Macroeconomic View

Inflation

This is a financial promotion. Your capital is at risk, the value of investments may fall and rise and you may not get back the full amount you invested. Past performance is not indicative of future returns.

How is the global macroeconomic outlook evolving in the context of rising inflation and geopolitical risks?

The global macroeconomic outlook is built on a configuration not seen in decades. Healthy private sector balance sheets and pent-up pandemic demand are generating robust spending and income growth which is propelling global GDP growth to above-trend levels. At the same time, aggregate supply is already tight in both labour and commodities markets. The mix of above-potential growth and lingering supply constraints is pushing inflation higher even after discounting near-term pressures from manufacturing bottlenecks and the energy sector. In response, central banks have pivoted towards faster monetary policy normalisation and fiscal authorities are dialling back pandemic-era spending promises such as 'Build Back Better'. While a path toward monetary policy normalisation taking real interest rates closer to zero is the minimum necessary to contain building price pressures, recent developments suggest this anticipated normalisation may not come soon enough or be large enough. This implies that if supply constraints are not eased over the next 12-18 months, central banks may have to embark on a second and more restrictive round of policy tightening which would take real interest rates above zero and potentially lay the groundwork for the next economic slowdown.

More recently, Russia's invasion of Ukraine casts a whole new light on our macro outlook. The range of scenarios is vast and at one extreme, potentially terrifying.

Assuming Putin stops somewhere between Dombass and all of Ukraine, the impact on global economic growth is estimated to be between c. -0.2% to -0.6%. Due to Europe's proximity to Russia and its associated energy supply dependence, the impact will be felt more in Europe than in other regions. The invasion will also generate powerful and lasting geopolitical reverberations, with energy security likely to become a greater policy priority across the globe. Despite the panic in oil prices up to the current $120/bbl, we do not believe that this war will create an energy crisis as in the 1990 Gulf war, which contributed to a global recession. While Russia produces 12% of global crude, it only exports 5.5% of global consumption with Europe being the largest purchaser from Russia. We believe this gap can be filled in a matter of months by OPEC and from the strategic reserve. Longer term, any remaining gap can be offset by a re-assessment of nuclear sources in Europe as well as supply from both OPEC and even Iran if the JCPOA is reactivated.

The investment implications of the above macro outlook point towards greater volatility in fundamental economic variables such as growth, inflation and interest rates over the next decade compared to the relative moderation experienced in previous (post-GFC) decade. We are likely to see more boom/bust cycles reminiscent of the 80s, 90s and noughties. This will make the jobs of fiscal policymakers, central bankers and investors more difficult and dynamic. It points toward the need for greater portfolio diversification, use of uncorrelated assets and active management, not only as a defense against volatility but also as a means to play offense to capture ongoing dislocation opportunities.

Exhibit 1

Expert forecasts see healthy but moderating growth over the next four years

Real GDP	Source	2022	2023	2024	2025
World	IMF	4.4%	3.8%	3.4%	3.3%
	OECD	4.5%	3.2%		
	Bloomberg Consensus	4.3%	3.6%	3.1%	
	Goldman Sachs	4.3%	3.6%	3.3%	3.2%
	Deutsche Bank	4.2%	3.7%		
	JP Morgan	4.5%	3.6%		
	Average	**4.4%**	**3.6%**	**3.3%**	**3.3%**
DM	IMF	3.9%	2.6%	1.7%	1.6%
	OECD	3.9%	2.5%		
	Bloomberg Consensus	3.7%	2.5%		
	Goldman Sachs	3.6%	2.4%	1.9%	1.9%
	Deutsche Bank	3.6%	2.3%		
	JP Morgan	3.9%	2.6%		
	Average	**3.8%**	**2.5%**	**1.8%**	**1.8%**
EM	IMF	4.8%	4.7%	4.5%	4.4%
	Bloomberg Consensus	5.0%	4.7%		
	Goldman Sachs	4.8%	4.5%	4.2%	4.1%
	Deutsche Bank	4.6%	4.5%		
	JP Morgan	4.7%	4.3%		
	Average	**4.8%**	**4.5%**	**4.4%**	**4.3%**
US	Federal Reserve	3.5%	2.7%	2.0%	
	IMF	4.0%	2.6%	1.7%	1.7%
	OECD	3.7%	2.4%		
	Bloomberg Consensus	3.7%	2.5%	2.1%	
	Goldman Sachs	3.2%	2.2%	2.2%	2.3%
	Deutsche Bank	3.6%	2.3%	1.9%	1.8%
	JP Morgan	3.7%	2.5%		
	Average	**3.6%**	**2.5%**	**2.0%**	**1.9%**

Note: *Individual growth forecasts for Europe (EU and the UK) and China are provided in their respective sections*

What is the outlook on inflation?

The benign inflation regime of the last decade is over. Inflation itself will likely become more volatile as economies become subject to the classic boom-bust cycles typical of the pre-GFC era. Our base case outlook is for developed market inflation rates to gradually moderate over the next 18 months as supply constraints ease, monetary policy tightens and base effects become more challenging, particularly in the energy sector. Beyond 18 months, our base case inflation scenario points to improvements in productivity and labour force participation reining in inflation. However, we note that today the same popular media that recently warned of permanent disinflation has now flipped to hyping risks of permanent runaway inflation. To this point, we align more with the professional economic forecasts in the Exhibit 2 below but also acknowledge that any risks to medium-term (2023-2025) inflation outlook remain asymmetrically skewed to the upside. While productivity and embedded labour market flexibility precludes a return to extreme 1970's style double-digit inflation even in the upside scenario, US and UK inflation, in particular, could remain above the 2% target in the context of tight labor markets. However, such a higher inflation scenario is likely to be temporary, as the natural response by central banks would be to

Exhibit 2

Most forecasters expect inflation to slow by 2023, but to remain above the target rate of 2% in the US and UK

	US				Euro Area				UK			
Source	**2022**	**2023**	**2024**	**2025**	**2022**	**2023**	**2024**	**2025**	**2022**	**2023**	**2024**	**2025**
Market Expectations												
Inflation Swaps (UK uses RPI[2])	3.6%	3.0%	2.7%	2.5%	3.4%	1.8%	1.8%	1.7%	6.9%	3.7%	4.1%	4.2%
Expert forecasts												
Central Bank (Fed, ECB, BoE[1])	2.6%	2.3%	2.1%	2.0%	3.7%	1.8%	1.8%		5.8%	2.5%	1.8%	
IMF (US and EU as of Jan 2022, UK as of Oct 2021)	5.9%	2.7%	2.6%	2.4%	3.0%	1.7%	1.6%	1.6%	2.6%	2.0%	2.0%	2.0%
OECD (Dec 2021)	4.4%	2.5%			2.7%	1.8%			4.4%	2.4%		
Bloomberg Consensus[3] (Jan 2022)	4.8%	2.4%			3.1%	1.6%			4.7%	2.1%		
Goldman Sachs (Jan 2022)	2.9%	2.3%	2.2%	2.2%	3.6%	1.3%	1.6%	1.9%	5.7%	2.6%	2.1%	2.0%
Deutsche Bank (Jan 2022)	3.2%	2.5%	2.2%	2.0%	4.0%	2.1%	2.0%	2.1%	4.4%	2.0%		
J.P. Morgan (Jan 2022)	4.9%	2.4%			3.4%	1.3%			5.6%	2.9%		

Notes:

1. *Fed forecasts as of December 2021, ECB as of November 2021, BoE as of February 2022*
2. *UK inflation swaps are indexed to RPI rather than CPI. RPI has averaged 80bps more than CPI over the last decade but can deviate substantially. In 2021, UK RPI was 7.6% while CPI was 5.4%.*
3. *Bloomberg consensus is derived from its latest surveys and from forecasts submitted by various banks*

implement aggressive monetary policy tightening beyond what is already discounted, taking real rates well above the 0% level currently expected. Such a policy shift would eventually engineer an economic slowdown or even a recession with associated lower inflation and eventually lower interest rates. However,this scenario would likely only occur after a period of higher inflation. Most importantly, the sequential shifts across these diverse scenarios is what informs our central conviction in higher volatility of inflation, interest rates and economic growth.

In 2021, the Consumer Price Index rose by +7.0% in the US, +5.0% in the EU and +5.4% in the UK. These multi-decade highs mostly reflect the impact of rising energy prices and unusually high demand for goods by consumers with high pent-up savings, at a time when the staggered global re-opening caused supply chain bottlenecks. In the US, goods inflation contributed +2.1% to headline inflation – about a third of the total – and energy contributed 1.8% (Exhibit 3).

On balance, the consensus outlook for inflation is that pressures will ease over the next 12-18 months, as supply chains normalise from pandemic pressures, fiscal and monetary policies turn more restrictive. Over the longer-term much will depend on the evolution of labour supply, productivity and globalisation. We examine both the near-term and longer-term drivers in greater detail below.

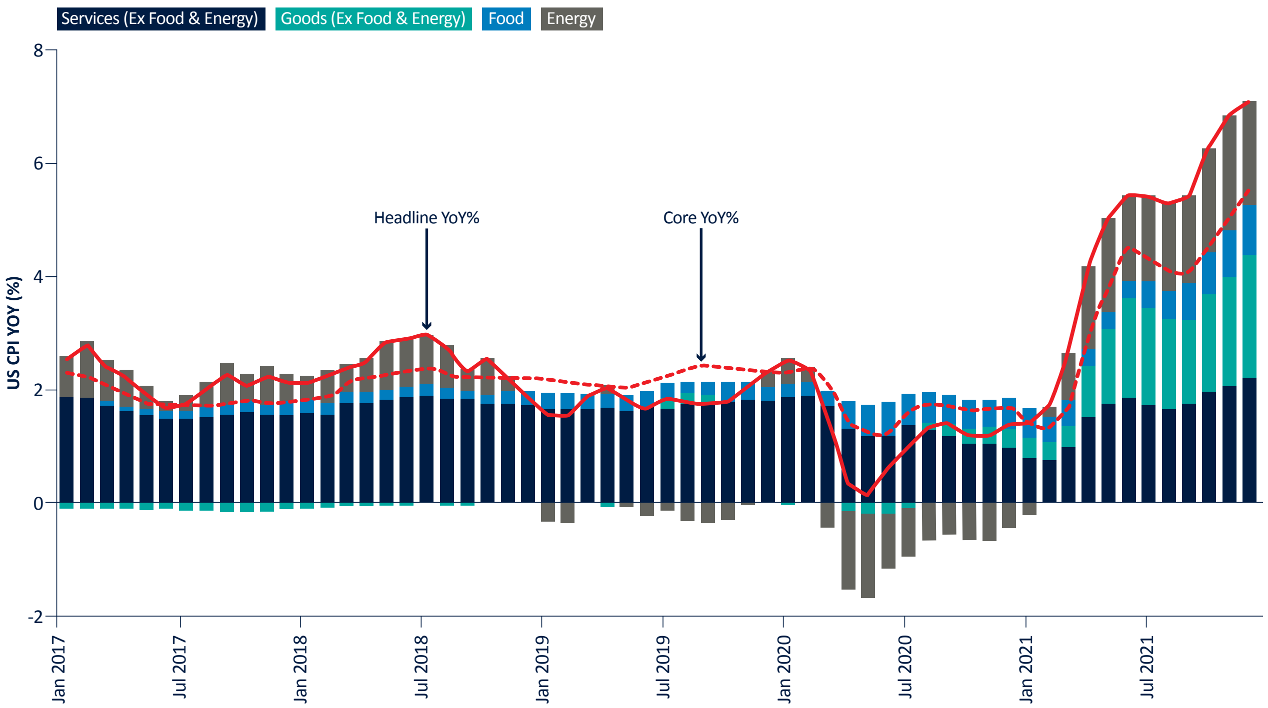
Near-term inflation supports appear to be fading

1. Excessive fiscal expansion is now being dialled back

The remarkable success of the vaccine rollout in 2021 led to a far more rapid economic reopening than many policymakers anticipated during the depths of the lockdown. Hence, in retrospect, the extraordinary fiscal stimulus provided in 2021 was overly demand-stimulative given supply-side constraints which tend to take longer to normalise – both in generic commodities such as energy where capex has been heavily curtailed and also in specialised areas such as automotive semiconductors where manufacturing processes require extensive retooling. Hence, this aggregate supply/demand imbalance was one of the principal causes of the currently elevated inflation levels.

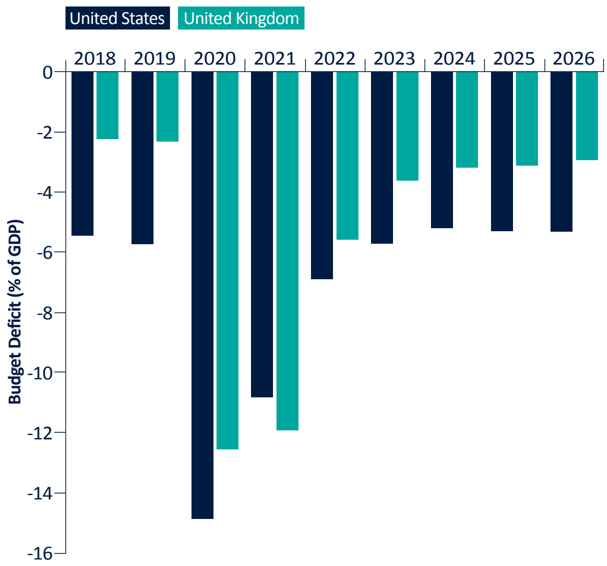
Exhibit 3

Higher price of goods and energy were the largest contributors to the +7% increase in US CPI in 2021



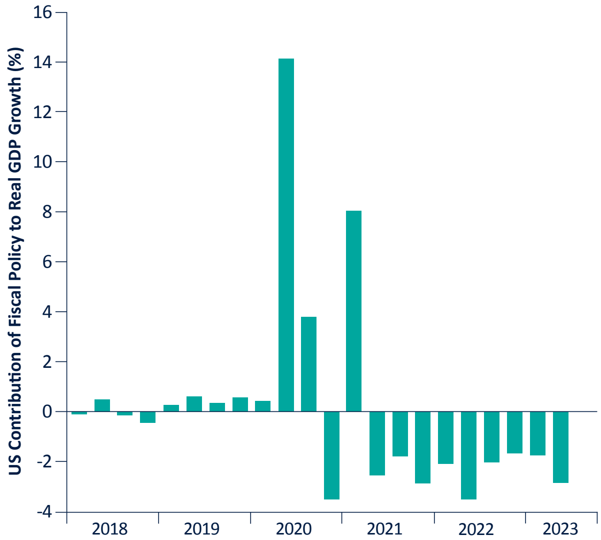
Source: *Bloomberg*

Exhibit 4
IMF forecast fiscal spending to remain loose, but not as extreme as in the last two years



Source: *IMF October 2022 World Economic Outlook*

Exhibit 5
US Fiscal impulse is expected to turn negative in coming years as the level of spending declines relative to pandemic relief spending



Source: *Alpine Macro*

Looking ahead, the fiscal impulse is slowing

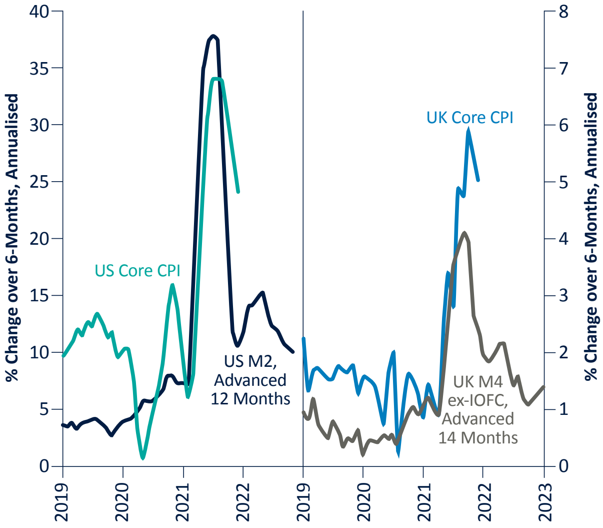
As shown in Exhibit 4, the IMF forecast that the US, EU and UK will all run significant budget deficits over the next five years, with the US deficit averaging 5.6% of GDP. However, both the growth and inflationary impacts of fiscal policy depend more on the rate of change of spending rather than the absolute level. In this regard, the 'fiscal impulse' in the US is expected to turn negative over the next two years as overall spending levels are expected to decline every year for the next four years. This contraction in public spending is expected to be a drag on both growth and inflation (Exhibit 5).

Moreover, if deployed in productive assets such as infrastructure, public investment has the ability to reduce inflation over the longer term by increasing output capacity. For example, a recent report from J.P. Morgan noted that no US port currently ranks in the top 50 globally in terms of efficiency. The ports at Los Angeles and Long Beach, where shipping backlogs are highest, rank a rather dismal #328 and #333 globally. However, the more modern and semi-automated port of Virginia ranks #85 and is free of backlogs despite handling record volumes.

2. Monetary accommodation is also being removed

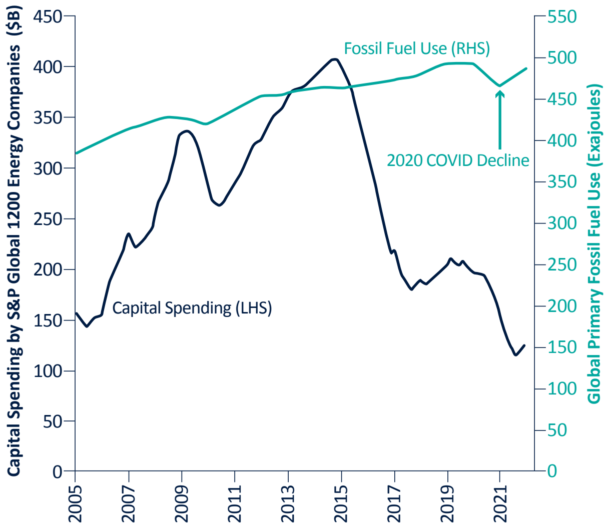
Monetary stimulus is closely linked to fiscal stimulus, as both are controlled by policymakers and were deliberately boosted to extreme levels during the pandemic period. In the US and UK in particular, monetary policy is also turning tighter today in response to rising inflation, even more so than fiscal policy. The shift in monetary policy is addressed in greater detail in the section below on interest rates. For the purposes of this inflation discussion, we note here that money supply declines typically lead inflation declines by about a year, and the former already started to turn down in both the US and UK (Exhibit 6).

Exhibit 6
US and UK: Inflation and monetary growth



***Source:** Oxford Economics/ Haver Analytics*

Exhibit 7
Global fossil fuel use vs. energy capital spending



***Source:** BP, Bloomberg, IEA, JPMAM*

3. Energy prices to remain volatile but current elevated levels leave medium-term downside

Critical to the inflation outlook will be the evolution of energy prices, which although only a 6.3% weight in the US CPI, rose by c. +30% in 2021 and directly contributed a quarter of the 7% US inflation rate that year. Energy contributed even more than that indirectly by increasing input costs for a variety of other goods and services from other commodities to goods and services. While geopolitical pressures and carbon transition effects have scope to keep energy prices elevated, base effects will become more challenging next year.

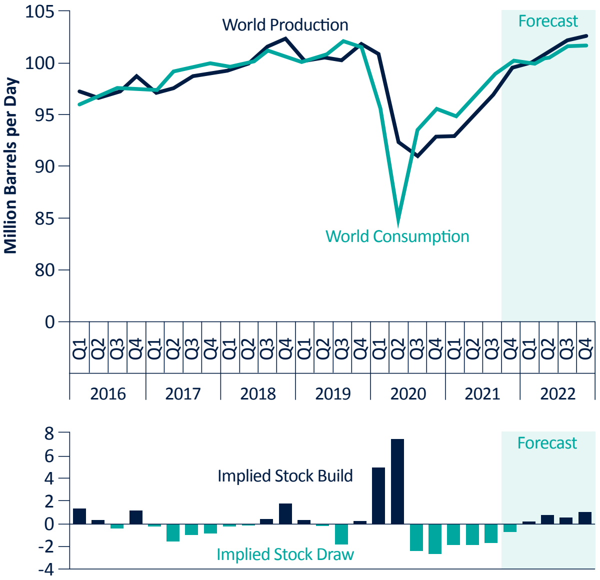
Since 2015 there has been a collapse of new investment in traditional fossil fuel production when global demand has barely declined. The capital expenditure of the S&P Global 1200 Energy Companies has declined from a peak of over $400 billion in 2015 to less than $125 billion last year (Exhibit 7).

While energy prices are currently subject to elevated geopolitical volatility around Russia/ Ukraine, over the longer term an expected surplus will likely limit inflationary pressures from energy. For now, the International Energy Agency (IEA) forecasts supplies to steadily increase in 2022, with US, Canada and Brazil all expected to boost production to their highest ever annual levels (Exhibit 8). The Rystaad group estimates a 1M bpd net decrease in Russian oil exports, but this could be offset by other sources of energy including OPEC, releases from the strategic reserve, a re-assessment of nuclear sources as well as supply from Iran if the JCPOA is reactivated. Longer-term, the massive investment in renewable energy sources is expected to yield benefits not only for the environment but also for the overall cost of energy[1].

However, Goldman Sachs estimate that peak oil demand will occur in 2025 and peak natural gas demand will occur in 2035, meaning that hydrocarbon-based energy sources will likely remain key inputs to the global economy over the next decade. Yet low levels of investment spending and low inventory levels leave energy markets vulnerable to supply/demand shocks, which may cause periods of higher inflation. We view this as a potential tail risk to inflation.

Exhibit 8

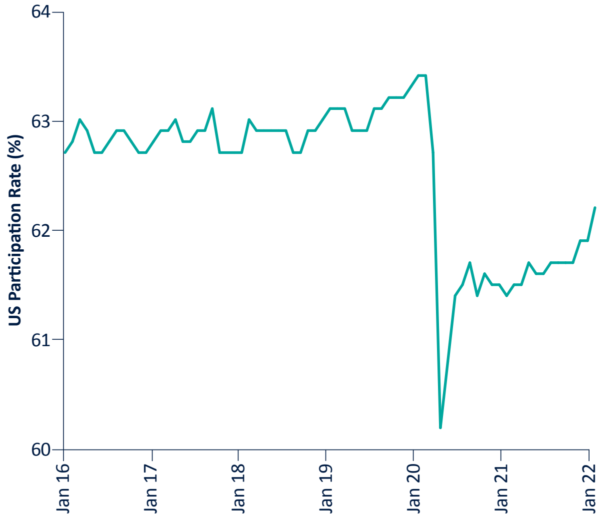
The International Energy Agency forecasts oil supplies to steadily increase in 2022



Source: International Energy Agency

Exhibit 9

US labor participation rate[1] has not recovered back to pre-pandemic levels



Note: *1 the percentage of all people of working age who are employed or are actively seeking work*

Source: *US Bureau of Labor Statistics, Bloomberg*

Longer-term inflation mitigators will be neutral at best, with risks skewed to higher inflation

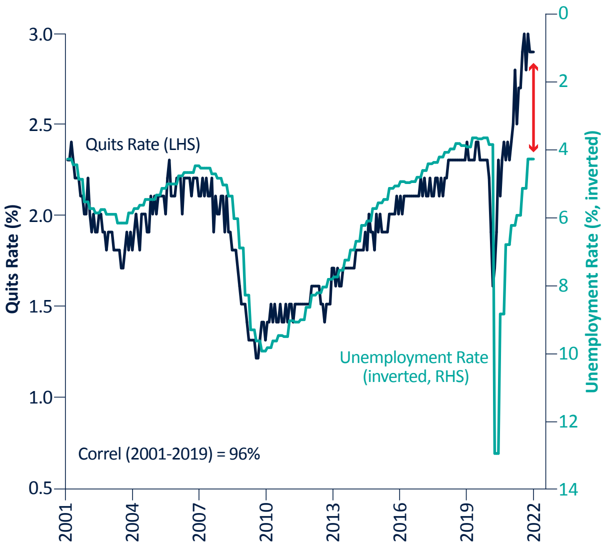
1. Labour market developments

Labour markets in developed economies are currently tight, particularly in the US and UK. Wages are currently less of an issue in Europe, as evidenced by the fact that negotiated wage growth in the Eurozone fell to its lowest level in 20 years in Q3 2021. The key difference is labor participation, which is still below pre-pandemic levels in the US (Exhibit 9). The US Bureau of Labor Statistics estimate that as of end-2021 there were 100 million people over the age of 20 “inactive” in the US workforce. This is an increase of 5 million from pre-pandemic levels. This typically includes students, retirees, those self-employed (e.g., the gig economy) and those simply not currently looking for work. Not included in this figure are the c. 700k fewer immigration visa approvals in 2021 due to Covid backlogs, which is compounding the labour shortfall.

Officially, the US unemployment rate was 3.9% as of end-2021, but the worker’s quit rate was at levels statistically associated with an unemployment rate of 1%, suggesting that underlying conditions are much tighter (Exhibit 10). Job openings are close to record highs and the NFIB small business survey shows that about 50% of companies are struggling to fill openings, the highest level in over 25 years of data (Exhibit 11).

Exhibit 10

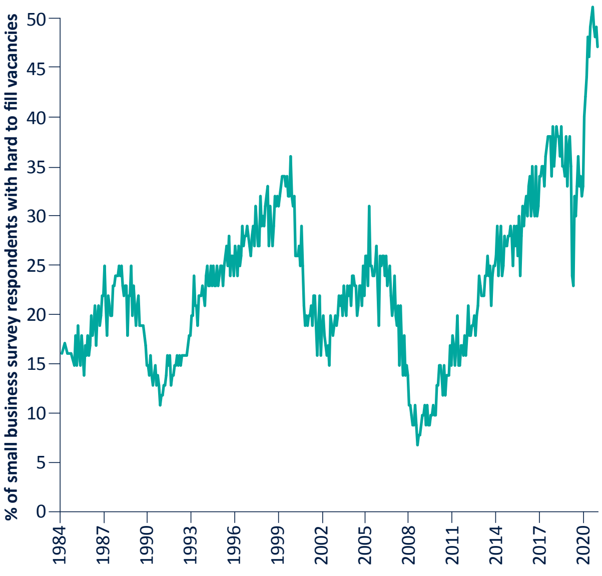
Workers are quitting at a rate that would normally be associated with unemployment around 1%



Source: *BLS JOLTS Survey, Haver Analytics. KKR Global Macro & Asset Allocation analysis*

Exhibit 11

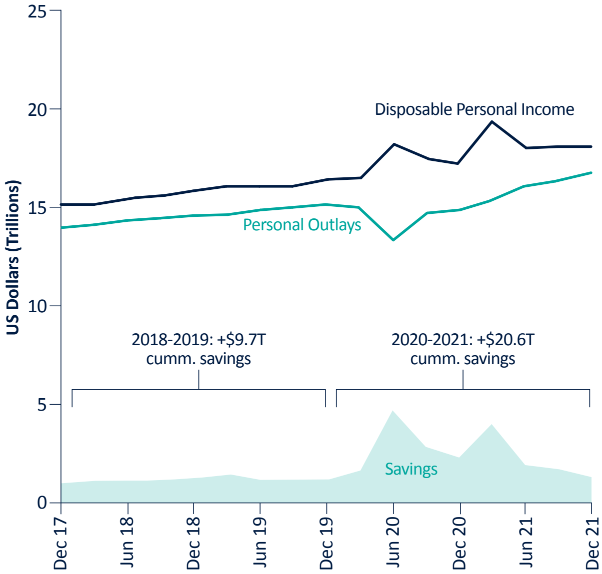
US small businesses with hard to fill job openings



Source: *Bloomberg, NFIB*

Exhibit 12

US households saved more in the last two years than they did in the previous four



Source: *Bureau of Economic Analysis*

There are 4 somewhat inter-related causes for the weak labour participation:

1. **Higher savings** – The Bureau of Economic Analysis use tax data to estimate monthly household disposable income and expenditure. Based on these estimates, household income exceeded outlays by $20.6 trillion cumulatively over the last two years, which is double the cumulative savings of the previous two years (Exhibit 12). This boon came from an initial fall in consumption spending at the start of the pandemic, followed by big boosts to disposable income from the government stimulus checks (Exhibit 13). JP Morgan reported that cash balances in client accounts were 50% higher in Q3 2021 compared to a year earlier, supporting the theory that households are sitting on unusually large savings. This suggests that the average household may not yet feel financially compelled to seek work.
2. **Covid health risks** – a record 4.5m people quit their jobs in December 2021 as Omicron cases spiked in the US. Front-line workers in sectors like restaurants, bars and retail quit at the highest rates, lending credence to the idea that fear of contagion and hazards of in-person work are playing a role.

Exhibit 13

US real disposable income has reverted to trend after big boosts from government

Source: *US Federal Reserve*

3. **Care responsibilities** – schools have reopened, but intermittent periods of quarantining have meant households place a higher priority on the flexibility that comes with not working. There has also been a large increase in the number of people saying they are staying home to look after an elderly relative.
4. **Early retirement** – roughly 3.6 million people have retired since the pandemic, which is 1.5 million more than expected based on demographics and pre-pandemic trends.

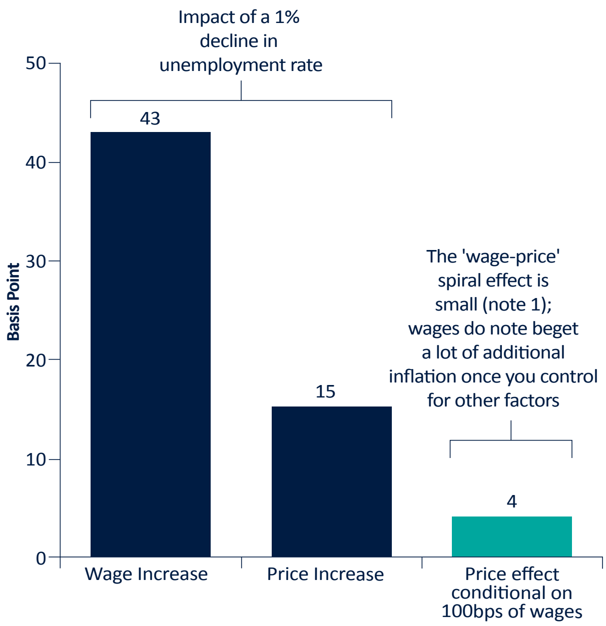
Looking ahead, the base case outlook is that many of the underlying drivers of weak participation will dissipate. Households will continue to steadily draw down their excess savings. Higher vaccination rates will reduce Covid fears and school attendance will become less erratic, reducing barriers to entry into the labour market. The total number of retirees will revert to trend as future rate of retirement will be lower, since data suggests that most of those who have recently retired early were likely to retire in the next 3-5 years anyway.

Experts forecast US visa approvals for foreign workers to accelerate due to high business demand and less onerous immigration policies of the Biden administration compared to Trump. There are already signs of this happening. Data from the US Citizenship and Immigration Services (USCIS) shows that H-1B visa approvals were 97% in fiscal year 2021, up from 84% in FY 2019. USCIS claim to be reviewing visa applications at 50% above the typical baseline to try to clear the pandemic-induced backlog.

In combination, these trends should lead to a steady increase in labour supply over time, without the need for materially higher wages. However, these trends will likely unfold gradually, and tight US labour markets are likely to be a prominent feature throughout this economic cycle. This leaves a wage-price spiral as a medium-term tail risk. However, data from UBS suggests that the feedback mechanism between higher wages and inflation has historically been very limited. They estimate that a 1% decline in unemployment drives up average hourly wages by an average of 43 basis points which pushes up prices by 15 basis points on average. Isolating further for the impact of higher wages on inflation, they estimate that all else equal, you need to generate 100 basis points of wage growth to generate just 4 basis points of inflation. In short, there is little empirical evidence from recent economic history to suggest that a self-sustaining wage-price spiral could occur. Further limiting this risk is the continued fragmentation of labour's power at the corporate negotiating table. In the US, just 5% of labour is unionised today versus 35% in the 1970s.

Exhibit 14

A tight labour market generates wage growth but those wages do not generate large additional price effects



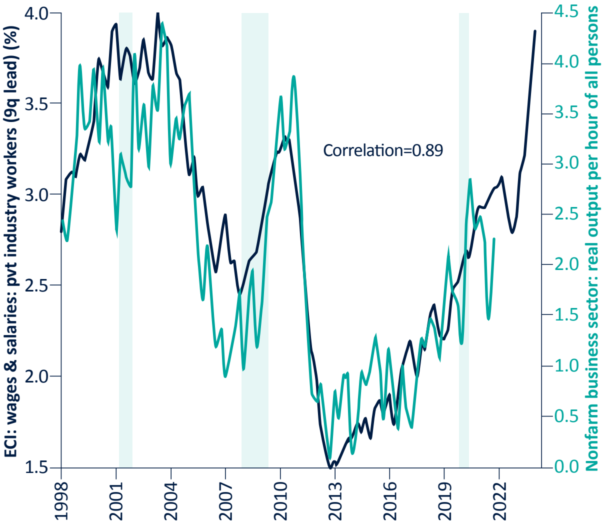
Note: *Estimates from regression over past 20 years of 4 quarter change in hourly wages on time trend, prior change in dependent variable, 4 quarter average unemployment rate, and 4 quarter changes in crude oil prices and the trade-weighted exchange rate, along with the prior 4-quarter changes.*

Source: *UBS*

2. Productivity gains likely to offset rising wages

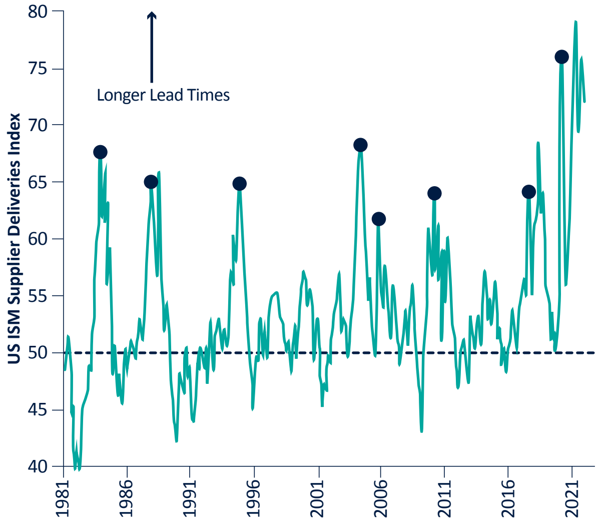
Rising wages have typically been a catalyst for faster productivity growth as firms are incentivised to improve the output per worker. As shown in Exhibit 15, the annual growth in wages has been highly correlated to change in output per hour per person over the last 25 years.

Exhibit 15
Higher wage growth spurs higher productivity growth



Source: *Haver Analytics, Deutsche Banks*

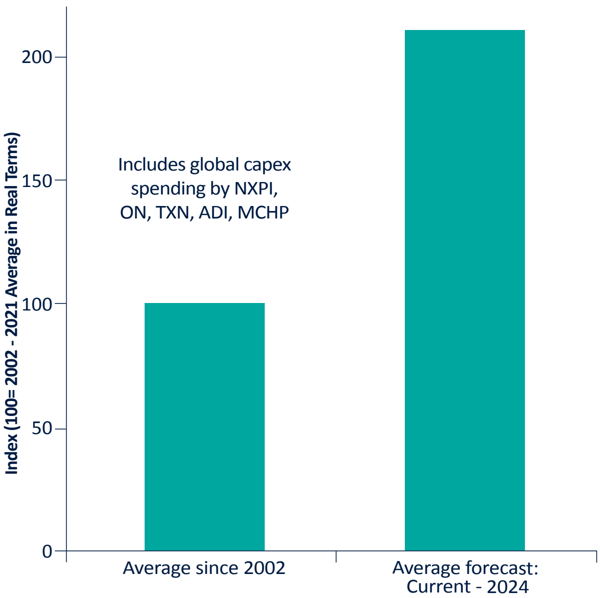
Exhibit 16
Capital on Supply bottlenecks are not that uncommon, and usually resolved by greater investment spending



Source: *Bloomberg*

In addition, spikes in demand relative to supply typically prompt large capital investment by companies as they build out capacity to meet the demand. This has happened seven times in the last 40 years (Exhibit 16). There is already evidence of it happening today. For example, according to Trend Force, capex by the top 10 semiconductor foundries surpassed $50 bn in 2021, up 43% year-on-year, with another 15% increase expected in 2022. This should increase global 8-inch and 12-inch wafer capacity by 6% and 14% respectively. With semiconductors such a key input into a wide range of products, additional investment and capacity should limit future price rises. Another example is shipping, where orders for new container ships in the first half of 2021 were nearly double the orders for both 2019 and 2020 combined, according to London-based maritime data provider VesselsValue Ltd., with the biggest gains going to shipyards in South Korea and China.

Exhibit 17
Global automotive semiconductor capex is expected to increase rapidly



Source: *GS, JPMAM*

3. Onshoring vs globalisation

Another factor often cited as a long-term support for inflation is a potential reversal of the globalisation trends of the last four decades. However, some experts argue that less globalisation is not likely to be a major source of inflation for two reasons. First, globalisation appears to be plateauing rather than reversing, and second, even a modest reversal is not expected to have a material impact on inflation.

The frailty of global supply chains has been exposed over the last few years - first by the trade war between US and China, then by the pandemic. As a result, greater onshoring is expected as companies build greater resilience into supply chains, partially reversing the globalisation trends of the past four decades.

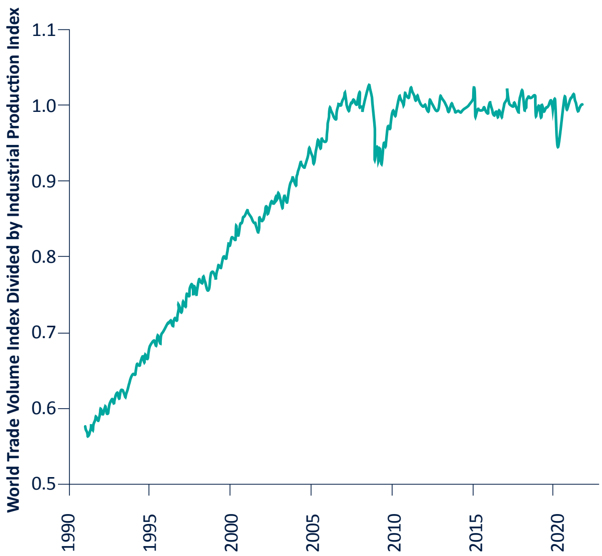
However, empirical evidence suggests that the impact of globalisation on inflation has been smaller than widely supposed. A 2006 IMF analysis calculated that non-oil import price reductions lowered US inflation by an average of -0.5% p.a. over the period from 1997 to 2005, a period of "hyper-globalisation" when cross-border flows accelerated rapidly. This finding is in line with an analysis at the Federal Reserve Board that estimates that lower (core) import prices reduced core US inflation by -0.5% to -1.0% p.a. between 1998 and 2008.

The US is a fairly closed economy with imports only accounting for about 15% of GDP, but data suggests the impact on inflation has been similar in Europe. A 2021 VoxEU research report concluded that globalisation has had "a negative but limited effect on trend inflation" in Europe. Although the share of goods in Euro area consumer expenditures originating from low-wage countries has doubled since the beginning of the 2000s, the report found that their overall contribution to consumer price index inflation was modest.

If measured as the volume of world trade relative to industrial production, globalisation peaked in 2008 and has flatlined ever since. Our base case is that companies will seek to add resilience and redundancy to supply chains, and trade relative to output will continue to move modestly lower. However, we do not expect this to have a material impact on DM inflation over the medium-term.

Exhibit 18

Globalisation has plateaued since the 2008 financial crisis



Source: *CPB Netherlands Bureau for Economic policy analysis*

The above analysis also overlooks important trends in services. A 2018 study by McKinsey found that low-skill labour is becoming less important as factor of production. Contrary to popular perception, only about 18% of global goods trade is now driven by labour-cost arbitrage. If anything, the technological improvements spurred on by the recession are likely to accelerate trends in the globalisation of services, not reverse them.

Investment implications

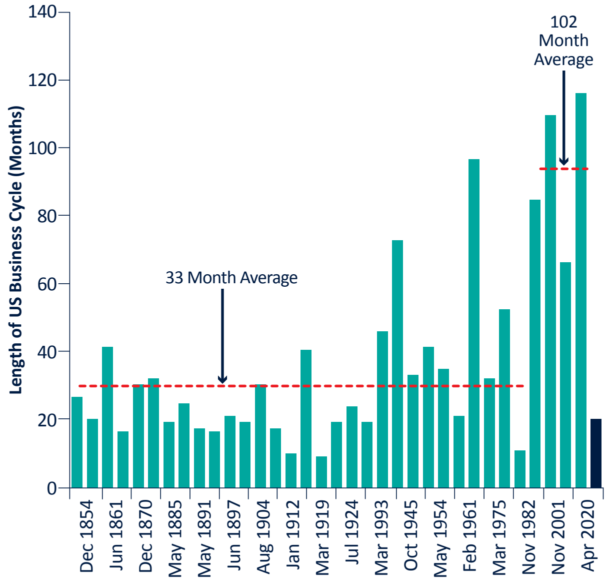
Our analysis leads us to believe that although inflation will remain high over the next year or so, the risk of a shift to a sustained higher inflation regime of 3-4% in advanced economies is unlikely. Inflation is likely to peak in 2023 as supply bottlenecks ease and will then steadily revert to the 2% level targeted by central banks over the following few years.

However, while sustained higher inflation is unlikely, the combination of tight labour markets, onshoring, the energy transition and potential for further Covid-19 induced supply shocks, all set against loose fiscal policy, mean that inflation tail risks in the near-term have increased. The benign inflation regime of the last three decades may be changing and inflation itself may become more volatile as we return to more classic boom-bust cycles. The key question is not whether inflation is transitory or permanent, but how long the transitory period will last and whether central banks will have to engineer a recession in order to tame inflation. This has significant portfolio construction implications and supports greater allocations to uncorrelated assets, nimble active managers and higher allocations to low-risk assets with good liquidity that may be used for portfolio rebalancing in periods of market stress. This also has us acutely focused on a portfolio's aggregate exposure to inflation and interest rate related risk drivers. This involves balancing exposures between technological winners of the futures with quality assets that have current cash flows and pricing power today.

As shown in Exhibit 20, inflation volatility was nearly 5% p.a. in the US between 1925-1989, during which time the average cycle lasted just 5 years on. In contrast, inflation volatility has been just 1.3% since 1990, a period that has seen two of the longest economic cycles in history.

Exhibit 19

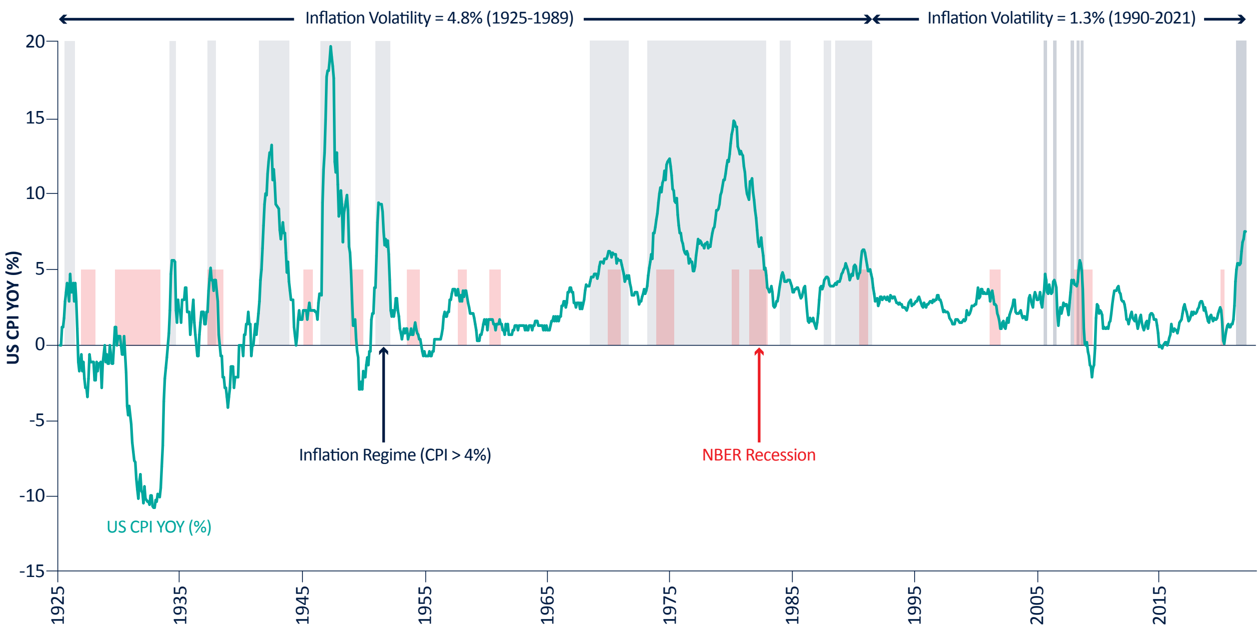
Cycles have lasted longer in recent era of low, steady inflation



Source: *Deutsche Bank*

Exhibit 20

Periods of higher inflation volatility are more prone to recessions, as indicated by red bars



Source: *Journal of Portfolio Management, The best strategy for inflationary times, Harvey et al*

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