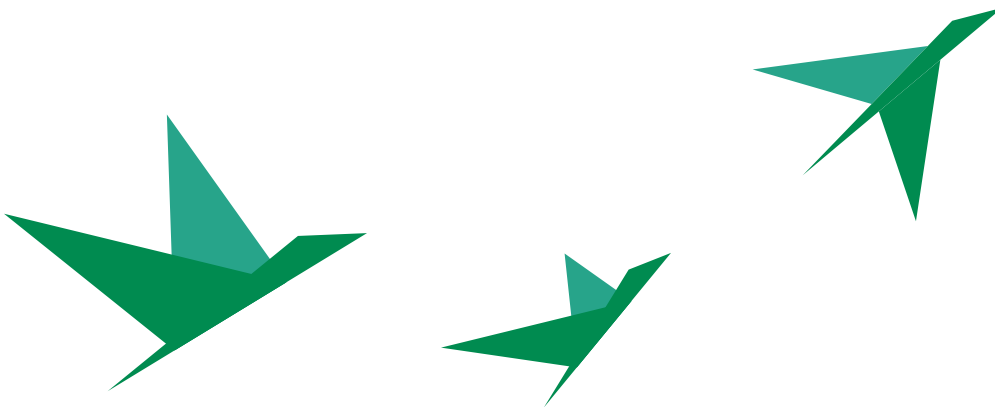


UNDERLYING GROWTH TRENDS SHOULD OUTPLAY SHORT-TERM INFLATION

What of inflation and higher interest rates? Potential weakness in bond markets poses a risk to higher growth technology names with longer-term future discounted cash flows. In the event of protracted above-trend inflation, tech stocks could underperform, but we expect this to be short-lived given the strong growth trends centred on areas such as cloud computing, automation and the Internet of Things. We seek to mitigate the risk of inflation and higher interest rates through managing position sizes and by balancing high-growth, high-valuation names with investments in more stable growth companies with compelling valuations.

Tech sector relative valuations are currently higher than historical norms in some areas, including high growth software. However, we believe the sector deserves a premium multiple versus the broader market due to its improving returns on invested capital (ROIC) and its superior growth prospects.

We expect persistent strength in IT spending and in industrial and car sector demand for chips and components. Experts predict robust global IT spending will moderate, but remain at a high level of growth in 2022. Gartner forecast 9.5% higher corporate IT spending globally in 2021, followed by 5.5% in 2022 (October 2021, Gartner Inc.). Based on surveys of IT professionals, top spending areas include cybersecurity, cloud migration, collaboration tools, and data analytics. These areas line up well with our view on the top secular growth themes and foundational technologies.



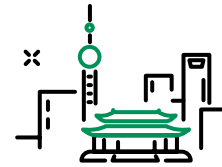


CHI LO

Senior market strategist APAC

China outlook

Some unconventional thoughts



While there appears to be a large degree of market consensus on China's GDP growth in 2022, there is less clarity on the three to five-year outlook. A raft of issues could slow growth momentum in 2022. They range from slowing export growth, further regulatory reform and the country's 'zero-Covid' policy to carbon emissions control and a cooling property market. There is also a lack of 'animal spirits' to spur private investment.

AVOIDING UNHELPFUL POLICY SIGNALS

Cautious tweaks to macroeconomic policy would only partly offset these headwinds. Beijing's tolerance for slower growth appears to have grown as it accepts that this is a price that must be paid when prioritising debt reduction, cutting carbon emissions and implementing further reforms. For 2022, the government's economic management looks set to focus more on resolving structural problems and supply-side disruption, notably power shortages, surging energy prices and producer price inflation.

Given these objectives, the People's Bank of China is highly unlikely to open the monetary floodgates as it will be keen to avoid sending out policy easing signals that could fuel inflation and derail the government's debt reduction and 'Go Green' efforts.

Investment in 'Go Green' areas together
with hard tech development
should revive China's growth momentum

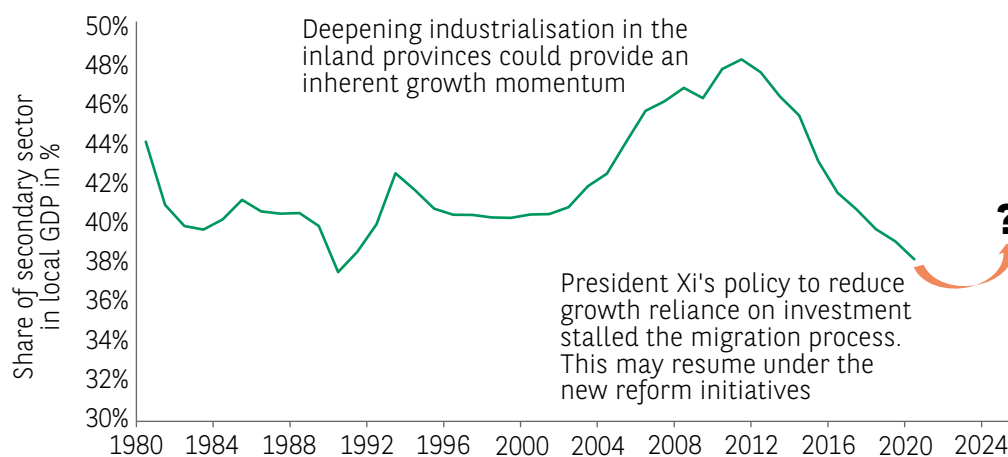
STRUCTURAL CONSIDERATIONS IN THE GROWTH DEBATE

Conventional wisdom argues that China's annual GDP growth would fall to 4%-5% in the next three to five years. However, the market may have overlooked the impact on the outlook of the return of industrialisation alongside structural changes.

The manufacturing sector has regained policy favour under Beijing's new reform tactics. These favour high-value manufacturing and hard tech production over traditional manufacturing and soft tech investments. Hard tech refers to the production of hardware and components that cater for the country's strategic and high-tech development; soft tech refers to the development of e-commerce catering for non-strategic consumption demand.

China's domestic sector started a slow rebalancing in 2005. This involved reducing costs and improving infrastructure to drive industrialisation towards poor inland provinces (Exhibit 1). The strategy resulted in a regional division of labour, with the expensive eastern region moving from manufacturing to high value-added services industries and cheaper inland regions picking up low value-added manufacturing. This migration could create a momentum that could maintain China's average GDP growth rate at above 4%-5% beyond 2022.

Exhibit 1: Industrial migration to the interior* is poised to resume



* include: Anhui, Chongqing, Gansu, Guizhou, Guangxi, Heilongjiang, Henan, Hubei, Hunan, Inner Mongolia, Jiangxi, Jilin, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Tibet, Xinjiang and Yunnan
Data as of November 2021; sources: CEIC, BNP Paribas Asset Management

However, the migration process has reversed since 2013 (see Exhibit 1) when Beijing refocused on shifting the drivers of economic growth from investment and manufacturing to services and consumption. This move led to a rise in the tertiary sector's share of GDP at the expense of the secondary sector. Overall GDP growth slowed, reflecting Beijing's policy at the time to trade off a slower GDP growth rate against higher growth quality.

Under this reform approach, industrial migration to the interior provinces is likely to resume, with high-value-added industries dominating. The government's efforts to achieve carbon neutrality by 2060 are set to open up new growth sectors and investment opportunities to replace the 'sunset' sectors.

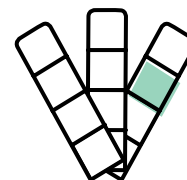
INVESTMENT OPPORTUNITIES IN NEW INDUSTRIES

China needs to upgrade its electrical grid infrastructure and develop energy storage systems to improve energy supply and distribution. It also needs to wind down its fossil fuel consumption by using more green electricity and achieve a structural shift from energy-intensive heavy industry to high value-added segments to boost energy efficiency. New-sector investments are estimated to amount to RMB 5 trillion (USD 781 billion) a year – about 10% of China's annual total fixed asset investment – over the next decade.

Mobilising private capital is crucial to support investment in the 'Go Green' areas. Together with hard tech development, this should revive China's GDP growth momentum and raise the country's medium-term productivity. Time will tell how well these trends evolve, but they already provide useful food for thought when assessing China's growth outlook and thus how investors can best position their 2022 investment strategies.



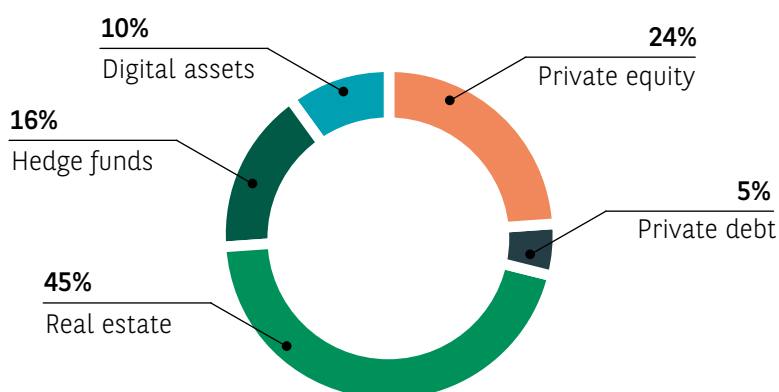
DAVID BOUCHOUCHA
Head of Private Debt
and Real Assets



Financing economic growth with private debt

Listed assets no longer suffice to build an investment portfolio. Private debt is becoming a central element among allocations.

Exhibit 1: Breakdown of Alternatives by sector
(as of Q3 2021, based on market capitalisation)



Please note that 'digital assets' are electronic files of data that can be owned and transferred by individuals, and used as a currency to make transactions, or as a way of storing intangible content — such as computerised artworks, video or contract documents. Cryptocurrencies, so-called asset-backed stablecoins and non-fungible tokens — certificates of ownership of original digital media — are all examples of digital assets.

Source: JP Morgan, Alternative Investments Outlook and Strategy, October 2021

Despite recent concerns over a possible weakening of economic growth and intransigent price pressures, the broad picture at the end of 2021 remains clear: Conditions in the G7 economies are picking up thanks to fiscal and monetary stimulus, with a corollary of equity markets retesting their all-time highs, while interest rates remain low.

A HYBRID FINANCING OF THE ECONOMY

At this time of unattractive valuations for equities and expensive bonds, private debt can be a suitable alternative. For the same level of risk, it offers investors a liquidity premium relative to listed bonds. This explains why inflows into private debt have been so strong – amounting to USD 120 billion in the first half of 2021 in Europe (source: Preqin).

A broader group of investors is now allocating to private debt. Insurers, attracted by favourable treatment under Solvency 2, led the way. They are increasingly being joined by pension funds, sovereign wealth funds and even individual investors. Many institutions have permanent allocation programmes at 10% or 20% of their portfolios, sometimes above 40%, with a balance between private equity, real assets and debt.

Of course, private debt does not escape the debate over the impact of excess liquidity on risk premiums. The amounts of dry powder are contributing to the pressure on credit margins. However, liquidity premiums have remained intact because demand for financing has also been rising

**With a focus on sustainability, diversification
and relative value, we believe an allocation to private
debt can add value and impact to portfolios**

Growth driven by the explosion in merger and acquisition activity is fuelling the financing needs of European mid-capitalisation companies. The infrastructure needs related to the energy and digital transitions are huge, particularly at the intersection of information technology and traditional infrastructure: Battery electricity storage, smart infrastructure (networks, cities, roads), and data processing and transmission.

Separately, Basel Committee rules are putting additional constraints on banks' balance sheets. As a result, private debt has become part of a complementary financing model for banks and investors in Europe.

A TRIPLE IMPERATIVE

The contribution of private debt to financing growth is in itself an attractive element motivating investors. Increasingly, private debt involves respecting strict environmental, social and governance (ESG) criteria. Rightly so: financing the economy is good, financing tomorrow's economy is even better!

Meeting ESG requirements requires significant resources and an approach tailored to each underlying asset. For our infrastructure and real estate loan portfolios, we measure the carbon and environmental impacts and, for example, the number of households gaining access to digital networks. For a small to medium-sized enterprise, it involves assessing the awareness of a company's executives of ESG themes and analysing the choices they are making.

A second investment imperative, the search for diversification, also applies to private debt. The pandemic has shown investors that seemingly robust sectors are not necessarily immune to shocks. The risk of excessive valuations for the most sought-after assets drives us as asset managers to consider a wider range of assets. This is why we believe it is important to have a multi-sector approach in infrastructure and real estate investing. We look at a broad range of companies, applying diverse strategies among SMEs and even more granular financing with mortgages.

Finally, the search for a fair compensation for the risk taken must be at the heart of any credit decision. A classic ratio adhered to by asset managers is the case selectivity rate. We have found that many apparently good credit opportunities can be put to the side if they do not offer a fair level of remuneration. That is why we integrate into our investment process a systematic calculation of the liquidity premium based on our analysis of listed peers.

We are convinced that by meeting these three prerequisites – sustainability, diversification and relative value – we can succeed in adding value and impact to portfolios through our management of allocations to private debt.

PRODUCTION

Daniel Morris, chief market strategist, co-head Investment Insights Centre
Andrew Craig, co-head Investment Insights Centre
Christine Bosso, publication manager - Investment Insights Centre
Nieck Ammerlaan, content manager - Investment Insights Centre

Graphic design: Creative Services BNPP AM

This publication is produced by the Investment Insights Centre at BNP Paribas Asset Management.
AM.investmentinsights@bnpparibas.com

The value of investments and the income they generate may go down as well as up and it is possible that investors will not recover their initial outlay. Investing in emerging markets, or specialised or restricted sectors is likely to be subject to a higher than average volatility due to a high degree of concentration, greater uncertainty because less information is available, there is less liquidity, or due to greater sensitivity to changes in market conditions (social, political and economic conditions). Some emerging markets offer less security than the majority of international developed markets. For this reason, services for portfolio transactions, liquidation and conservation on behalf of funds invested in emerging markets may carry greater risk.

BNP Paribas Asset Management France, "the investment management company," is a simplified joint stock company with its registered office at 1 boulevard Haussmann 75009 Paris, France, RCS Paris 319 378 832, registered with the "Autorité des marchés financiers" under number GP 96002.

This material is issued and has been prepared by the investment management company.

This material is produced for information purposes only and does not constitute:

1. an offer to buy nor a solicitation to sell, nor shall it form the basis of or be relied upon in connection with any contract or commitment whatsoever or
2. investment advice.

This material makes reference to certain financial instruments authorised and regulated in their jurisdiction(s) of incorporation.

No action has been taken which would permit the public offering of the financial instrument(s) in any other jurisdiction, except as indicated in the most recent prospectus and the Key Investor Information Document (KIID) of the relevant financial instrument(s) where such action would be required, in particular, in the United States, to US persons (as such term is defined in Regulation S of the United States Securities Act of 1933). Prior to any subscription in a country in which such financial instrument(s) is/are registered, investors should verify any legal constraints or restrictions there may be in connection with the subscription, purchase, possession or sale of the financial instrument(s).

Investors considering subscribing to the financial instrument(s) should read carefully the most recent prospectus and Key Investor Information Document (KIID) and consult the financial instrument(s)' most recent financial reports. These documents are available on the website.

Opinions included in this material constitute the judgement of the investment management company at the time specified and may be subject to change without notice. The investment management company is not obliged to update or alter the information or opinions contained within this material. Investors should consult their own legal and tax advisors in respect of legal, accounting, domicile and tax advice prior to investing in the financial instrument(s) in order to make an independent determination of the suitability and consequences of an investment therein, if permitted. Please note that different types of investments, if contained within this material, involve varying degrees of risk and there can be no assurance that any specific investment may either be suitable, appropriate or profitable for an investor's investment portfolio.

Given the economic and market risks, there can be no assurance that the financial instrument(s) will achieve its/their investment objectives. Returns may be affected by, amongst other things, investment strategies or objectives of the financial instrument(s) and material market and economic conditions, including interest rates, market terms and general market conditions. The different strategies applied to financial instruments may have a significant effect on the results presented in this material. Past performance is not a guide to future performance and the value of the investments in financial instrument(s) may go down as well as up. Investors may not get back the amount they originally invested. The performance data, as applicable, reflected in this material, do not take into account the commissions, costs incurred on the issue and redemption and taxes. All information referred to in the present document is available on www.bnpparibas-am.com



Download the Investors' Corner App



BNP PARIBAS
ASSET MANAGEMENT

The sustainable
investor for a
changing world