

The creation of inflation

“Looking through” versus “it’s coming back”

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Economics - Global

- ◆ Amid vast uncertainty, inflation has spiked...
- ◆ ...raising fears that price stability is over
- ◆ The risks of “error” – in both directions – have risen hugely

Late expectations

Those most relaxed about inflation typically point to an absence of any serious increase in inflationary expectations. This approach is problematic. Expectations are often slow to respond to changing conditions and, in any case, are too volatile to be relied upon. Worse, forecasters tend to “hug” inflation targets, thereby limiting the usefulness of projections at times of structural upheaval.

A different angle

The biggest danger is a sustained increase in inflation for any given rate of economic growth. Currently, there’s no shortage of threats. “Building back better” offers a throwback to Lyndon B Johnson’s ultimately inflationary “Great Society”; central banks have been given an increasing number of – at least in principle – conflicting objectives; quantitative easing has potentially unleashed a “backdoor” version of fiscal dominance; and, exacerbated by the COVID-19 pandemic, supply side conditions are no longer as favourable as they once were.

Not everything is inflationary

Still, a precise repeat of the inflationary 60s and 70s is unlikely. “Cost push” and “competing claims” versions of inflation are now less threatening: unionisation has fallen; robotics and other forms of automation have reduced the threat of damaging strikes; and labour markets are increasingly atomised thanks to the rise of monopsonist employers and hiring “apps”. Still, unless these factors intensify, the risk is that once-tranquil price pressures build more sustainably.

Five scenarios

With heightened uncertainty, rather than set out one explicit forecast, we set out five scenarios, an approach policymakers themselves should be keen to embrace. The most likely outcome may still be “business as usual” – previous warnings of higher inflation have come to nothing – but other scenarios now look much more plausible than pre-pandemic. We most fear a “delayed policy response” scenario, in which eventual tightening has to be more aggressive – and, hence, more economically damaging – than would otherwise have been the case, alongside a “scattergun” scenario, in which inflationary outcomes increasingly vary from country to country, implying a substantial increase in currency volatility. Overall, the return of inflation is a bigger danger now than at any previous point since central banks collectively began to enjoy their independence in the 1990s.

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Disclosures & Disclaimer

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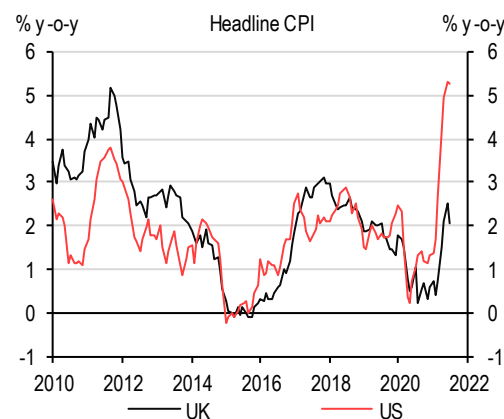
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Executive Summary

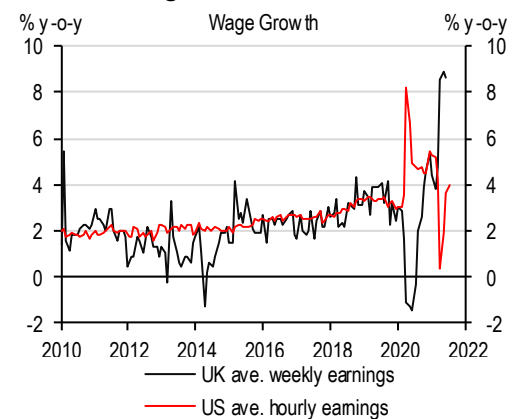
Inflation is back, at least temporarily. On either side of the Atlantic, either prices or wages (or both) are rising faster than they have done in many a year. Not surprisingly, social media – at least that part devoted to economics and finance - is awash with claims and counterclaims regarding inflation. Some think we are on the brink of a 1970s revival, the equivalent of an ABBA tribute act. Others think we're witnessing no more than a temporary storm in a deflationary teacup.

1. Inflation is on the rise...



Source: Refinitiv Datastream

2...as are wages



Source: Refinitiv Datastream

In truth, we are facing inflationary uncertainty on a much bigger scale than witnessed in many decades. As such, and consistent with how policymakers should consider inflationary risks, our report concludes with a series of what we consider to be plausible and, in some cases, disturbing scenarios.

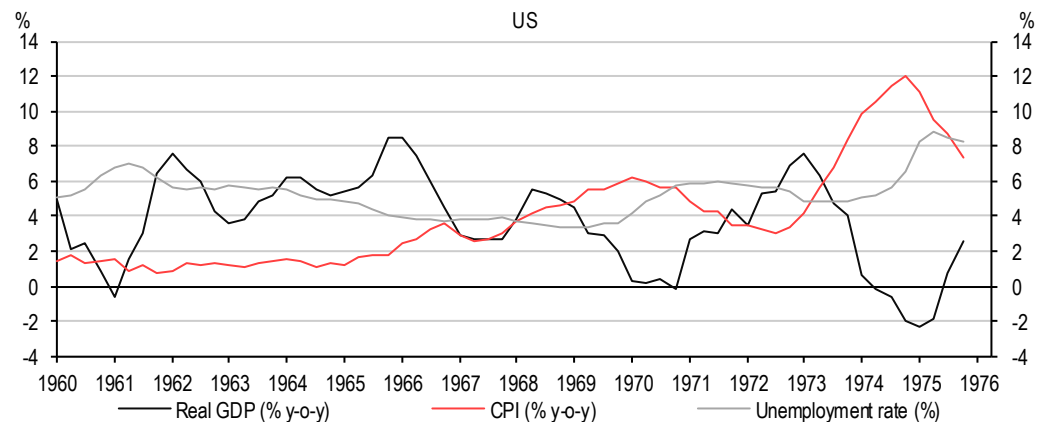
Those who claim that inflation remains under control mostly believe we can “look through” current squalls, blaming much of the recent rise on temporary “supply side” disruptions associated with the COVID-19 pandemic. Often, their views are based on the idea that, to date, inflationary expectations have risen to only a tiny degree. This approach is not as robust as it seems, partly because expectations tend to respond only with either a long or a variable lag to - admittedly infrequent - changes in inflation fundamentals. In the late-1960s, inflationary expectations – to the extent that they could be measured – responded only belatedly to increases in actual inflation. Today, most economic forecasters’ inflation projections are simply anchored to existing inflation targets. If it all goes wrong, their projections will be among the last to adjust.

If inflation is about to rise sustainably, it will reflect fundamental changes in political economy. There are good reasons to worry:

- ◆ “Building back better” conjures up images of Lyndon B Johnson’s “Great Society”, a period in the late-1960s in which the trade-off between growth and inflation steadily deteriorated¹.

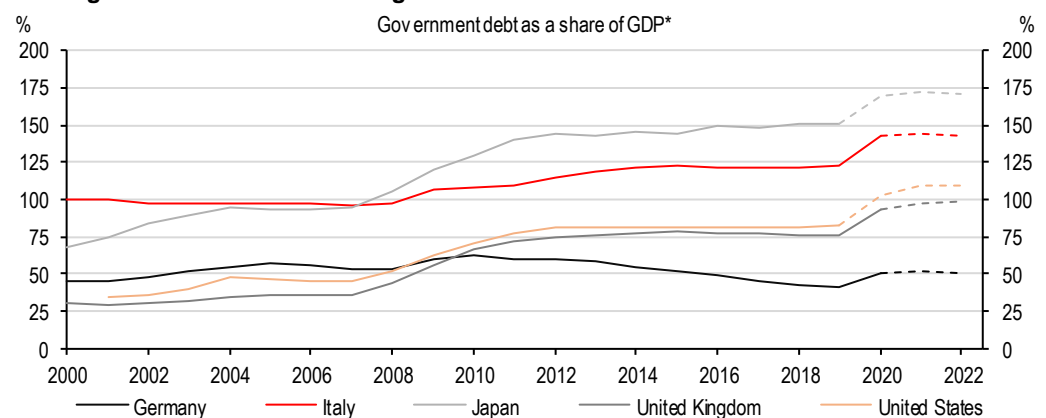
¹ An unexpected development – at least for the Keynesian consensus - which Milton Friedman and Edmund Phelps separately explained in 1968, in effect introducing the “expectations-augmented Phillips Curve”.

3. In the late 1960s, US inflation rose even as growth slowed



- ◆ Central bankers are no longer required single-mindedly to pursue price stability above all else: they also have to worry about, *inter alia*, growth, employment, financial stability and climate change, threatening a series of policy “conflicts”. The risk of inflationary error – in both directions – is higher than it once was.
- ◆ Quantitative easing may have increased the risks of fiscal dominance returning through the “back door”, not least given the huge increases in government debt witnessed both before and during the pandemic.

4. Net government debt is a lot higher than it used to be



- ◆ And, thanks to reverses in globalisation – reflecting both deteriorating relations between China and the West and, more recently, pandemic-related cross border restrictions on the movement of labour – supply side performance globally is deteriorating, making output gap estimates even less reliable than usual.

Yet all is not lost. Other forces remain intensely deflationary. Automation and, in particular, robotics continue to advance at a rapid pace. The “cost push” and “competing claims” models of inflation that seemed so relevant in the 1960s and 1970s no longer resonate: unionisation has fallen, industrial relations have improved, labour markets are more atomised than they once were, thanks in part to monopsonist employers and the proliferation of job search “apps”. Thanks to the likes of Amazon and Alibaba, price transparency is much greater than it once was. We have yet to discover the impact of “working from home” on labour markets, wages and, in turn, prices.

Still, unless the pace of these deflationary forces accelerates, it seems that the balance of risks has shifted: other forces appear more obviously inflationary than they did previously. We consider these forces within four “buckets”: demand risks, supply risks, financing risks and international spillover risks. In each case, we try to relate inflationary dangers to an understanding of economic fundamentals, most obviously the relationship – too often ignored – between money and the broader economy.

At the international level, that basically requires a view on the US dollar. With America’s “twin deficits” about to make headlines once again, much depends on how the Federal Reserve reacts to signs of rising domestic inflationary pressures. At first sight, average inflation targeting is a million miles away from Paul Volcker’s anti-inflation approach in the early 1980s. As such, there is perhaps a bigger risk that a perceived delayed policy response from the Fed could put the US dollar under downward pressure, a result that might discourage some central banks elsewhere from tightening domestic policy, leading in turn to a more generalised pick-up in inflationary pressures worldwide. Time will tell.

We examine other arguments that might favour either inflation or deflation. Those who regard ageing populations and, hence, a potential shortage of workers as a major inflationary threat need to explain why this is more likely to lead to generalised inflation as opposed to Japanese-style asset price deflation. Those who think looser fiscal policy is without risk given huge lockdown-inspired increases in household saving need to explain why households will remain cautious when lockdowns come to an end. Those who believe that price increases are simply the market’s way of encouraging more supply and, in time, price declines need to explain why this is the only reason why inflation might be rising.

We conclude with five scenarios, attaching subjective “likelihoods” to each based on our reading of both economic conditions and the likely policy response:

Scenario 1: Business as usual (or the “looking through it” scenario)

Given so many years in which price stability has been broadly achieved and in which warnings of inflation’s return have fallen on barren soil, only a few brave economists argue that this is not the most likely scenario. It probably still is and is the global inflation view we have broadly stuck with over the past year or so. Since late March 2021, financial markets appear to have reverted back to the transitory view too. But, for all the political economy and pandemic reasons spelt out in this report, there can be much less certainty about it than before COVID-19.

Scenario 2: Early-90s Japan: confusing near-term inflation for long-term deflation

Central bankers know the perils of being trigger happy when dealing with inflation: think of Japan’s transition from modestly high inflation at the beginning of the 1990s to subsequent deflation and the ECB’s premature tightening in both 2008 and 2011. Possible, but unlikely at the moment: everyone is focusing on “building back better”.

Scenario 3: Inflation up, triggering both rising expectations and, eventually, a major policy reversal

The mirror image of scenario 2: wait too long and suddenly discover that inflation is a rather bigger problem than first thought. At that point, policy has to do some serious heavy lifting. Inflation might then be followed by recession. The risks are rising.

Scenario 4: Inflation up, financial repression

Dare central banks raise interest rates fast enough given the impact on government debt service costs? Might we end up in a world in which inflation is persistently higher and real rates are much more negative? Possible, but ageing populations won’t like it. It’s one reason why Japan never pursued helicopter money outright. And those that try this path might end up with a currency crisis.

Scenario 5: The scattergun

The return of increased inflation divergence between nations. Increasingly likely given the slow retreat from globalisation, the post-pandemic rebuilding of borders and barriers, the varying fiscal burdens stemming from the pandemic and the increased prioritisation of goals other than price stability.

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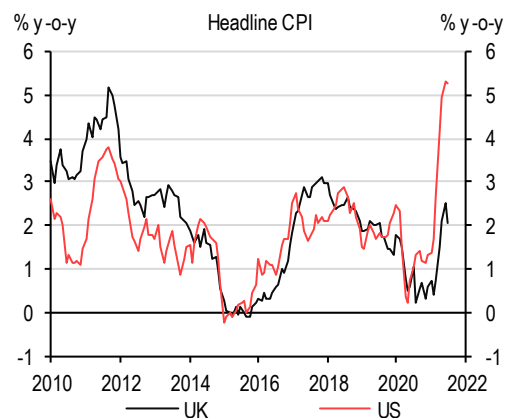
The creation of inflation

- ◆ Uncertainty is acute...
- ◆ ...but forecasters are complacent
- ◆ Risks to price stability are on the rise

Big mouths, huge uncertainties and unreliable expectations

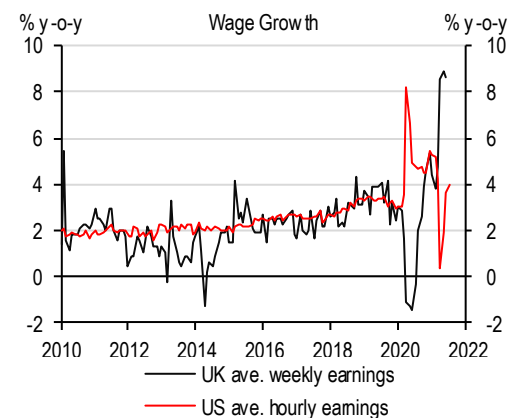
Emerging from the worst of the pandemic, inflationary prospects are the most uncertain they have been in many a year, perhaps even in many a decade. As such, debate amongst economists has become ever louder during 2021, with some convinced that we can merely “look through” inflationary squalls while others are certain that inflationary threats lurk around every corner. The mood in financial markets, meanwhile, appears to be oddly changeable: earlier in 2021, bond markets sold off as nervousness over inflation rose but, as spring turned to summer, yields fell back again as earlier fears began to fade. Recognising that uncertainties regarding price developments have risen may not seem like the most helpful observation. For policymakers and investors, however, it's the right approach. They, after all, have to analyse economic developments in real time, with uncertainty their constant – yet constantly evolving - companion. And, in real time, inflation has become problematic in ways that seemed unimaginable just a handful of months ago (chart 1 and 2).

1. Inflation has risen on both sides of the Atlantic...



Source: Refinitiv Datastream

2....and wages are rising more quickly

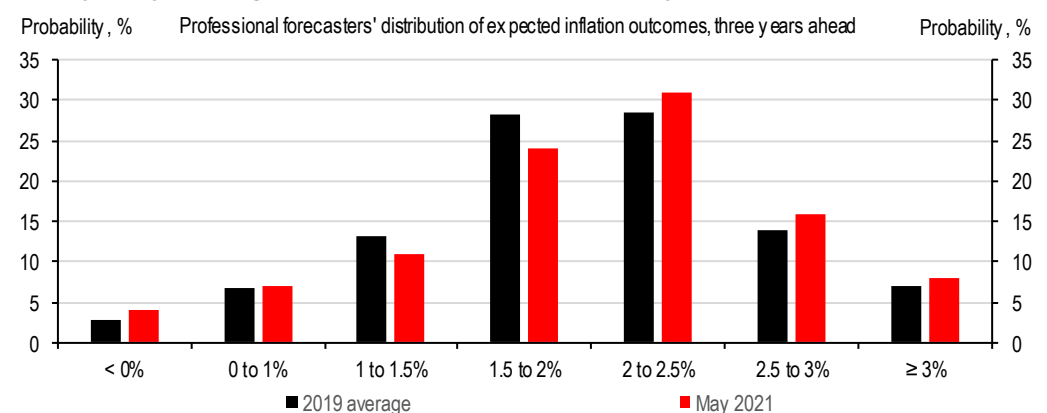


Source: Refinitiv Datastream

One argument in favour of continued underlying price stability is to recognise that, until now, inflationary expectations measured either through “consensus” forecasts, surveys of businesses or households or via market prices have not looked particularly threatening, at least on the upside. The implicit assumption is that inflation only becomes a problem once it is “expected” to be a problem. If deviations from an inflation target are believed only to be temporary, there's nothing to worry about. With stable inflation expectations, central banks can claim to “look through” any near-term increase in inflation and, by implication, keep their policy powder dry.

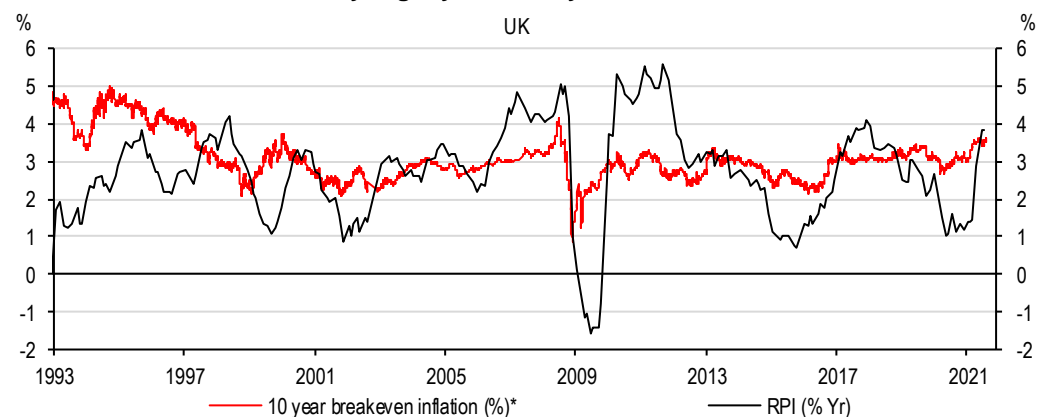
As Gertjan Vlieghe, an external member of the Bank of England's Monetary Policy Committee, concluded in May, "in the UK, inflation expectations measured from surveys of professional forecasters remain well anchored" while there is "no sign of either a rise in the magnitude of perceived risks around the mean, nor of risks being perceived to be more to the upside."² Things are not quite as placid in the US but, as Vlieghe notes, "while the balance of risks has now shifted to more upside risks, they are still modest...but the risk of inflation exceeding 3% in the next couple of years remains within the range seen since 2000, and is much lower than in the 1990s, and even further below the perceived risk in the 1970s or 1980s." US inflation reached 5.4 per cent just a handful of weeks later: whether it will stay that high is, of course, another matter entirely.

3. Only a tiny shift higher in professional forecasters' projections for UK inflation



Source: Bank of England

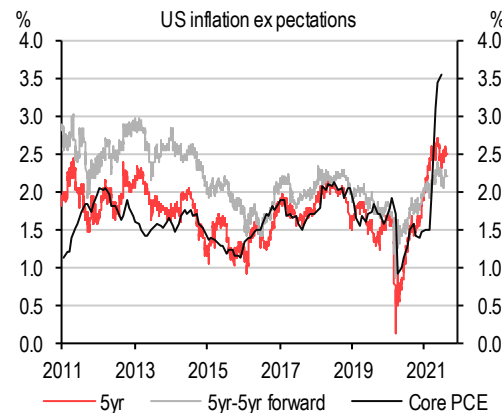
4. Investors have become only slightly more wary about inflation risk in the UK



Source: Bloomberg Note: *Refers to UK RPI inflation

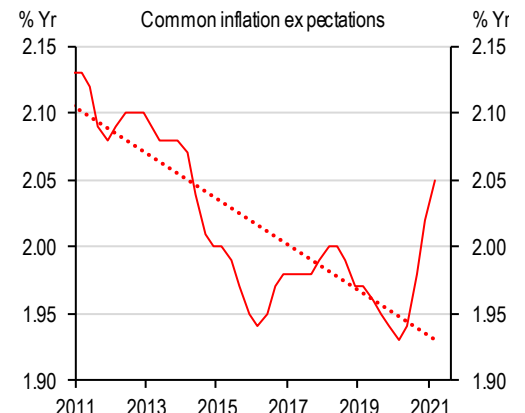
² See <https://www.bankofengland.co.uk/-/media/boe/files/speech/2021/may/what-are-government-bond-yields-telling-us-about-the-economic-outlook-speech-by-gertjan-vlieghe.pdf?la=en&hash=12CD87677EE126D04A0F831672D18190E1410F74>

5. US inflation expectations spiked...



Source: Refinitiv Datastream, Federal Reserve Bank of St. Louis

6....but a broad measure suggests they're still low by past standards



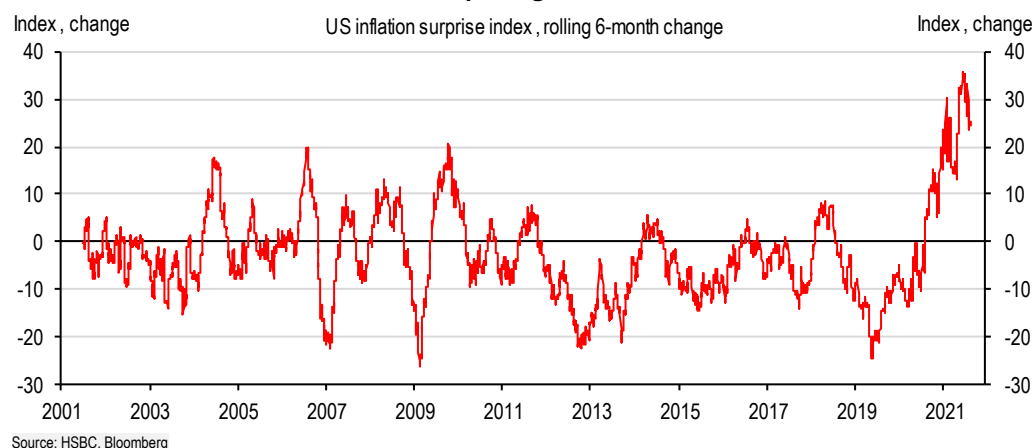
Source: US Federal Reserve, Bloomberg

All very well, but a key difficulty with this approach is whether inflationary expectations are “leading” or “lagging” actual inflation. In the authors’ experience, forecasters typically suffer from a degree of inflationary inertia: if a central bank’s inflation “target” is, say, 2 per cent, the average forecaster will simply “assume” that inflation returns to target within a finite period of time. That assumption, in turn, rests on three ideas:

1. the central bank is focused on the control of inflation alone: in other words, there are no conflicting policy objectives;
2. the central bank has the tools to control inflation and, given enough time, will utilise them appropriately, even when faced with nasty external shocks; and
3. inflation is ultimately determined only by the actions of the central bank alone and not by, for example, developments elsewhere in the world (to be fair, “ultimately” is doing a lot of work here: central bankers obviously recognise that developments elsewhere can temporarily undermine their ability to deliver price stability).

Meanwhile, investors may be overly dependent on simple heuristics (or rules of thumb) and, as such, slow to spot changes in economic fundamentals. Chart 7, for example, shows the HSBC “surprise index” for US inflation since its inception in 2001. For much of the period following the global financial crisis, inflation surprised on the downside relative to economists’ projections. The simple heuristic for investors was, in effect, “economists are always thinking inflation will be higher than it proves to be: we should buy government bonds”. The shift in the direction of “surprise” in 2021 has been remarkable. It’s easy in these circumstances to stick to the old heuristic and thus “look through” what might merely be a temporary upside surprise. There is, however, another possibility. A new heuristic along the lines of “the pandemic has changed everything, including the relationship between growth and inflation” may eventually displace the old version.

7. Inflation can sometimes be rather surprising



Assuming the answer: a little bit of history

Meanwhile, since the Global Financial Crisis, central banks have found themselves pressurised to achieve more than just price stability: they also have had to think about financial stability, economic growth, employment, climate change and – increasingly – their role in supporting government finances, leading to potentially awkward trade-offs. With a combination of quantitative easing and huge increases in borrowing leaving government finances more exposed to changes in short term interest rates – and, by implication, to monetary tightening – there are good reasons to believe that central banks may come under political pressure to limit the use of the tools at their disposal for the purposes of bringing inflation to heel. And, as policymakers of a certain vintage already know, it is very difficult to control inflation if it is partially driven by structural changes occurring elsewhere in the world.

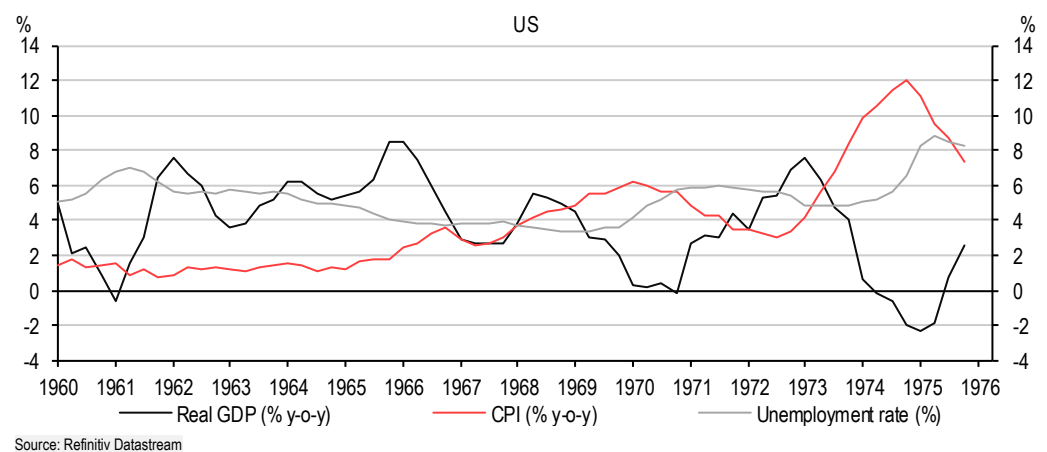
Many of these “theoretical” problems became a reality in the late 1960s and early 1970s. Chart 8 shows annual growth and inflation rates in the US from 1960 through to 1975. Inflation was rising long before the 1973 oil shock. Worse, the trade-off between growth, unemployment and inflation was deteriorating (in other words, for any given growth rate, inflation was heading higher over time, an awkward result for those wedded to “output gap” methodologies). Yet a glance through the minutes from the Federal Reserve’s policy setting Federal Open Markets Committee meetings during that period shows that inflation was not the primary concern. In the mid-1960s, more time was spent worrying about (i) the stability of the Bretton Woods foreign exchange system (sterling eventually devalued in 1967); (ii) the impact of the Vietnam War; and (iii) deteriorating labour relations. These worries, in turn, may have contributed to a lack of sufficient and timely monetary action. Policy rates fell from a peak of 5.75% in late 1966 to a mid-1967 trough of 3.5%, in line with a cyclical slowdown in economic growth³ (chart 9). An already elevated inflation rate, however, fell only modestly and, thereafter, quickly shot up to new highs for the decade. In effect, the inflation genie was allowed out of the bottle, partly because policymakers did not recognise that the growth/inflation trade off might deteriorate. Nor did they have a clear sense of where the so-called “natural” rate of unemployment was. After all, the concept, flaky though it is, had yet to be developed. Inflation expectations did eventually rise, but only after actual inflation was already heading out of control⁴.

³ For an amusing discussion of life under Burns and lessons for today, see Roach, S., The Ghost of Arthur Burns, available at <https://www.project-syndicate.org/commentary/fed-sanguine-inflation-view-recalls-arthur-burns-by-stephen-s-roach-2021-05>

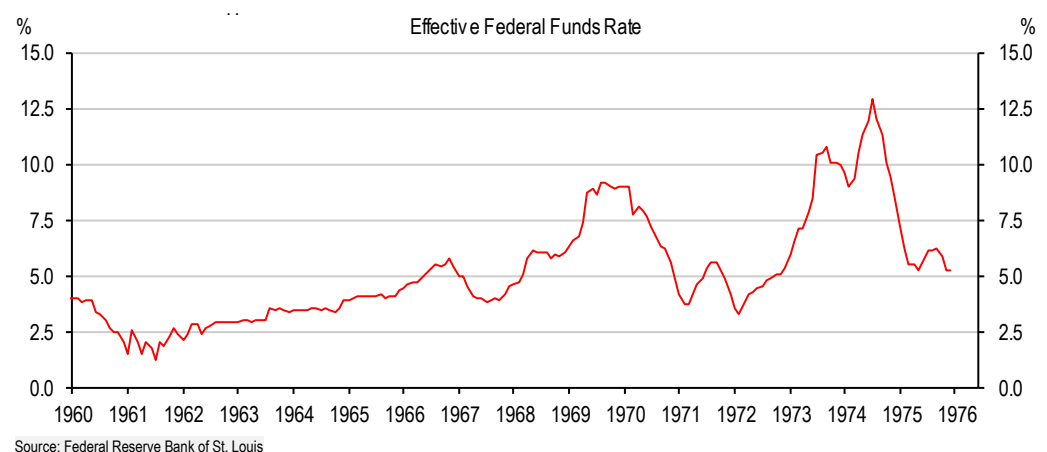
⁴ See, for example, Orphanides, A. and Williams, J., Monetary Policy Mistakes and the Evolution of Inflation Expectations, Federal Reserve Bank of San Francisco Working Paper, May 2011 available at <https://www.frbsf.org/economic-research/files/wp10-12bk.pdf>

The late-1960s and early-1970s were also a period in which inflationary “denial” led to the construction of new inflation indices designed to exclude those pesky prices which had a habit of rising rather too quickly. Arthur F. Burns, the then-Chairman of the Federal Reserve, took the view that price disturbances were most likely to reflect exogenous supply-side shocks which had no relevance for monetary policy. Burns persistently refused to admit there was any kind of generalised inflationary problem. By the mid-1970s, when he belatedly recognised the error of his ways, virtually all prices were rising rapidly. There are echoes of this approach today, with the desire to exclude used cars and other “rapidly inflating” items from an analysis of underlying inflation, without recognising the possibility that such price increases may reflect not just supply disruption but also a set of overly loose policy conditions. One explanation, after all, need not exclude the other.

8. US inflation headed higher in the late-1960s even as economic growth slowed



9. US interest rates fell in the late-1960s: policymakers didn't recognise the inflation “ratchet”



Another way to consider the expectations “problem” is to recognise that forecasters in general are not very good at spotting really big changes in economic circumstances: they stick to their heuristics too. With the benefit of hindsight, economists can provide a satisfactory explanation of the causes of the Global Financial Crisis. Yet although sub-prime mortgages were much discussed before the world economy eventually fell off a cliff, few in real time were able to recognise their importance. It was easier to “hug the consensus”, pretending that economic outcomes in 2008 and 2009 would simply be a case of “business as usual”. Only after the

collapse of Lehman Brothers in September 2008 did economists begin forecasting recessions, by which time they were merely demonstrating their ability to “state the blindingly obvious” (table 10).

10. Consensus forecasters, GDP projections and the “blindingly obvious”

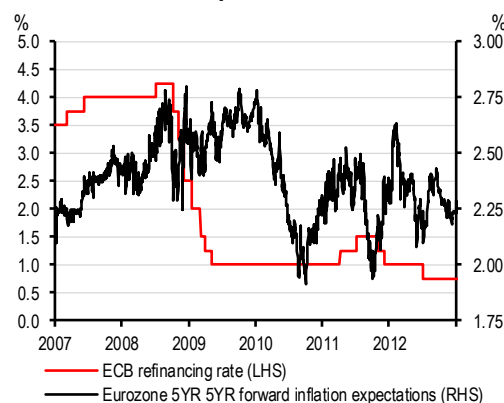
Publication date % Yr	Jan 2008		Aug 2008		Dec 2008	
	2008	2009	2008	2009	2008	2009
US	2.0	2.7	1.6	1.4	1.2	-1.3
Japan	1.5	2.0	1.3	1.2	0.4	-0.9
Germany	1.8	1.9	2.0	1.1	1.6	-1.2
France	1.7	1.9	1.5	1.3	0.9	-0.6
UK	1.8	2.0	1.4	0.9	0.8	-1.5
Italy	1.2	1.5	0.3	0.6	-0.4	-1.1
Canada	2.1	2.5	1.1	2.0	0.7	-0.1

Source: Consensus Economics

The same is likely to be true of inflation. The fact that expectations have not risen says very little about whether, eventually, inflation will rise. Meanwhile, central bankers themselves will never forecast inflation moving sustainably above target for the simple reason that, by doing so, they would appear to be anticipating their own policy failures.

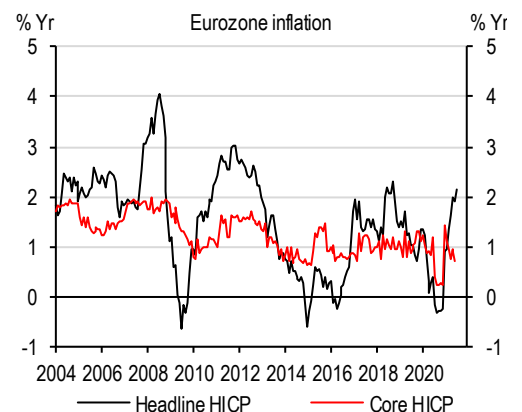
This doesn't mean to say that central banks should become trigger happy at the first sign of an increase in inflation or, indeed, inflationary expectations. Rather, periods of heightened uncertainty are more likely to lead to policy misjudgements. Arguably the ECB has tightened policy prematurely twice, in 2008 and again in 2011. On both occasions 5yr-5yr inflation expectations (ie market expectations of inflation in 5-10 years' time) had risen materially above the ECB's then objective of “close to but below 2%” primarily because of higher commodity prices but the governing council opted to raise rates. On both occasions the ECB soon had to reverse course rapidly as inflation expectations fell back sharply. In the first instance it cut within a handful of months because of global developments (US sub-prime and, in particular, the failure of Lehman Brothers) and in the second because of the sovereign (or more accurately balance of payments) crisis in the Eurozone periphery.

11. ECB twice raised rates in response to rise in inflation expectations...



Source: Refinitiv, Bloomberg

12. ...and on neither occasion did lasting inflation materialise



Source: Refinitiv

How common is 2 per cent?

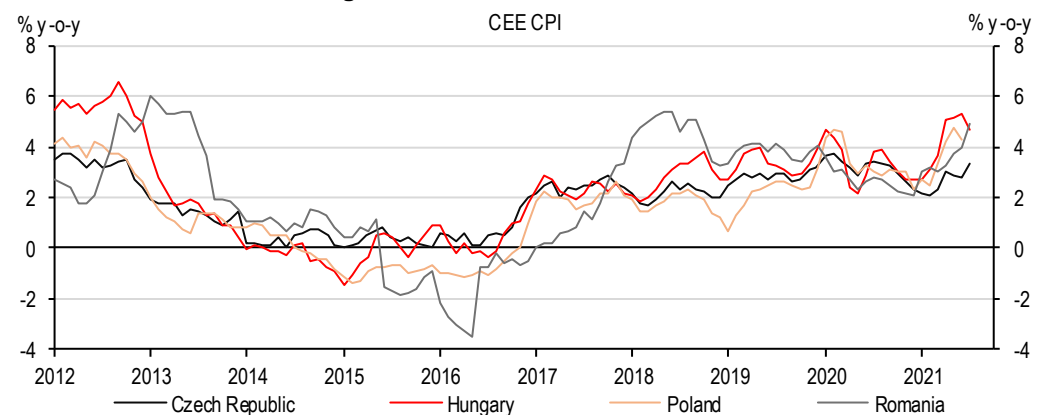
Inevitably, expectations are conditioned by recent experience, one reason why it's so difficult to imagine that we're on the cusp of an inflationary pick-up. Yet behavioural psychology teaches us that such expectations are inevitably biased. In the year following 9/11, many people chose to avoid aeroplanes altogether and, instead, travelled by car even though, statistically, the risks associated with a car journey were (and remain) far greater. Similarly, with inflation in the developed world remaining stubbornly low in recent years, it's easy to imagine that higher inflation is simply an impossibility. Again, however, this may simply reflect our recent observational biases. Table 13 shows that recent inflationary developments in the US and the UK are unusual, at least relative to the full post-WW2 experience. If anything, recent experience has more in common with late 19th Century economic developments, a time when most countries had little or no monetary freedom and were ultimately tied to the gold standard. Yet today, even if they may have some degree of independence, central bankers are no longer tied to a mast of gold preventing them from falling prey to the inflationary Sirens' songs. And some of them (chart 14) have yet to establish lasting price stability, at least as conventionally defined (although, to be fair, the Polish inflation target is 2.5 per cent, plus or minus 1 per cent, so there is already a fair degree of leeway).

13. 2% inflation is unusual: CPI inflation rates, decade averages (%)

	US	UK
1950s	2.1	4.7
1960s	2.3	3.3
1970s	7.1	12.0
1980s	5.6	6.5
1990s	3.0	3.3
2000s	2.6	1.9
2010s	1.8	2.2

Source: FRED, ONS, Bank of England. Note: UK data prior to 1990 is from Bank of England (A millennium of macroeconomic data).

14. CEE inflation has been higher than elsewhere



Source: Refinitiv Datastream

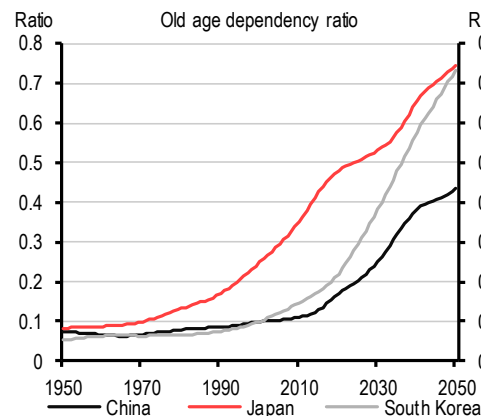
A different approach

To conclude that inflation will remain well-behaved simply because it has been well-behaved recently, or that it will remain well-behaved because most forecasters are currently sanguine, thus smacks of complacency. To understand inflationary risks, we need a better understanding of what – at least in principle - can trigger a period of higher inflation. We also need to know why, in recent decades, inflation has been so well-behaved.

Demographics

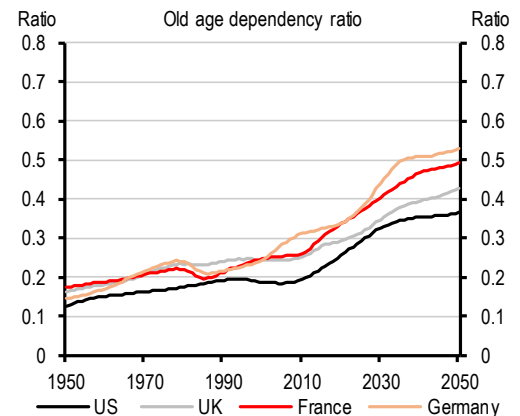
One warning comes from Charles Goodhart and Manoj Pradhan in “*The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*”. Part of their argument is based on the idea that, as populations age, so economies will run short of workers (in other words, the old age dependency ratio will rise). To date, the problem hasn’t materialised because economies with ageing populations have tapped into younger populations elsewhere. Most obviously, Japanese companies have spent the last three decades escaping from a domestic demographic trap by investing in China and other parts of Asia where workers have still been both cheap and plentiful. That, however, may change. China’s own population is now rapidly ageing, as is South Korea’s (charts 15 and 16). Too many pensioners may eventually end up chasing too few workers. At that point, wages and prices might begin to rise more rapidly. Higher inflation would thus be a mechanism to lower the real value of pensioners’ claims on scarce workers’ output.

15. Japan, China and Korea are rapidly ageing



Source: United Nations

16. The West is also ageing, but no longer as rapidly as East Asia



Source: United Nations

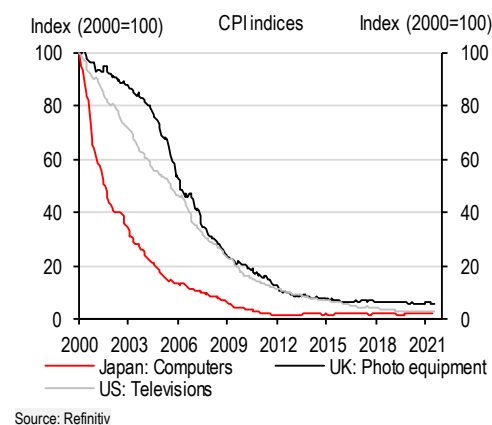
How plausible is this story? There are three objections. First, while it’s true that populations in some parts of Asia are ageing rapidly, other parts of the world – most obviously, much of Africa - are still in the infancy of their baby booms. There are plenty of young people about to enter the “global jobs market” (although, whether they are in the right place and with the right skills is another matter altogether). Second, inflation is not the only mechanism by which the claims of the elderly on the efforts of the young can be reduced. Another option is a sustained fall in asset prices, a result that is more likely to lead to deflation than inflation thanks to negative balance sheet effects (think, most obviously, of Japan). Third, even if Goodhart and Pradhan prove to be right over the long run, their argument is not directly relevant for contemporary inflation worries, which are more closely linked to policy decisions and supply concerns stemming from the COVID-19 pandemic than to shifting demographic trends.

The Great Moderation in reverse

Another approach is to consider the “supply-side” drivers behind the so called “Great Moderation”, an extended period during which inflation structurally fell for any given growth rate (in other words, the reverse of what happened in the late-1960s and early-1970s). This is a potentially controversial topic because many central bankers have themselves claimed the credit for this sustained period of falling inflation, arguing that it was chiefly a product of central bank independence, credible inflation targeting regimes and their own wise stewardship. An alternative explanation, however, is that central bankers simply “got lucky”. Their inflationary “success” was simply a result of being dealt a very favourable hand.

This is ultimately a story about the benefits of globalisation and automation. Put simply, the combination of a huge expansion in the global workforce, thanks to the heightened cross-border mobility of capital, the telecommunications revolution, the end of the Cold War, the increasing use of robotics and, earlier, the container shipping revolution meant that the developed world was faced with declining prices for a wide variety of different products. In effect, access to cheap Chinese and other emerging market labour meant that the West imported “favourable” deflation. Goods prices fell relative to incomes and, as such, purchasing power increased. Add to this the impact on services of heightened cross-border labour migration – particularly in the European Union – and, suddenly, the Great Moderation looks less like a successful application of enlightened monetary policies and more like a stroke of good fortune, a windfall gain that could last only so long as borders remained open and barriers to trade remained low.

17. Automation around the world...



18. ...has meant fairly persistent goods price deflation – until COVID-19



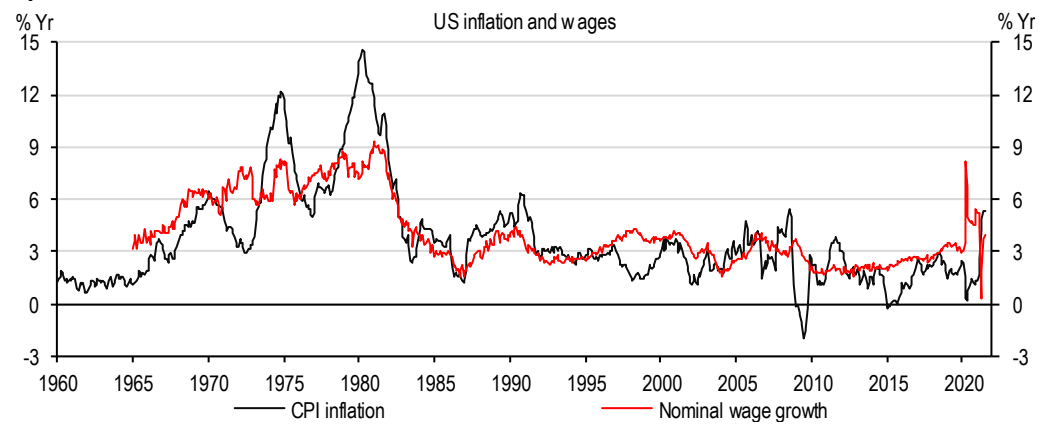
A combination of deteriorating Sino-US relations and a creeping attenuation of supply chains post pandemic threatens to put some of this good fortune into reverse⁵. If other countries are increasingly forced to make a choice between the US and China, the harmony that characterised the decades following the fall of the Berlin Wall – a period which some people thought marked the “End of History” – may be in retreat. As such, the opportunities for further cross border efficiency gains may be reduced⁶.

But would this necessarily be inflation in its truest sense? In one sense, yes, because prices would end up rising relative to where they might otherwise have been. Yet they would be rising relative to wages, not alongside wages, and as such the kind of wage-price spiral that characterised inflation in the 1960s and 1970s would not necessarily occur. Seen this way, the Great Moderation and, if it ever came to pass, a subsequent Great Reversal would represent changes in real living standards merely masquerading as inflation.

⁵ Even if Sino-US relations sink further, other “low cost” producers in Asia – Vietnam and India, for example – will continue to help reduce global production costs.

⁶ For a detailed discussion, see King, S. D., *Grave New World: The End of Globalization, the Return of History*, Yale University Press, 2nd Edition, 2018

19. Higher prices might mean lower living standards rather than a 1970s-style wage-price spiral



Source: Refinitiv

There is, however, an important near term issue that threatens to undermine price stability in a more limited number of countries. While some countries have partially or even completely unlocked domestically following COVID-19, international lockdowns remain in place, in many cases with good reason. Roughly speaking, nations fall into one of three pandemic categories: (i) those which have vaccinated a high percentage of their populations (for example, the US, the UK, the EU); (ii) those which have been seeking to “suppress” the virus by shutting their economies off from the rest of the world (Australia, New Zealand, some countries in East Asia); and, (iii), those which have done neither, typically emerging nations which didn’t have the resources to procure vaccines at an early stage and which cannot easily impose social distancing on their populations (Brazil, India, South Africa).

Those in the “high vaccine” category may be unlocking domestically, but there is no guarantee that they will easily be able to connect with countries and territories elsewhere: vaccines may reduce hospitalisations and deaths but they may have less of an impact on infections and, for that matter, mutations. As such, “suppression” governments are likely to keep people from “vaccine” nations at bay (Hong Kong SAR, for example, banned flights from the UK in the middle of 2021 thanks to the rapid spread of the so-called “Delta variant” of COVID-19). Meanwhile, “vaccine” nations may be unwilling to connect closely with countries where vaccination rates are low if, by doing so, new, vaccine-resistant, mutations might be imported.

In effect, this “variable unlocking” recreates borders and barriers that had slowly been removed over many decades of globalisation. By doing so, there is a greater risk that inflation begins to vary between nations. This would mark a major shift away from the inflationary “convergence” witnessed over the last thirty years (see box for more details).

The impact of “variable unlocking”

A simple thought experiment⁷ can help demonstrate the “borders and barriers” issue, using a primarily two-country model involving simplified versions of, say, the UK and Thailand (with a little bit of Brexit thrown in for good measure). Imagine that the UK unlocks internally, such that its citizens are now able to move freely within the UK. Imagine, too, that the majority of those citizens have built up savings during lockdown and, for the most part, are still gainfully employed. In normal circumstances, some of them might choose to head to Thailand for a holiday. That option, however, is now ruled out. Instead, would-be holidaymakers now have to find accommodation and restaurants in, say, the Lake District or Cornwall. Yet there aren’t sufficient resources to meet this extra demand. The result is a combination of queues and higher prices. In Thailand, meanwhile, it’s exactly the opposite: empty hotels have no choice other than to cut their prices in a bid to attract at least some level of demand. Some of those who would typically be enjoying gainful employment in Bangkok or Phuket either lose their jobs or suffer wage cuts. There will likely also be negative effects on the balance of payments thanks to a reduction in tourism receipts.

As demand rises in the Lake District and Cornwall, so hotels and restaurants try to increase their level of service: occupancy rates, after all, are now much higher, and restaurants are faced with more covers. Yet there is a shortage of staff: many former employees have returned to their family homes elsewhere in Europe and it’s impossible for Thailand’s “spare workers” to up sticks and head to the UK. Thanks to both the pandemic and Brexit, cross-border labour mobility is not what it used to be. Inevitably UK wages in the hospitality sector begin to rise even as – thanks to a workforce lacking experience in the hospitality industry – standards and, hence, productivity decline. The increase in wages adds further to price pressures. The story is now no longer about excess demand alone but, also, a reflection of scarce supply.

To be fair, the adjustment taking place in this model is, in truth, a shift in either the real or nominal exchange rate and not the beginnings of lasting inflation. One way to see this is to imagine a world in which both the UK and Thailand share the same currency. Thai prices and wages fall, reducing the volume of imports that can be purchased from the UK. Prices and wages in the UK hospitality sector rise, reducing the volume of holidays that can be purchased by UK citizens not working in the hospitality sector. British citizens particularly vulnerable are those who previously exported the fruits of their economic endeavours to Thailand (unless, of course, they can immediately switch to selling their wares to, or working for, newly-enriched Cornish hoteliers). The price adjustments, in turn, serve to dampen demand to meet the newly-attenuated supply. However, should policymakers fail to recognise this “demand dampening” mechanism – perhaps because their models related to a pre-pandemic world – the risk is that they will attempt to boost demand beyond the newly restricted levels of supply. As such, inflation could then become more persistent.

This is potentially an important development. In recent decades, a country’s cyclical position increasingly appeared to have little bearing on its inflation experience. Inflation was much the same in most countries regardless of whether output gaps were either positive or negative. It appeared increasingly as though there was a global “law of one price”, doubtless a reflection of globalisation, automation and, thanks largely to the internet, a much greater degree of price transparency. A fractured post-pandemic world threatens to undo some of these effects, pointing to an environment in which localised inflationary pressures become more relevant, policy “errors” have greater significance and, in time, bond and currency vigilantes hungrily return.

Money

Ultimately, any kind of persistent rise in inflation will have to involve money for the simple reason that a rise in the general price level can plausibly happen only in a monetary, as opposed to a barter, economy: inflation, after all, is a process in which money “loses value” relative to a given basket of goods and services. The basic identity relating money to the economy is expressed as $MV=PT$, where M is the stock of money, V is its velocity of circulation (in other words, the number of times the money changes hands within a given period of time), P is the price level and T is the volume of transactions (or, in modern parlance, the volume of

⁷ Thought experiments are not designed to be perfect reflections of reality. Rather, they are designed to illustrate some basic principles, in this case the extent to which “building borders” can lead both to a series of relative price shifts and an increased risk of policy errors.

GDP). As an identity, the equation reveals nothing about causality but it nevertheless helps to emphasise that, in some general sense, inflation is a monetary phenomenon. If we assume, for example, that T follows a fixed path over the medium term, governed by changes in demographics and technology, it equally follows that, over the medium term, changes in M will either lead to changes in P or offsetting changes in V .

In reality, defining M is tricky: obviously it includes notes and coin and sight deposits, but there are plenty of other pieces of paper and electronic entries in circulation that are very close to being money and which, in normal circumstances, are highly liquid⁸. Equally, V is awkward. Contrary to the expectations of monetarists who originally thought money supply targeting was the equivalent of the Holy Grail, V has proved to be both unstable and unpredictable, one reason why inflation targeting gradually took over. In effect, the money supply “middleman” was excluded from the decision-making process.

Still, in a monetary economy, there is ultimately a connection between money and prices, determined in part by the nature of the monetary regime. In the late 19th Century, as an increasing number of countries tied themselves to the gold standard, the supply of money (gold, indirectly) was effectively fixed. That, in turn, meant that periods of strong economic growth – and, hence, rapidly rising T – by definition had to be accompanied by sustained falls in the price level, P (put another way, if the price level was unable to fall, growth would be choked off, partly through a rise in the “real” exchange rate vis-à-vis other countries where P was falling). This had profound implications for the distribution of income and wealth within countries: in the US, for example, rural borrowers typically found themselves burdened with ever-higher real debts even as urban creditors made financial hay.

With a combination of big increases in government borrowing and tremendous strains on non-military production, wartime is typically associated with periods of high inflation (indeed, at the beginning of the First World War, countries suspended their links to the gold standard, paving the way for money-financed increases in government debt alongside significantly higher prices). In the late-1960s, a macroeconomic commitment to full employment in the US – consistent with Lyndon B Johnson’s vision of a “Great Society” – alongside the burgeoning costs of America’s involvement in Vietnam and the Bretton Woods system of fixed (and rarely adjustable) exchange rates which effectively exported US monetary conditions to the rest of the world, led to a gradual erosion of price stability. In 1971, the US broke the US dollar’s link to gold and any residual sense that policymakers were committed to price stability was lost. The 1973 oil price shock merely provided the icing on an already inflationary cake.

Four Buckets

All this may be distant history but it matters for today’s inflationary risks for the simple reason that political realities may be threatening the monetary regime established over the last three decades, a period during which central banks have enjoyed their independence and, to an increasing degree, have adopted inflation targeting. Those risks can be separated into four buckets.

First bucket: Demand risks

“Building back better” sounds marvellous but what does it actually mean? The easy answer, it seems, is to “go for growth”⁹. To be fair, economic growth in the advanced economies has been lacklustre for around two decades now so, in a simple sense, a “go for growth” strategy appears to be attractive. The easiest way of doing so is to boost demand. Supporters of the “secular

⁸ Cryptocurrencies threaten to add a whole new layer of complexity. Liquidity of some near-money substitutes can erode very quickly in a financial crisis, as happened with collateralised debt obligations and even some sight deposits during the Global Financial Crisis

⁹ It can also, of course, mean building back “fairer”, “more equally”, “greener” or encouraging “levelling up”.

stagnation” hypothesis might reasonably argue that a big fiscal boost has the potential to shift an economy from a “low employment” to a “high employment” equilibrium. Yet, notwithstanding the impact of the pandemic, weak growth has, for the most part, not stemmed from low employment but, instead, from limited productivity gains which, in turn, have contributed to low growth in wages¹⁰.

20. The productivity shortfall: annual average percentage increase in GDP per hour worked per decade

	1980	1990	2000	2010	2019
Canada	1.7	0.9	1.7	0.9	1.0
France	4.0	3.0	1.8	0.9	0.9
Germany	3.8	2.4	2.1	0.9	0.9
Italy	4.1	1.8	1.6	0.0	0.2
Japan	4.3	4.0	2.3	1.2	0.9
Spain	4.7	2.8	1.0	0.8	0.8
UK	2.9	2.2	2.7	1.4	0.2
US	1.5	1.5	1.8	2.2	0.7

Source: OECD

It follows, therefore, that boosting demand may not have the desired impact on economic growth. As we argued in “*How to Build Back Better*”¹¹, the risk is either that demand stimulus leads to higher inflation or, through its impact on interest rate expectations, triggers a major fall in asset prices. Either way, the desired outcome would not be achieved. At the extreme, the danger is a repeat of what later became known in the UK as the “Barber Boom” in 1972, when the eponymous Chancellor of the Exchequer attempted to boost demand in the hope that, by doing so, it would create its own supply (and return the ruling Conservative Party to power in the following General Election). Inflation surged, wage and price “freezes” were imposed, workers went on strike and, in 1974, the Tories were thrown out of office. “Building back better” may be linked to substantial increases in public spending designed to improve the “supply side” of an economy – through the construction of ports, roads or railways, say – but the evidence to suggest that economies have been transformed by doing so is limited: compare, for example, the private sector funded US Great Northern Railway of the 19th Century with the trials and tribulations of the UK’s publicly-funded HS2 high-speed rail project today.

Today, there is already growing evidence of an increased mismatch between demand and supply¹². Since mid-2020, German industrial orders have surged, reflecting a rapid recovery in demand, but German industrial production has, if anything, subsequently faded. Meanwhile, although both semiconductor production and sale have rebounded, lead times have extended even further (charts 21 and 22). Short-term bottlenecks they may ultimately prove to be but, as we discuss below, it’s not obvious that supply will always easily be able to respond to demand.

¹⁰ Low wage growth also reflects the impact of automation in “hollowing out” various areas of employment, forcing many workers to compete for jobs below their previous “pay grade”.

¹¹ See *How to build back better*, HSBC Research, 7 April 2021

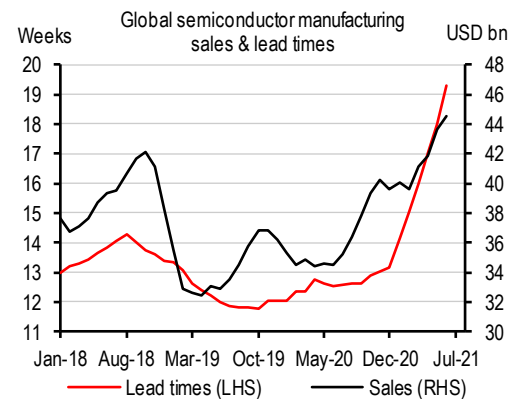
¹² See *The death of disinflation: Upside inflation risks are in supply*, HSBC Research, 7 September 2020 and *The boom and the bottlenecks*, HSBC Research, 3 June 2021

21. German orders have rebounded but production has not



Source: Refinitiv

22. Companies have to wait longer and longer for chip deliveries

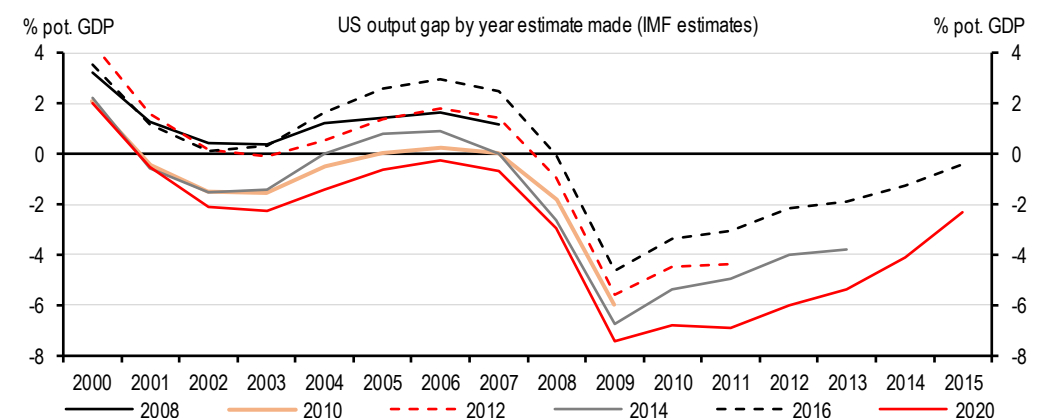


Source: Susquehanna Financial Group; Refinitiv

Second bucket: Supply risks

Central banks are sticklers for “output gap” approaches to their monetary decisions. If demand is temporarily too high relative to an economy’s supply potential, the risk of higher inflation rises and, thus, there is a bias towards tightening monetary policy. The opposite applies if demand is temporarily too low. The conceit in this approach is the idea that, somehow, an economy’s supply potential is either observable or knowable in real time. On either count, it isn’t. “Productive potential” is no more than a working assumption that will be proved right or wrong only in hindsight. One way to demonstrate this is through the copious *ex post* revisions to estimates of the output gap (chart 23)¹³. In real time, policymakers simply don’t know the balance between supply and demand, partly because “productive potential” is an elusive concept.¹⁴

23. Estimates of the output gap tend to be very unstable



Source: IMF World Economic Outlook, various editions

There’s a tendency to believe that, if activity is unexpectedly depressed, or the growth rate is disappointingly low, the culprit must be a shortfall in demand¹⁵. Table 24, however, suggests that longer term “supply-side” forces can also play a role, undermining the idea that an economy

¹³ See, for example, *The credibility gap: Why the bust after the boom will linger for a long time*, HSBC Research, 12 September 2008 and *Higher inflation: Temporary or longer-lasting?*, HSBC Research, 5 February 2021.

¹⁴ For a detailed discussion of supply threats to price stability, see Wells, S., *The Death of Disinflation: Upside Inflation Risks are in Supply*, HSBC Research, September 2020

¹⁵ This view was particularly widely held by those who blamed austerity for the absence of decent economic recoveries in the post-GFC world.

can settle down into a “steady state” growth rate that rarely changes. “Peak-to-peak” growth rates in the US have shifted enormously over the last 75 years, suggesting that there is no “one size fits all” rate of long-term economic growth.¹⁶

24. Some growth rates are bigger than others

Business Cycle Peak Dates	Peak-to-peak compound annual growth rates for US GDP (%)
Q4 1948	-
Q3 1953	5.1
Q3 1957	2.8
Q2 1960	2.9
Q4 1969	4.5
Q4 1973	3.7
Q1 1980	2.9
Q3 1981	1.4
Q3 1990	3.4
Q1 2001	3.3
Q4 2007	2.6
Q1 2020	1.5

Source: Federal Reserve Bank of St. Louis, HSBC calculations, Economic Cycle Research Institute

As argued in “When the Money Runs Out”¹⁷, the late 20th Century was a period particularly favourable to strong “supply-side” economic growth, linked to an expansion of tertiary education, increased opportunities for women in the workforce, “labour-saving” domestic appliances, the opening up of cross-border trade after the protectionism and isolationism of the interwar years, the further expansion of consumer credit and, in time, the impact on labour supply of baby boomers entering the workforce. Long before the pandemic, some of these “forces” were already showing signs of peaking, as reflected in much weaker productivity gains in the first two decades of the 21st Century. The pandemic may, however, have made some things worse, at least temporarily.

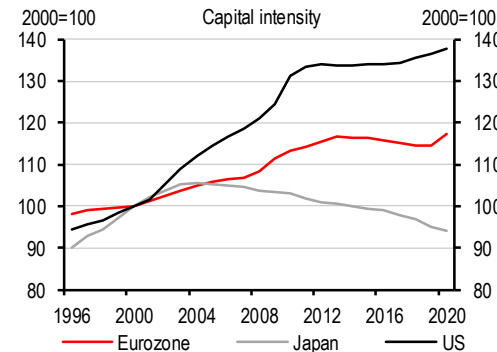
Complex global supply chains have been shown to be vulnerable, leading to an increased “home” or “local” bias regarding production lines. As we have seen, workers are no longer so able – or willing – to cross borders with the result that jobs are “here” and would-be workers are “there”. Some industries – airlines, commercial property and business hotels - will likely shrink permanently. Displaced workers may not have the skills easily to be employed elsewhere.

Admittedly, the pandemic appears to have accelerated the use of technology in some sectors – notably services - which could potentially result in higher productivity growth even as the opportunities for further cross border efficiency gains fade. Over the past decade we had already seen the impact of automation in retail through both online sales and self-checkouts in shops (although if the person in front of you in the queue is not tech savvy, any “theoretical” productivity gains can be rapidly eroded). Fast food services have also seen heightened automation during the pandemic. There are also some higher paid sectors employing some of the largest numbers of people – education & health and business & professional services – where changes were already underway pre-pandemic. Helped along by investment in IT-related business investment, transformational shifts have been massively accelerated over the past year in, for example, telemedicine and online learning. Rapid progress is being made in areas of healthcare related to robotisation which is already starting to go well beyond using drones for medical deliveries. However, whether any of this leads to an improvement in productivity – as opposed to a deterioration in customer service – is up for debate. In some cases, electronic “distance” can create opportunities for service providers to “hide” from their responsibilities, a problem that has already arisen in, for example, the UK’s National Health Service.

¹⁶ To be fair, part of the variance is associated with changing demographic patterns. Nevertheless, as we have already seen, growth in output per hour has also varied enormously.

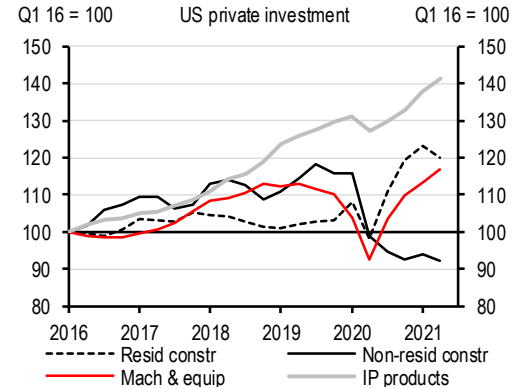
¹⁷ King, S. D., *When the Money Runs Out: The End of Western Affluence*, Yale University Press, second edition, 2018

25. Weak productivity post-GFC partly reflects a lack of investment



Source: Refinitiv

26. Will higher US tech investment raise productivity in some services sectors?



Source: US Bureau of Economic Analysis

Whether coming waves of automation are sector stories or can be expected to enhance economy-wide productivity growth is another area of uncertainty. Much may come down to investment. At least part of the failure of the increased use of robots and other technological innovations to deliver productivity improvements for the broad real economy over the past decade appears to be explained by a lack of “capital deepening” reflected in a decline in the capital-labour ratio (particularly in Europe and Japan). But a shortage of suitable skills is an issue too: while weak investment can help to explain weak labour productivity, if workers can’t use the higher tech equipment effectively, then total factor productivity will be weak too.

Working from home: good or bad for productivity and wages?

Separately, the jury is still out on the effects of working from home (WFH). Some reports have offered encouragement. Pre-pandemic, some companies and roles allowed for a degree of hybrid or remote working. Most work, however, was carried out “physically”, in the sense that teams worked together in a common location. This was considered beneficial for productivity because it allowed for greater exchange of ideas and knowledge, strengthened relationships, trust and teamwork and offered managers the ability to monitor workers more effectively¹⁸. But it also had costs, both financially and in terms of productivity. Workers spent time commuting, wasted hours in pointless meetings¹⁹ and faced more distractions (e.g. from noise). Companies paid more for office rentals, utilities and food and travel for their employees. Moreover, in-person work limited how wide the net could be cast to attract workers both within the domestic country and even across borders.

By no means have all companies accepted that WFH will be a permanent feature of the landscape. The direction of travel, however, is clear. There has been a step change in the share of work that is being carried out remotely. Some preliminary surveys undertaken before and during the pandemic suggest remote working or “hybrid” working has had a positive impact on productivity²⁰ and recent large surveys of business managers and employees have shown a similarly successful impact on productivity (albeit based on perceptions rather than measurable gains²¹). It is probably too soon to gauge whether WFH is, ultimately, a positive or negative supply shock but so far the news on productivity has been encouraging.

WFH might also have implications for the distribution of wage growth. Not all jobs can be undertaken remotely (estimates suggest up to a third in Europe and a little higher in the US²²) but they tend to be higher paying jobs. So the ability to cast the net wider for higher-earning employees working largely from home could mean lower wage growth in those roles - irrespective of the productivity implications - relative to those sectors where physical presence is required to perform the work, such as most

¹⁸ Impact of digitalisation on tax revenues (British tax review page 158)

¹⁹ Some of those meetings have transferred to Zoom but may still be pointless

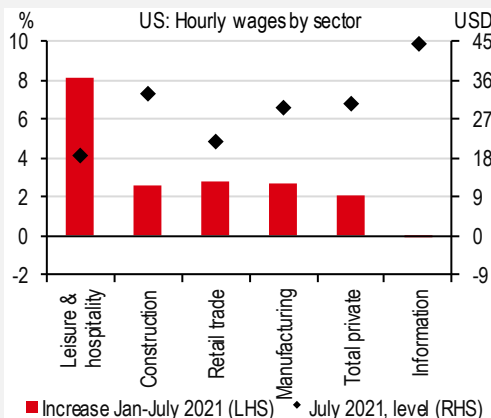
²⁰ Bloom et al “Does working from home work? Evidence from a Chinese experiment” (2015) 130(1) Quarterly Journal of Economics 165 Choudhry et al, “GitLab: work where you want, when you want” (2020) 9 Journal of Organisational Design

²¹ PwC US, “It’s time to reimagine where and how work will get done: PwC’s US Remote Work Survey – January 12, 2021” (January 2021)

²² Dingel and Neiman, “How Many Jobs Can be Done at Home?” (2020) 189 Journal of Public Economics 104235.

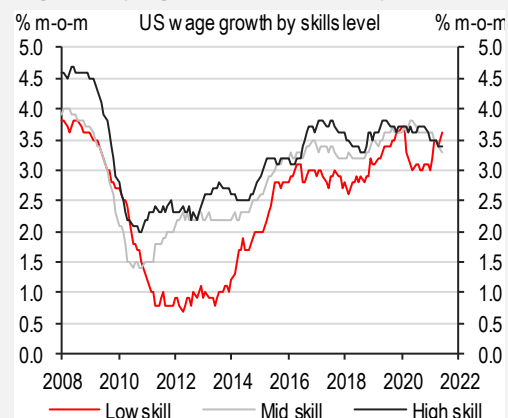
roles in construction or manufacturing as well as leisure and hospitality. In the US workers in the leisure and hospitality sector have seen by far the biggest wage increases in recent months (rising 8% in the seven months to July) even though the number of people employed in the sector is still 10% below pre-pandemic levels. The supply of willing workers in the sector has fallen significantly. If this trend persists, it would be a step change from the post GFC period where higher-skilled, higher-paid workers typically enjoyed larger pay gains than lower skilled workers. Some US labour availability challenges were actually building prior to the pandemic, reflected in upward pressure on the lowest quartile of wage earners so this is not entirely new. But for higher earners it would appear pay cuts are even possible in a post-pandemic world: Google announced in August that workers who choose to work permanently from home in an area of the country or state where living costs are lower than in the location of the office, will see lower pay. Facebook and Twitter have already cut pay for some remote employees²³.

27. Hospitality workers have seen wages soar this year but higher paid workers have not



Source: Refinitiv Datastream

28. More WFH could mean lower wage growth for higher skilled higher paying roles – particularly remote workers



Source: Atlanta Fed

Yet there are also productivity risks in the opposite direction. New recruits will take longer to “learn the ropes” if the casual conversations and chance meetings that are a typical part of office life no longer take place. Individuals may take longer to establish any kind of franchise value both within a company and with its customers. Existing incumbents may merely “coast” if they know that completion from new entrants will take longer to come into effect.

Gauging the scale of this pandemic-influenced adjustment is nigh-on impossible. Knowing that the adjustment is happening, however, is enough to suggest that estimates of the output gap should be taken with an even bigger pinch of salt than usual. Under these circumstances, macroeconomic policy errors become a lot more likely²⁴. If policymakers underestimate the permanent damage to supply from the pandemic and stimulate aggregate demand too much then inflation would follow. But if the permanent loss to supply proves to be minimal and the level of consumer spending remains materially lower, then the extra slack in the economy from a failure to stimulate demand sufficiently could result in below-target inflation or even outright deflation.

Third bucket: Financing risks

If you're a fan of Modern Monetary Theory, you're not going to be unduly fussed by the huge increase in government debt either in the aftermath of the Global Financial Crisis or, more recently, during the pandemic²⁵. And if inflation does eventually pick up, supporters of MMT will simply advocate tighter fiscal policy to deal with the consequences. In reality, however, the electoral cycle has always tended to compromise wise economic management, one reason why, from the late-1980s onwards, an increasing number of central banks were granted their operational

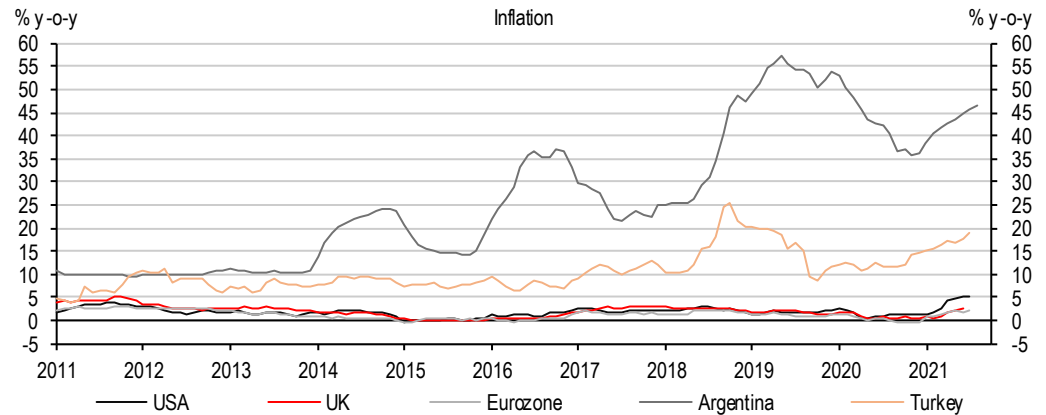
²³ Reuters, Pay cut: Google employees who work from home could lose money.

²⁴ See *Global inflation: What does COVID-19 mean for prices?*, HSBC Research, 4 May 2020

²⁵ See, for example, *Future Saviour or False Prophet?: Modern Monetary Theory (MMT) examined*, HSBC Research, 8 October 2020

independence. And where central bankers have been heavily influenced by their political masters the inflationary consequences have been discouraging, to say the least (chart 29).

29. Inflation isn't low everywhere



Source: Refinitiv Datastream, Central Bank of Argentina

There is now, however, a new problem associated with the effects of quantitative easing. The total interest cost for a government when its bonds partly sit on its central bank's balance sheet is as follows:

*Total interest cost = (interest rate on government bonds * government bonds held by the private sector) + (policy rate * government bonds held by the central bank).*

Put another way, as the proportion of outstanding government debt held on the central bank's balance sheet increases, so the sensitivity of the fiscal arithmetic to changes in short term interest rates also rises. When monetary policy is unusually loose and, thus, short term interest rates are particularly low, this works in the government's favour: debt service costs themselves remain low. When, on the other hand, monetary policy is tightened and short term interest rates are rising, the public finances begin to deteriorate: debt service costs head higher. Other things equal, monetary tightening in these circumstances leaves government with less money to play with (although a strong recovery will raise more tax revenue with which to service the higher interest burden).

As such, central bankers may come under pressure from governments to keep interest rates lower for longer not necessarily for the purposes of good economic management but, instead, to limit the fiscal risks associated with what would otherwise be entirely appropriate monetary tightening²⁶. In this situation, "lower for longer" would simply mean the re-establishment of fiscal dominance, with its attendant inflationary risks.²⁷

Fourth bucket: International macro policy risks

Macro risks fall into two broad categories: those associated with a policy error within a given policy framework and those associated with a change in the framework itself. Arguably, the US is currently facing both dangers. The Biden administration's stimulus package is occurring at the same time as the US economy is receiving an automatic boost thanks to the ending of lockdowns and the potential freeing up of "forced savings" during the pandemic. That, on its own, might be enough to raise demand beyond available supply. Alongside this, however, the Federal Reserve has shifted its framework to adopt "Average Inflation Targeting", allowing the

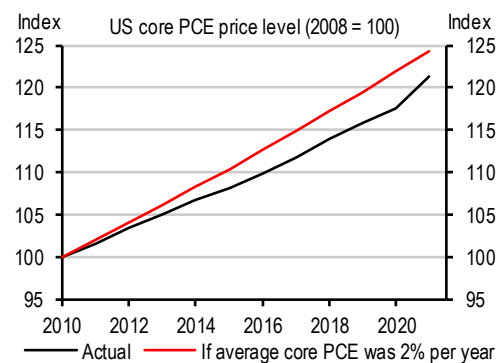
²⁶ There's more than one way of applying pressure: central banking decision makers are, after all, typically appointed by their political masters.

²⁷ An alternative is for the central bank not to pay interest on commercial bank reserves as market rates head higher but, as Andrew Bailey, the Governor of the Bank of England has noted, this would effectively be a "backdoor" tax increase on the banks. The issue is likely to promote an intriguing debate about where monetary policy ends and fiscal policy begins.

central bank both to “look through” any near-term pick-up in inflation and to tolerate extended periods of inflation “above target”. This, in turn, suggests the Fed might react too slowly to any unexpected rise in inflation, arguing that any increase in inflation should be regarded only as temporary. It could be the late-1960s all over again. Indeed, given the huge pandemic-related surge in money supply which, arguably, only failed immediately to translate into inflation because of the impact of lockdown on velocity, there are good reasons for caution.

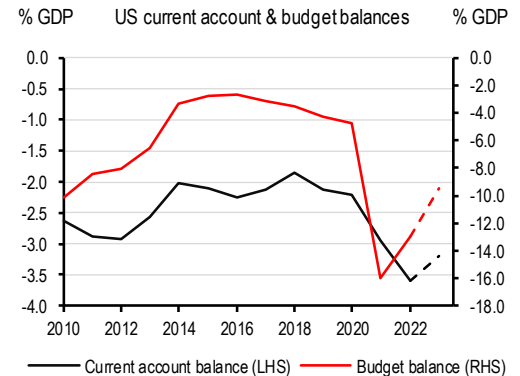
The international ramifications of such an approach partly hinge on the performance of the US dollar. A big budget alongside an easing of lockdown restrictions in the US – particularly compared with economies elsewhere in the world – points to the emergence of “twin deficits” on a scale last seen in the 1980s. Back then – and contrary to many contemporary predictions – the US dollar shrugged off the deterioration in external finances, making big gains thanks to very high interest rates imposed by Paul Volcker’s Federal Reserve in a bid to bring inflation to heel. The policy worked both by forcing inflationary expectations lower in the US and by crushing economies elsewhere: the Latin American debt crisis, after all, was partly a consequence of Volcker’s actions.

30. Policy patience implied by average inflation targeting...



Source: Refinitiv, HSBC calculations and core PCE estimate of 3.2% ave in 2021.

31. ...against a backdrop of double deficits, could have implications for USD



Source: Refinitiv

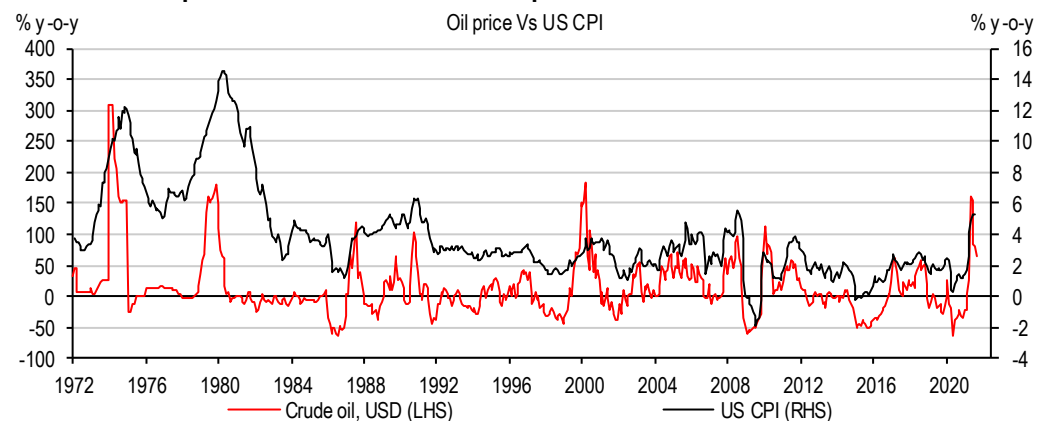
Today, the opposite may apply. True, the Federal Reserve could change its mind and “do a Volcker” but, based on its AIT approach, the likelihood is that emerging twin deficits would be accompanied by very low interest rates. Other things equal – and in direct contrast to the 1980s experience – the US dollar might then fall rather than rise. Rather than exporting disinflationary pressures to the rest of the world, the Fed would, in effect, be exporting inflationary pressures, as it did in the late-1960s and early-1970s. Only if countries were willing to accept currency appreciation against the US dollar would this outcome be avoided. In reality, however, many countries would be more worried in the short run about the effects of currency appreciation on their exports, thus increasing their “inflationary” exposure to the US twin deficits.

Looking through it...or how long is the long run?

These risks suggest that “looking through” any rise in near-term inflationary pressures is not without risk. The issue is not so much whether governments and central banks intend, secretly, to push inflation higher. It is, instead, whether our institutions can quite so easily cope with the conflicting political economy imperatives being thrown at them. “Building back better” won’t be so easily achieved with trigger happy central bankers but, should monetary policy remain too loose for too long, we’re likely to end up with inflation instead. It’s not good enough simply to assume that “small country A” will avoid “big country B”’s inflation unless it’s clear how small country A’s central bank responds to movements in its exchange rate. Arguing that inflationary expectations have not yet shifted doesn’t get us very far: expectations may only adjust with a lag to actual economic developments and it is those developments, in turn, which will help establish whether a central bank’s credibility is in trouble. As for “the long run”, it’s a view that always suffers from Keynes’s famous observation that, over that time period “we are all dead”.

Put another way, “looking through” inflation will be successful only if the causes of inflation turn out to be temporary. One way to think about this is the distinction between changes in headline inflation caused by the vagaries of commodity prices and changes in “core” inflation caused by structural pressures thereafter magnified by changes in expectations. Chart 32 shows annual percentage changes in oil prices going back to the early 1970s alongside the headline US inflation rate. There have been plenty of oil “shocks” but only those in the 1970s appear to have had a substantial impact on inflation. It’s another way of saying that changes in commodity prices alone do not determine broader inflationary outcomes.

32. Inflation depends on much more than the price of oil



Source: Refinitiv Datastream

The experience of the 1970s does, however, demonstrate conditions under which changes in commodity prices are more likely to be a lead indicator of broader inflationary problems (or, put another way, how changes in commodity prices can sometimes be consistent with more deep-rooted inflationary difficulties). This is the nub of the “looking through it” argument. The claim is, ultimately, that even if commodity prices are now rising, there is nothing to worry about because, unlike the 1970s, we no longer face “deep-rooted” difficulties.

To be fair, there have been important changes in the inflationary process since the 1970s. In the developed world, unionisation has declined, the number of days lost to strikes has dwindled and, in general, industrial relations have improved. Technology, meanwhile, has created a more atomised labour market in which individual workers sell their labour via apps to monopsonistic employers: wages have come under downward pressure as a result. Thanks to Amazon and Alibaba, price discovery is much greater than it once was, making it more difficult

for avaricious retailers sneakily to pass cost increases on to their customers in the form of higher prices. As a result, “competing claims” or “cost push” models of inflation no longer seem as worrisome as they once were.

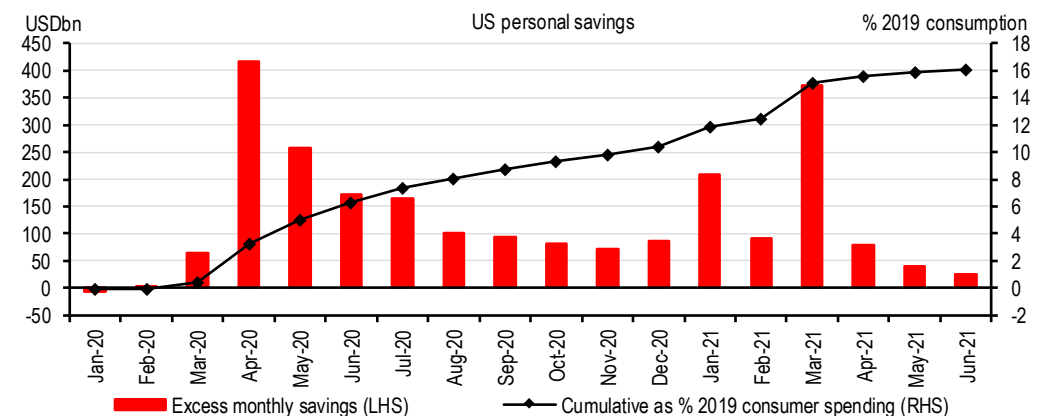
Knowing all this, however, does not prove that we should simply “look through” any increase in inflation. We come back to $MV \equiv PT$, the identity that links the monetary economy to the real economy. In it, there are no unions, no technology effects on prices or wages, and no industrial relations, whether good or bad: markets, meanwhile, can be monopolistic, oligopolistic or perfectly competitive. We’re getting close to Milton Friedman’s famous dictum that “inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output”. Friedman wasn’t quite right: in theory, inflation can rise if velocity rises for any given money stock or if output falls for any given supply of money and rate of velocity. Yet he was nevertheless making an important point: the arrangement of political, economic and social institutions in any country at any fixed point in time may determine the degree to which inflation rises but, ultimately, there’s no escape from the tyranny of “too much money chasing too few goods”. Even the best behaving countries in the 1970s from the perspective of price stability – most obviously, West Germany and Switzerland - performed terribly when benchmarked against today’s inflation targets.

Seen this way, our four buckets are highly relevant. They don’t in any way prove that inflation is about to take off. They do, however, suggest that the risks have shifted and that, at the very least, we should recognise that the return of inflation is a bigger danger now than at any previous point since central banks collectively began to enjoy their independence in the 1990s.

Mountains and molehills

Some, however, choose to be more relaxed. James Galbraith, a well-known economics professor in his own right but also the son of John Kenneth Galbraith, takes the view that the supposed risks associated with inflation are hugely overblown. Taking on Larry Summers, he accuses those worrying about inflationary pressures in the US of pursuing “odd logic, beginning with the conjecture that *savings cause inflation*”. John Maynard Keynes argued the reverse: excess savings are withheld from demand, causing unemployment²⁸.

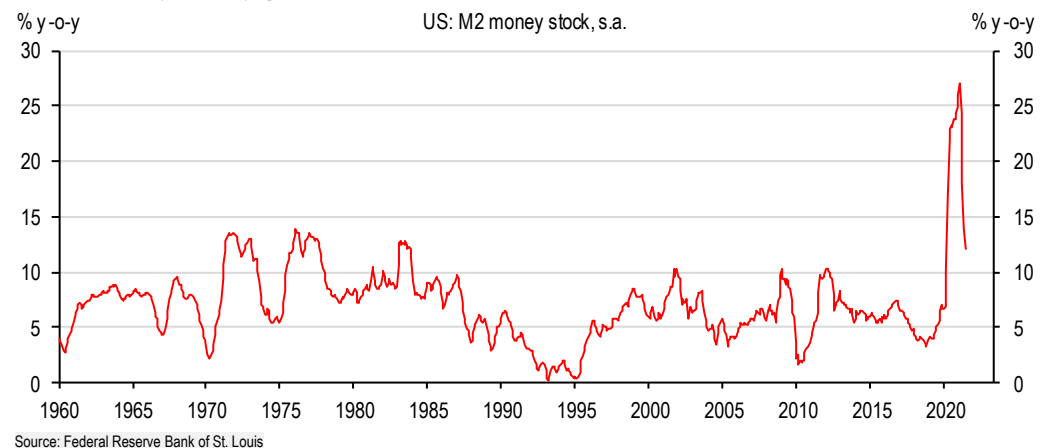
33. Households in aggregate saved a lot over the past year or so but how much will be spent?



²⁸ See, for example, <https://www.project-syndicate.org/commentary/larry-summers-weak-inflation-argument-by-james-k-galbraith-2021-06>

There are two problems with this argument. The first is that much of the increase in US savings happened in 2020, at the beginning of pandemic related lockdowns, not subsequently. It is the possibility of a post-lockdown decrease in savings that creates the potential for inflation, particularly in combination with the Biden administration's stimulus package: it is the flow of savings, not the stock, that matters. The second problem comes back to $MV=PT$. Last year's lockdowns were associated with a huge increase in M and, equally, a huge collapse in V . In effect, the Federal Reserve and other central banks flooded the world with cheap money. While some of the money found its way into equities, real estate, fine art, antiquarian books and cryptocurrencies, much of it ended up doing not very much at all, trapped in lockdown aspic. As lockdowns end, the risk is that this "idle" money ends up being spent, leading to a rise in V and, thus, an equivalent rise in PT . Admittedly, it's possible that all of the increase in V ends up reflected in an increase in T alone but, given our four buckets, such an outcome would likely reflect good luck rather than good judgement.

34. US money supply growth has been a little more rapid of late

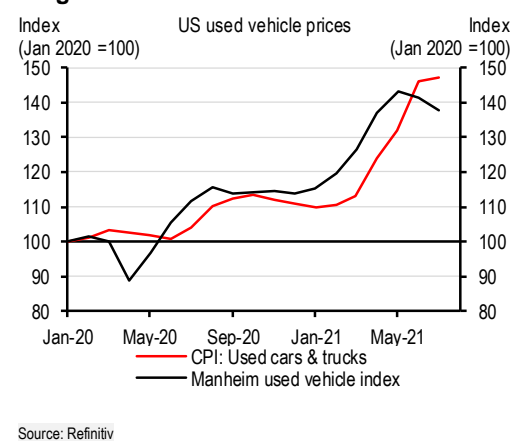


Another "molehill" comes in the form of the memorably-named *Ketchup Bottle* economy, courtesy of the FT's Martin Sandbu²⁹. This variant focuses on the impact of supply bottlenecks and, in effect, is a pandemic-driven version of a commodity price shock. It's essentially a short-term argument, based on the idea that the pandemic has hugely disrupted normally-reliable systems of logistics: containers are in the wrong places, workers are in the wrong countries and semiconductors are in short supply, in part because demand for cars has held up much better than originally anticipated.

35. Lumber prices have fallen back sharply



36. Will other pandemic-related price surges follow suit?



²⁹ <https://www.ft.com/content/8daa2740-30de-4817-a687-c69b345095cd>

This is a large-scale version of the “cobweb” theories beloved of undergraduate textbooks. The idea is simple: higher prices will, in time, encourage activity to “normalise”: containers will go back to where they should have been, foreign workers will be welcomed back with open arms and semiconductor production will rise to meet demand. Once supply has “normalised”, prices will come back down again. By boosting production, near-term inflation will give way to long-term disinflation. If this coincides with the eventual reversal of the Biden fiscal stimulus, we might end up with even more disinflation than would have occurred before the pandemic took hold.

Yet we don’t know for sure whether the rise in inflation witnessed so far is purely the result of supply bottlenecks. Moreover, it seems odd to focus on the effects of stimulus withdrawal when we have yet to see the effects of the stimulus itself: it’s a bit like saying the inflation of the 1970s and early 1980s was never a serious problem because, eventually, monetary policy was tightened sufficiently to restore price stability: true, but vacuous.

A third molehill comes in the form of US inflation in the late-1940s, a temporary increase in price pressures that stemmed from the build-up of government debt and the expansion of money supply during the Second World War. As Frederico Mandelman notes³⁰, a similar debt and money supply pattern has been seen during the pandemic. Pent-up private demand that had been constrained during wartime – when production was diverted to armaments – was finally unleashed in 1946 and 1947 as wartime price controls were lifted. Inflation surged to a peak of 20 per cent but quickly fell back, thanks to a combination of contractionary policies and - reflecting the impact of the earlier Depression years - subdued inflationary expectations.

But is the post-WW2 experience directly comparable? Not really. Much of the inflation back then was, in truth, a delayed response to wartime monetary and fiscal loosening thanks largely to the eventual lifting of price controls. This time around, there are no price controls to be lifted and the risk lies not with a delayed reaction to past stimulus but an eventual reaction to current stimulus.

Conclusions: scenarios under uncertainty

In economics, there are few “guarantees”. True, disinflationary pressures have been operating for decades, contributing (alongside slower productivity growth) to “lower for longer” interest rates. Yet, as with any process of induction, the past can only be an imprecise guide to the future.

This report has set out a series of reasons for why uncertainty regarding the outlook for inflation has risen. Ours is not a story about forecasting but, rather, about institutions, frameworks and changes in political economy, all of which threaten to undermine conventional forecasting approaches. We have closely examined the conditions under which inflation is more likely to misbehave. Those conditions are more relevant now than in many a year.

This is not to say that the forces of disinflation have disappeared. Automation and price transparency both point to some degree of enduring constraint on inflation. Thanks to new, atomistic, recruitment models, unions don’t enjoy the powers of old. As such, cost push models of inflation don’t seem as frightening as they once were.

Yet many of the factors which contributed to disinflationary pressures are no longer behaving as they once were. There is no single-minded determination on behalf of central banks to stamp out inflation whenever it appears, either because they now have multiple (possibly conflicting) objectives or because, in the Federal Reserve’s case, there is a willingness to engineer periods of “above average” inflation to compensate for other periods in which inflation is below average. The risks of fiscal dominance have increased, partly thanks to the central banks’ own actions in

³⁰ See <https://www.atlantafed.org/-/media/documents/research/publications/policy-hub/2021/05/17/04-wwii-and-today--monetary-parallels.pdf>

committing to quantitative easing. By doing so, they have, in effect, increased the sensitivity of government debt interest payments to changes in short term interest rates: good news on the way down, but not such good news on the way up. The commitment to “build back better” is similar in tone politically to the “Great Society” vision of Lyndon B Johnson, an idea ultimately undermined by late-1960s inflationary excess. Meanwhile, the pandemic has only served to exacerbate a number of pre-existing anti-globalisation trends, all of which threaten to undermine supply side performance. As such, output gap calculations are even more hazardous than they normally are.

So how should we think about the future? If conventional forecasting models – most of which simply assume inflation returns to target within a year or two – are redundant, how can we possibly provide a sensible, credible, view about future inflationary pressures? One way is to consider a limited number of scenarios, ranked both in terms of current and future likelihood. Each scenario, in turn, contains an echo from the past. In other words, each scenario has precedent.

Scenario 1: Business as usual (or the “looking through it” scenario)

A case of “the king is dead, long live the king”. Maybe central banks are right to “look through it”. Outside wartime, surging inflation is something of a rarity other than in those countries where fiscal ambition is inconsistent with economic reality (think, for example, of Zimbabwe or Venezuela). Over the past two decades, Phillips curves have mostly flattened, suggesting that inflation is insensitive to large changes in the level of demand. Ageing societies dislike inflation. And bond investors appear convinced that inflation is dead.

This scenario would, of course, be ideal. It is also the global inflation view we have broadly stuck with over the past year or so³¹. Having started the year increasingly troubled by the fear that the jump in inflation might be more permanent rather than a transitory adjustment, financial markets appear to have reverted back to expected a return to a pre-pandemic low inflation view.

Yet is it less plausible than it once was. Too much has changed. Goods prices are no longer so well behaved. True, an automation revolution in services might offset the effects of higher goods prices, but this would be a case of “good luck” rather than wise judgment by central bankers. Yes, it might still be the most likely scenario, but it no longer can be regarded as a slam dunk. Only if the acceleration in wage growth in 2021 reverses and inflation heads lower will this “business as usual” scenario prove correct: the cracks, however, are appearing.

Likelihood: Still high, still the conventional view, but increasingly undermined by the new economic realities

Scenario 2: Early-90s Japan: confusing near-term inflation for long-term deflation

We cannot be sure the extent to which inflation will rise. Moreover, even if inflation does become a threat in the short term, attempts to tame the “inflationary beast” could unleash a set of entirely different problems.

To understand why, consider Yasushi Mieno, the 26th Governor of the Bank of Japan, who won *Euromoney's* Central Bank Governor of the Year in 1991 for stamping out inflation in the immediate aftermath of Japan's late-1980s economic and financial boom. At the time, most economists thought Mieno was a worthy winner: after all, inflation was still public enemy number one in many parts of the world and Japan, remarkably, had got away with only a modest rise given the bubbly nature of its broader economy.

Yet Mieno's determination to crack down on inflation backfired. By triggering an asset price meltdown – related to both higher than expected interest rates and, in time, lower than expected growth – Japan began to suffer from balance sheet deflation. Aggressive repayment of

³¹ See *Global economics quarterly: Going their different ways*, HSBC Research, 24 June 2021 and *US inflation briefing: Shifting to a lower gear*, HSBC Research, 13 August 2021.

unwanted debts led to weaker demand and more asset price declines. The country that Americans feared was going to take over the world in the late-1980s – at least economically – hit an impenetrable brick wall.

The lesson for central bankers today is simple. Beware tightening moves that could trigger an asset price collapse. There are good reasons to be fearful: stock prices are elevated, particularly in the US, while many countries have seen renewed house price surges. Acting aggressively to deal with inflation could take us straight back to the disinflationary/deflationary conditions which threatened to become a permanent feature of the economic landscape in the years immediately following the global financial crisis. Central bankers won't be thanked if the objective of "building back better" is undermined by a collapse in asset prices and a bout of balance sheet deflation.

Likelihood: Low, because too many from the current crop of central bankers fear a Japanese outcome more than anything else. Still, not impossible, notably in the Eurozone.

Scenario 3: Inflation up triggering both rising expectations and, eventually, a major policy reversal

A big worry. If we have correctly identified the key economic, social and political drivers of inflation, this outcome has become more likely in the last year or so. Central bankers with multiple objectives, an increased threat of fiscal dominance and heightened supply-side uncertainties point to a shift in the relationship between output and inflation: more specifically, there's a growing risk of inflation becoming permanently higher for any given growth rate.

What would be the tell-tale signs of such a shift? Both prices and wages would have to rise at a relatively fast pace well into next year, with wage pressures spreading beyond the lowest skilled (and paid) sectors. One possible impetus might come from generous pay awards in public sectors alongside "levelling up" increases in minimum wage levels. Inflationary expectations – at least measured in bond markets – would have to head higher. The icing on the cake would be an increase in two-year ahead inflation forecasts made by the economics community.

To the extent that the Phillips curve may be flatter than it was thirty years ago (even if recent evidence suggests a renewed – albeit modest – steepening), such a shift in the relationship between growth and inflation would eventually require very aggressive acts of policy tightening, suggesting the risk of another recession later on. This need not be sufficient to create Japanese-style conditions but it would be the cost associated with central bankers attempting to regain previously hard-won credibility following a period of effective economic mismanagement. If led by the US, such a policy tightening would most likely be associated with – eventually - a stronger dollar in a repeat of the conditions last seen in the early 1980s. The incremental steps in policy rates would be sooner, quicker and more painful than under the 'business as usual' scenario, even if the magnitude ultimately proved to be no larger.

Likelihood: Uncomfortably high. The world has changed.

Scenario 4: Inflation up, financial repression

Could policymakers stand idly by, content to watch inflation heading higher without doing much about it? It might seem implausible, particularly given recent demographic trends. Ageing populations, with good reason, dislike inflation because it typically robs pensioners in real terms of the incomes built up during their working lives. It's one reason why Japan never went down the helicopter money path.

Yet implausible is not impossible. Governments have big ambitions to "build back better". The cost of borrowing is currently very low. In the words of the UK's House of Lords Economic Affairs Committee, quantitative easing has become an "addictive drug". Is it too much of a stretch to imagine that political ambition could trump central bank independence? Might we be

witnessing a sea-change in economic and monetary affairs, the likes of which only happen maybe once or twice in a century? Will central bankers be fearful of raising interest rates in a world in which debts are, on many measures, already incredibly high?

If this scenario were to pan out, it would be associated with a combination of rising inflation and low bond yields. Financial repression is, after all, a process designed to use the powers of the state to rob people of their rightful financial returns while giving preferential capital market access to governments. This, of course, leads to a highly problematic conclusion, namely that bond markets themselves become next to useless as mechanisms to signal rising inflationary expectations. A more useful signal would likely come from currency markets: a policy of US benign neglect regarding inflation would trigger an extended period of US dollar weakness, effectively exporting US inflationary pressures worldwide.

Likelihood: Still low, but central bankers' anti-inflation mettle has yet to be tested in current conditions. Watch this space.

Scenario 5: The scattergun

It may be that, in the event, we end up with more of an inflationary smorgasbord, with different countries and regions responding to different political realities. Japan and the Eurozone would be less prone to inflation than the Anglo-Saxons with their “boom-bust” economies. Some hugely indebted emerging markets may have no choice other than to embrace inflation given the absence of required fiscal depth. Others in the emerging world carry so much dollar debt that inflation linked to FX weakness is to be avoided at all costs which may explain why they are tightening so far ahead of the Fed (although whether such a course is sustainable given the implied constraints domestically is another matter altogether). Others, particularly in Asia, may find themselves in a Japanese “ageing” trap. The case for a “one size fits all” approach to inflation may be diminishing in response to the gradual reversal of globalisation alongside varying legacy effects associated with the pandemic.

The scattergun would lead to much greater variance in inflation across countries and, by implication, a pick-up in currency volatility compared with the relatively placid experience of recent years.

Likelihood: High, in part reflecting forces established before the onset of the pandemic.

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