HSBC Global Research

28 February 2022

# We need to talk about inflation

## Six lessons from eight centuries of data

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Economics - Global

- Central bankers told us inflation was transitory…
- …but they ignored the tell-tale signs of trouble ahead…
- …forgetting the crucial importance of money and credit

**Money and inflation: the history lesson**

Centuries of economic data teach us that periods of persistently rising prices are also periods in which money no longer acts as an “anchor” to limit inflationary pressures. In recent decades, it’s a lesson that has increasingly been ignored. It’s almost as if we’ve forgotten that inflation is, ultimately, a monetary phenomenon.

**COVID-19: A monetary misdiagnosis**

Economically, the COVID-19 crisis was regarded by many primarily as a demand challenge. Central banks responded by offering very low interest rates and continued quantitative easing, even as governments offered huge fiscal stimulus. Monetary growth went through the roof and the value of financial assets surged.

**Excessive monetary stimulus when supply is constrained**

In truth, COVID-19 had only limited lockdown-related demand-side effects in the advanced economies. Supply-side effects have proved to be both large and far more persistent: markets now work less well, countries are economically disconnected, and workers are less able to cross borders and, in some cases, less readily available within borders. Loosening policy conditions when supply performance has deteriorated so much is only likely to lead to inflation.

**The corrosive effects of inflation**

Inflation is a challenge not just to economic stability, but also to political and social stability. Winners and losers emerge in an entirely undemocratic fashion. Markets are undermined. Policymakers are faced with a terrible choice between acting to drive inflation out of the system – a process that leads to recession and unemployment – or living with the disease. The 1970s, however, show that the corrosive effects of inflation can only be tolerated for so long.

**Six lessons for central banks**

We conclude with six lessons: (i) central bank independence is no guarantee of price stability; (ii) money matters and cannot be ignored; (iii) the “nominal world” can change remarkably quickly, with expectations slow to keep up; (iv) multiple objectives for central banks can lead policymakers astray; (v) central banks’ inflation forecasts are not entirely plausible – they will never forecast a major inflation “miss” relative to target; and (vi) bringing inflation back to heel is, to say the least, tricky.

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# We need to talk about inflation

- Hoping that inflation was "transitory"…
- …led to monetary and financial conditions being ignored
- Central banks now have a serious fight on their hands

## Defining inflation: the cost of living versus the value of money[1]

Inflation is typically defined as a persistent and sustained increase in the price level of an economy. It's a definition that immediately causes problems. An increase in the price level sounds simple enough but, to have any meaning, it needs to be increasing relative to something else. If prices are rising relative to wages, say, what initially looks like inflation will probably not be sustained: it will, instead, be an increase in the "cost of living". As real spending power erodes, so demand will weaken, with the likely result that measured inflation will disappear relatively quickly. Meanwhile, in determining the price level, what prices should be included? Do rising real or financial asset prices count as inflation? Conventionally, the answer is "no", even if rapid increases in household wealth may, in time, be used to support higher levels of borrowing, more in the way of demand and, eventually, higher prices for goods, services and labour.

An alternative approach is to think about inflation as the process by which money falls in value relative to something else. Inflation can thus be defined in terms of money's diminishing ability to make a claim on a specific range of goods, services and labour. It is the mechanism by which the value of the dollar, euro or pound in your pocket is eroded over time. Even this definition, however, comes with problems. How should improvements in the quality of given goods, or changes in tastes and technology, be taken into account? The price of horseshoes would have mattered a great deal to many people in the 19th Century but, today, there's much more interest in the price of tyres. More generally, the typical consumer "basket" of goods and services today differs hugely from what it was 100 years ago. Money, meanwhile, is itself an elusive concept. Is it narrow or broad, does it include "near-money" substitutes and how should, say, cryptocurrencies be treated?

## A history of monetary destruction

Still, despite these conceptual difficulties, it's possible to sketch out a "big picture" history of inflation, thanks in part to the Bank of England's "Millennium" database. Table 1 demonstrates the impact of inflation on the value of money in what is now the UK, century by century. Over the last eight centuries, there have been only two extended periods during which inflation has truly persisted and, thus, the value of money has dramatically eroded (hyperinflations, typically confined to only one nation at any moment in time, can achieve the same result, of course, but in remarkably short periods).

[1] This paper can be read in conjunction with earlier HSBC papers on inflation, including '*The creation of inflation*' (23 August 2021), '*Fighting inflation*' (24 January 2022) and '*The energy crunch*' (4 February 2022)

The table shows what a nominal pound – a rough proxy for global money – held at the beginning of each century would be worth at the end of that century, expressed in decimal units (and thus ignoring, for example, earlier monetary systems involving pounds, shillings, pence, guineas, crowns, ha'pennies and farthings). In the 14th and 15th Centuries, money held its value. Everything changed in the 16th Century following the Spanish conquest of the New World, where silver was in abundant supply. Spanish conquistadors and their successors shipped vast quantities of the precious metal back across the Atlantic to be spent on the finest European merchandise. Spain itself ran a large balance of payments current account deficit as its moneyed classes imported no end of fripperies manufactured elsewhere in Europe. By implication, the rest of Europe ended up with an increasing amount of New World silver which only helped push inflation higher across the continent and, in time, throughout the world: there was, if you like, too much silver chasing too few goods. A pound in 1500 was worth only 25 pence 100 years later.

**1. The value of "British" money: what a pound was worth 100 years later**

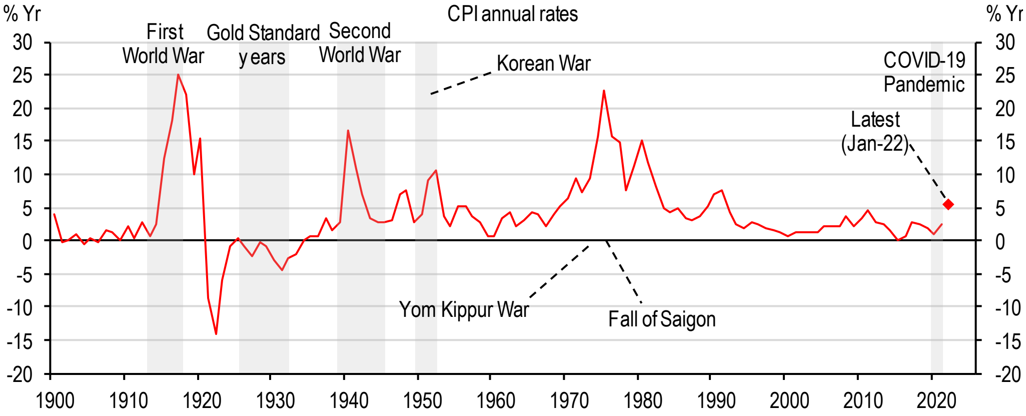
| 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
|---|---|---|---|---|---|---|---|
| £1.00→ | £0.99 | | | | | | |
| | £1.00→ | £1.11 | | | | | |
| | | £1.00→ | £0.25 | | | | |
| | | | £1.00→ | £0.71 | | | |
| | | | | £1.00→ | £0.46 | | |
| | | | | | £1.00→ | £1.49 | |
| | | | | | | £1.00→ | £0.02 |

Source: Bank of England, HSBC calculations

The pace of monetary "loss" moderated in the 17th Century. For much of the 18th Century, prices were relatively stable until the American and French revolutions triggered another bout of inflation: money lost half its value in just twenty years thanks, in part, to international contamination stemming from the French post-revolutionary hyperinflation of the mid-1790s. The 19th Century was dominated by the gradual adoption of gold, silver and bimetallic standards that essentially limited the supply of money against the twin backdrop of rapid economic development and empire building: with the volume of production expanding swiftly but with money supply effectively fixed thanks to its link to – finite – precious metals, there was no option other than for prices to fall. They duly did. Money was worth more at the end of the century than it had been at the beginning.

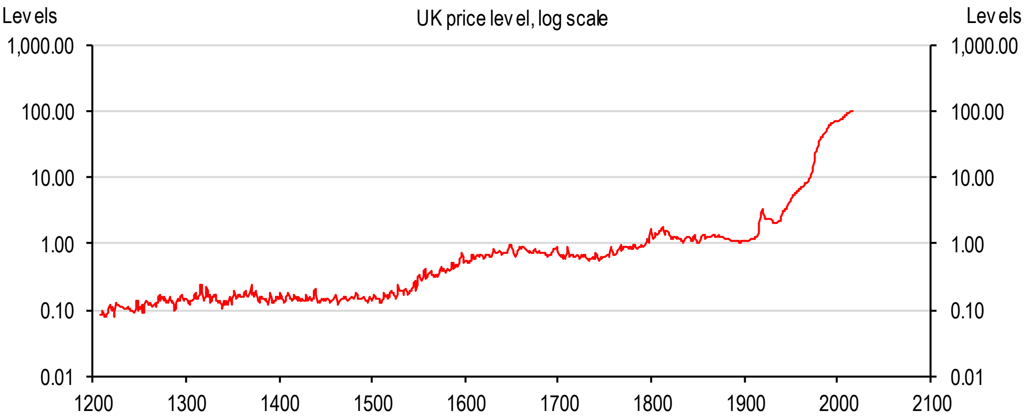
The 20th Century offered entirely the opposite experience. It wasn't just the most destructive century in terms of war and genocide: it was also by far the most destructive regarding the value of money. Following the collapse of the Gold Standard and the broad adoption of fiat money regimes, the last hundred years have seen periods of particularly high inflation – the early years of the Second World War, the Korean War, the late 1960s through to the early 1980s – but, even when inflation has been low, it has still been, for the most part, a constant presence (chart 2). Japan's experience of (modestly) falling prices over the last thirty years is the obvious exception but Japan's "odd" experience simply emphasises how, in recent decades, we have taken inflation for granted, regarding it as part of the normal state of affairs. Chart 3, which maps the UK price level on a logarithmic scale, suggests this sense of "normality" is merely a reflection of our own – and our parents' and grandparents' – experiences. To our ancestors, the rise in the price level over the last hundred years would have been regarded as nothing short of extraordinary. A pound in 1900 was worth only tuppence 100 years later.

**2. A century of British inflation**




Source: Bank of England, ONS

**3. A long-run history of the UK price level**

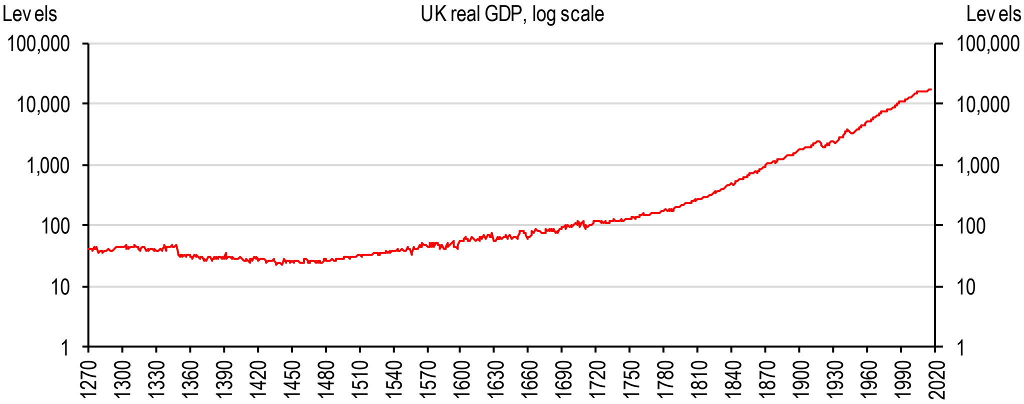



Source: Bank of England, HSBC calculations

## Inflation, living standards and the avoidance of deflation

Rampant inflation over the last hundred years, at least when judged by past standards, has proved to be no obstacle to rapidly rising living standards. Chart 4 shows the level of UK GDP per capita, again drawn on a logarithmic scale, since the late 13th Century. In the 20th Century, real per capita GDP rose fivefold having merely doubled in the 19th Century following a yet more modest 40 per cent increase in the 18th Century. There may have been plenty of inflation but the last century or so has also witnessed a previously unimaginable improvement in the quality of life. And it's not just a story about higher incomes. Literacy and numeracy rates are far higher, malnutrition is much lower, and life expectancy is through the roof.

**4. GDP per capita rose fivefold in the 20th Century**




Source: Bank of England, HSBC calculations, real terms, logs

Given this extraordinary transformation in living standards, it's tempting to think that inflation must be a rather good thing. The more of it we have, the faster, it seems, our (real) incomes rise. Or, put another way, perhaps inflation is the lubricant necessary to oil the cogs of economic progress.

To be fair, there is some acceptance of this view, for reasons associated more with the disadvantages of deflation – a world in which nominal prices and wages continuously fall – than with the advantages of inflation. Deflation offers three challenges. First, no one likes to have a wage cut: wages are "sticky" and cannot easily fall. If, however, prices are continuously dropping, there's a danger that workers end up with excessively high real wage increases, triggering higher unemployment. Second, the more that nominal interest rates fall below zero, the more attractive cash – with a guaranteed zero nominal interest rate – becomes. Deflation can thus trigger cash hoarding, undermining the role of the financial system in directing excess savings into profitable investment opportunities. Third, if prices and wages continuously fall, and interest rates cannot drop far below the so-called "zero bound" thanks to the presence of cash, the real debt burden will rise over time. If real debts are perceived to be too high, or are rising too quickly, deleveraging may take hold, thus curtailing demand and leading, in turn, to even bigger price and wage declines[2].

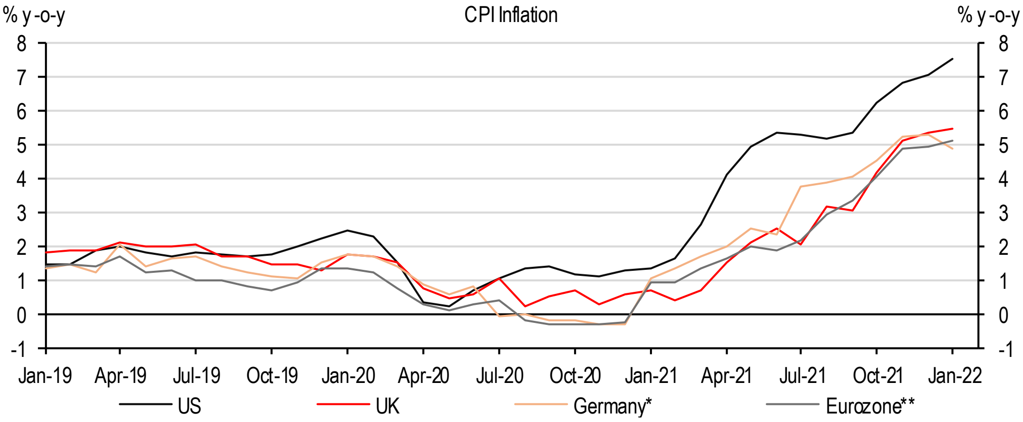
For all these reasons, inflation targeting regimes generally attempt to achieve a low, but positive, inflation rate over time. It's another way of saying that, unpegged from a gold standard-type regime, cash is more or less guaranteed to lose its real value over time: better, therefore, to put our savings to work – in a way that will hopefully generate investment, boost productivity and, thus, raise living standards – than to stash them under the proverbial mattress.

[2] In the 1930s, some questioned this argument, invoking the so-called "real balance" effect. In a world of falling prices and wages, the real value of nominal cash balances rises, thereby increasing the spending power of those with cash savings. It's a perfectly reasonable argument, apart from the fact that those with cash savings are typically matched by those with cash borrowings: and, for the latter, the real balance effect operates in exactly the opposite way. Add to this the idea that borrowers, on average, may have higher marginal propensities to consume than savers and deflation threatens to become a perfect storm. In the late 19th Century, meanwhile, the perils of deflation were partly offset by (i) rapid productivity growth, at least relative to previous history; (ii) a very skewed distribution of income and wealth, such that those with wealth were happy to invest heavily in new infrastructure – think Rockefeller, Carnegie and John Pierpont Morgan; and (iii) a relatively low level of household debt judged by 21st Century standards. Still, political tensions bubbled away: the "creditors" from the North Eastern US states benefited from deflation and "sound money" even as the "debtors" – often poor farmers – from the South and West found themselves in a permanent state of impoverishment.

## When inflation is no longer low and stable

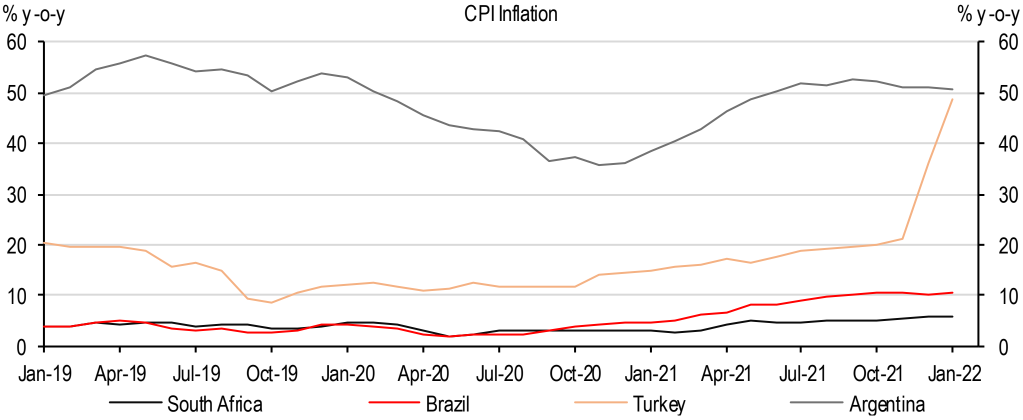
Unfortunately, inflation doesn't always remain low and stable. As we have already noted, the last 100 years have witnessed plentiful occasions during which inflation has been both high and volatile. On such occasions, inflation can become an economically and socially destructive force. Too much of a "good thing" can turn out to be very bad indeed. 2% inflation may be perfectly acceptable. Many would argue that 3% or 4% inflation probably wouldn't do too much damage so long as everyone came to expect it. But beyond 4%? That's when things threaten to become a little more complicated. And that, of course, is where many economies find themselves today. Charts 5 through to 7 show how inflation has evolved since the beginning of 2019 across a range of different economies. Not all are facing a major problem currently. There can be no doubt, however, that inflation is proving to be a far more difficult challenge than policymakers imagined just a handful of months ago.

**5. Inflation has risen rapidly across much of the developed world**



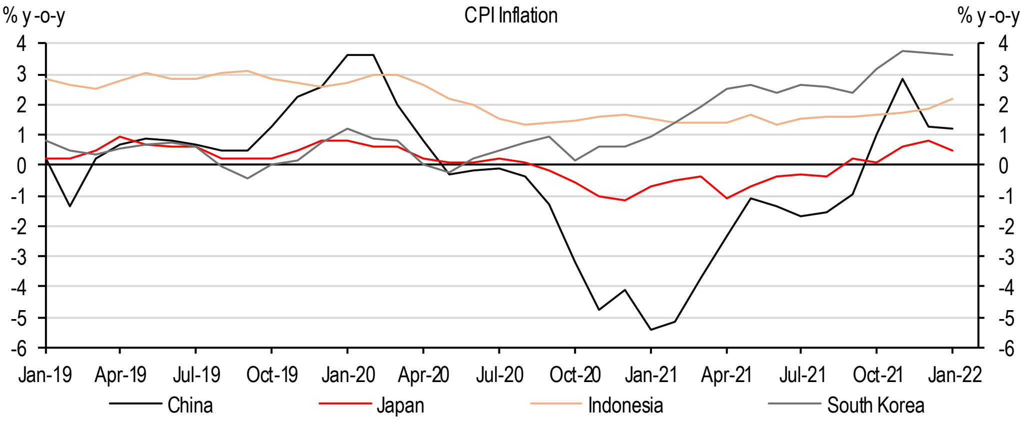

Source: Refinitiv Datastream Note: * Germany is national measure **Eurozone data is HICP

**6. Inflation is worrisome in some emerging markets**




Source: Refinitiv Datastream

**7. Asian inflation has been better behaved**



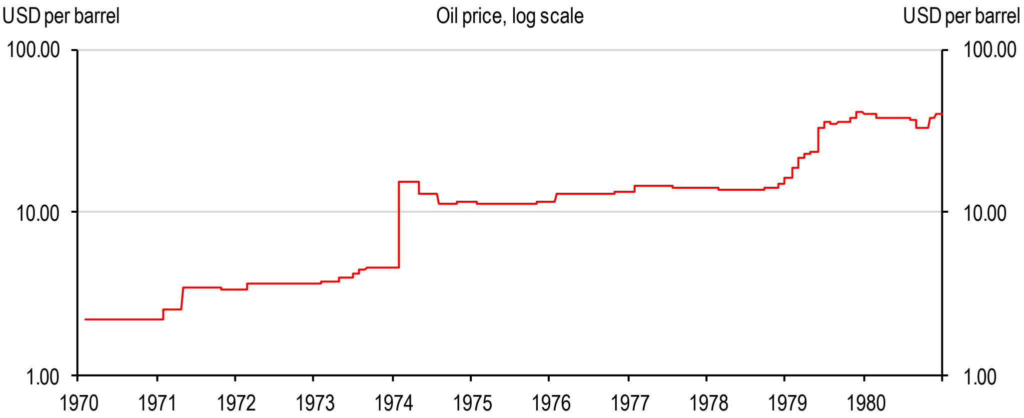

Source: Refinitiv Datastream

Much ink has been spilt in a bid to explain why inflation has risen so much in such a short space of time. To date, reasonable people have yet to agree. This reveals a fundamental problem. Inflation can have a multitude of "proximate" causes, some of which are mere blips even as others might, in time, prove to be more persistent. Worse, blips can sometimes prove to have unexpectedly stubborn effects, particularly if the blips themselves are a reflection of more deep-rooted problems.

## A misreading of history: the 1973 oil price shock

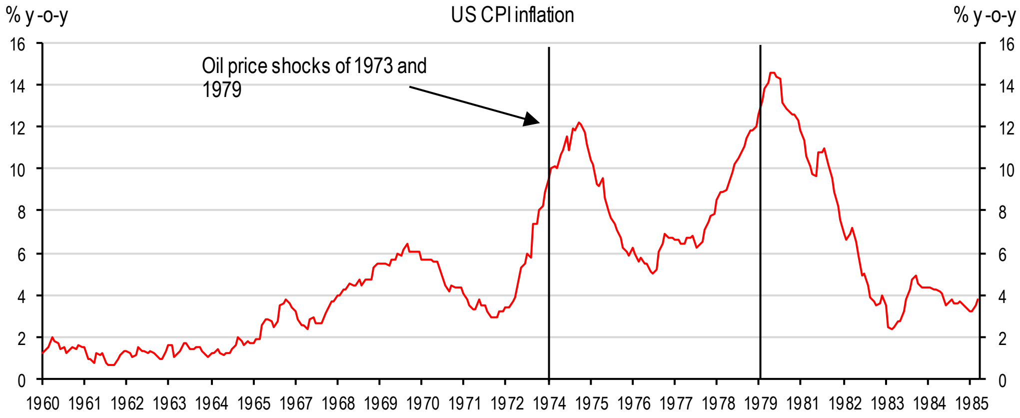
One such example is the quadrupling of oil prices in December 1973 by the Arab oil-producing nations in retaliation for perceived western support for Israel in the Yom Kippur War. Although the catalyst was, perhaps, a little unusual, the oil price hike reflected the behaviour of a classic cartel. Many now regard this event as the "cause" of the excessive inflation of the 1970s. Put another way, had the war never taken place, inflation in the 1970s would have been much better behaved.

**8. Oil prices spiked at the end of 1973 and again in 1979 (logarithmic scale)**




Source: Refinitiv Datastream

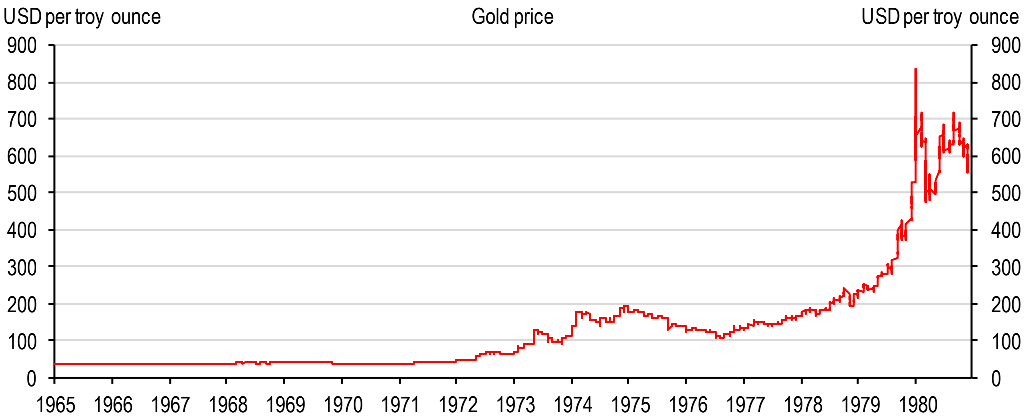
**9. US inflation was rising long before oil prices spiked**




Source: Refinitiv Datastream

It's a reassuring idea, suggesting that inflation is only likely to happen thanks to unforeseen external shocks and not as a result of a domestic policy mistake. Back in 1973, many policymakers were able to persuade themselves that inflation would not be a persistent problem. Yet there was already enough evidence to suggest that, long before the Yom Kippur War, inflation had already become a major threat. President Lyndon B Johnson had promised Americans the “Great Society”, a 1960s equivalent of Build Back Better. The Vietnam War was forcing the US to print dollars beyond what would normally be either necessary or acceptable. Labour costs were rising. And, in 1971, President Nixon suspended the US dollar’s fixed link to gold, at a stroke destroying the Bretton Woods system of fixed but adjustable exchange rates that had been an essential part of the international monetary architecture in the decades following the end of the Second World War. The value of gold thereafter went through the roof, even as the value of many “paper” currencies simultaneously fell through the floor (chart 10).

**10. People exchanged paper currencies for gold as the Bretton Woods system collapsed**




Source: Refinitiv Datastream, World Gold Council

By late-1973, therefore, there was plenty of evidence to suggest that inflation was already rising swiftly across many different parts of the world. The quadrupling of oil prices can thus be seen as the icing on an inflationary cake. Had monetary conditions not been so loose, had inflation not already been so high, and had industrial relations not been so incredibly poor, the increase in oil prices would either not have been sustained or, alternatively, would have been absorbed via lower profit margins, squeezed wages and, quite possibly, even higher unemployment than was recorded at the time (subsequent oil shocks, occurring during periods of greater monetary credibility, typically triggered such effects).

Indeed, those countries which, in the midst of economic chaos, were able to cling on to the last vestiges of monetary credibility, ended up having better "crises" than many others. Table 11 shows average inflation rates in selected five-year periods from the 1960s onwards. All nations listed saw inflation rising before the 1973 oil shock. The oil price shock itself was, by definition, a universal event. Some countries, however, responded "better" than others, at least with regards to subsequent inflationary developments. Swiss inflation was lower post-oil shock than it had been previously. German inflation was broadly unchanged, ultimately reflecting a commitment to "sound money" amidst international financial chaos. US, French and Japanese inflation rates were significantly higher. The British and Italian experiences were, frankly, dreadful.[3] In other words, a universal "price shock" was associated with wildly differing localised inflationary outcomes. Put another way, policy frameworks – and the decisions they spawn – matter.

**11. Inflation experiences pre- and post- the 1973 oil shock**

| Annualised average inflation over 5 years ending in the year shown (%) | 1968 | 1973 | 1978 | 1983 | 1988 |
|---|---|---|---|---|---|
| Switzerland | 3.5 | 5.6 | 4.0 | 4.5 | 2.1 |
| Germany | 2.5 | 4.6 | 4.7 | 4.9 | 1.2 |
| France | 3.2 | 6.0 | 10.7 | 11.8 | 4.4 |
| United Kingdom | 3.8 | 7.5 | 16.1 | 11.2 | 4.5 |
| Italy | 3.5 | 5.8 | 16.4 | 17.0 | 7.1 |
| Japan | 5.0 | 6.9 | 11.2 | 4.2 | 1.1 |
| United States | 2.6 | 5.0 | 8.0 | 8.8 | 3.5 |

Source: World Bank

## What matters is WHY

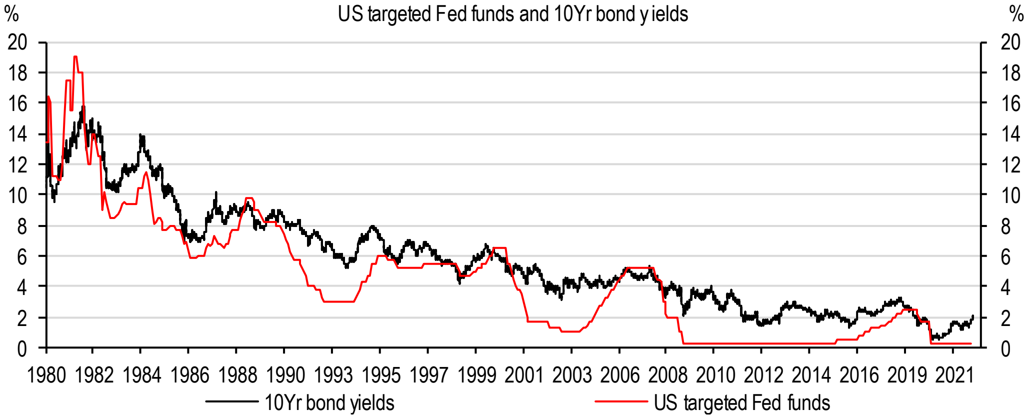
Seen this way, the recent inflationary upsurge cannot simply be brushed to one side on the basis that only a limited number of items appears to have increased in price. The correct question to ask – too frequently ignored – is whether those price increases are a reflection of changes in relative prices alone – one item becoming more expensive relative to other items – or, instead, whether they are indicators of a broader upsurge in inflationary pressures. In other words, does the evidence suggest that rapid price increases in some areas are leading to price declines elsewhere – in which case, overall inflation will remain well-behaved – or, instead, are we witnessing the beginnings of some kind of wage-price spiral?

Last year, when the word on the tip of the typical central banker's tongue was "transitory", the general consensus was that inflation – to the extent that it existed – would merely be fleeting, a reflection of temporary supply shortages associated with pandemic lockdowns. That position – as Jay Powell, Chair of the Federal Reserve, freely admits – is now more difficult to sustain. A wider and wider range of prices and wages is now rising, yet there are no obvious offsets in the form of price declines elsewhere. As a result, inflation has persistently surprised on the upside. To understand why, it's worth thinking about policy stances before, during and in the aftermath of lockdowns.

For much of the last thirty years – between the end of the late-1990s dotcom boom and the pandemic – central banks have mostly worried about inflation being too low, not too high. That view was strengthened after the Global Financial Crisis. Interest rates dropped to zero, and in some cases into negative territory, and bond yields collapsed. Central bankers had become addicted, so it seemed, to quantitative easing[4]. An emergency policy introduced during the Global Financial Crisis designed to extend funds through the capital markets to companies while the banking system was being fixed had seemingly become a permanent tool of monetary policy. Inflationary expectations, meanwhile, were moribund, a sign – apparently – that inflation itself was only a minor risk.

[3] Italy made things worse by using the so-called *"echelle automatique"*, in which wages automatically adjusted to inflation, thereby entirely institutionalising the inflationary process. It was eventually abolished in 1983.
[4] For a detailed discussion and review of evidence, see the House of Lords Economic Affairs Committee Report – *Quantitative Easing: A Dangerous Addiction*, 16 July 2021– available at https://publications.parliament.uk/pa/ld5802/ldselect/ldeconaf/42/4202.htm

**12. Interest rates tumbled as inflation disappeared**




Source: US Federal Reserve, Refinitiv Datastream, Bloomberg

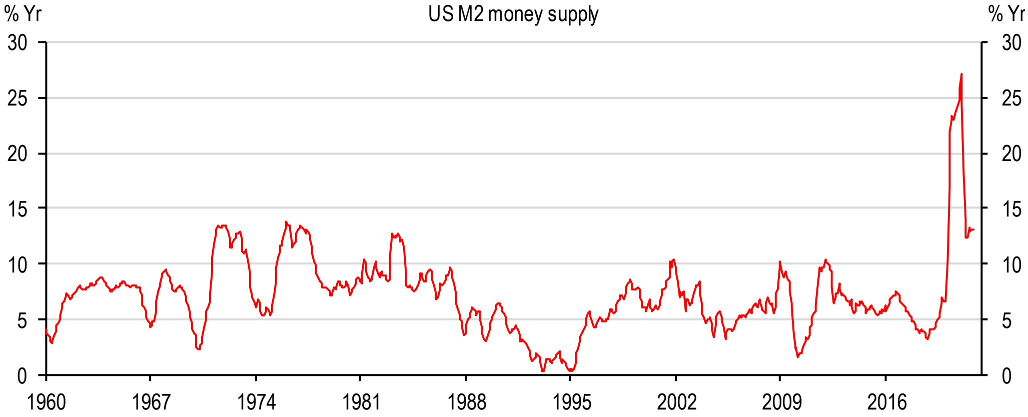
## The Great Depression and the pandemic collapse

At the beginning of the pandemic, with both lockdowns and bankruptcies looming, monetary policy was loosened still further. With GDP collapsing in line with the experience of the Great Depression in the 1930s, it seemed only right that monetary policy had to offer support in addition to that being provided by the fiscal authorities. Yet, while the decline in GDP was similar in magnitude to that experienced during the Depression, it was fundamentally different in other ways.

- First, the Depression was associated with the forces of debt deflation: wages and prices both tumbled, causing real debts to soar and, in turn, mass bankruptcies. No such forces materialised in 2020 and thereafter.
- Second, the Depression was associated with multiple financial failures: put simply, banks went bust left, right and centre. During the pandemic, banks mostly proved to be resilient, thanks in part to reforms stemming from the Global Financial Crisis.
- Third, the loss of activity during the Depression was mostly associated with shortfalls of demand. During the pandemic, and thanks in part to lockdowns, the loss in activity was, to a considerable extent, driven by supply: furloughed staff, after all, were still in a position to “demand” even if they were contributing little to “supply”. Thereafter, with lockdowns ending in only some parts of the world, it was difficult to gauge how fractured global supply chains would respond to localised demand surges.
- Fourth, the Depression was associated with the mass erosion of financial wealth. To date, the pandemic has delivered mostly the opposite: those with financial assets – equities, housing, fine art, cryptocurrencies – have mostly fared very well.

Monetary policy at the beginning of the pandemic became remarkably loose, as reflected in the extraordinarily rapid expansion of US money supply in 2020, despite the fact that global supply uncertainties were visibly on the rise. Inflation itself didn’t pick up immediately for the rather obvious reason that lockdowns prevented the money from easily being spent. Instead, the monetary expansion was offset by a lockdown-induced collapse in velocity. The money still, however, had to find a home. Financial markets inevitably boomed.

**13. US monetary growth surged in 2020**




Source: US Federal Reserve, Refinitiv Datastream

That simply meant, however, that the increase in actual demand associated with monetary expansion had merely been postponed. Once lockdowns ended and people were free to spend, the risk was that loose monetary policy would combine with resurgent velocity to push nominal GDP much higher. However, with supply now restricted thanks to the ongoing effects of the pandemic and the lagged effects of previous lockdowns on the ability of markets to function, such an approach was more likely to lift prices than quantities. In many parts of the world, consumer demand is now very strong: yet, with supply unable to respond fully, the result has been rapidly rising prices.

Last year, central bankers were mostly too complacent, too willing to embrace the idea that inflation would remain well-behaved so long as inflationary expectations were stable, and too forgiving – from the perspective of future inflation - of extraordinary fiscal generosity. This, frankly, was a view based more on faith than reality. Yes, there might be occasions in which a sudden increase in a particular price – say, the price of oil – can be usefully ignored if the majority of people are willing to accept that it is not likely to trigger an ongoing wage-price spiral. If, however, policy is too loose in the first place, there's no reason to think that initially low inflationary expectations provide any kind of guarantee that inflation will remain well-behaved: excessive monetary stimulus may push headline inflation higher long before inflationary expectations catch up with the new inflationary reality.

## The political economy of inflation

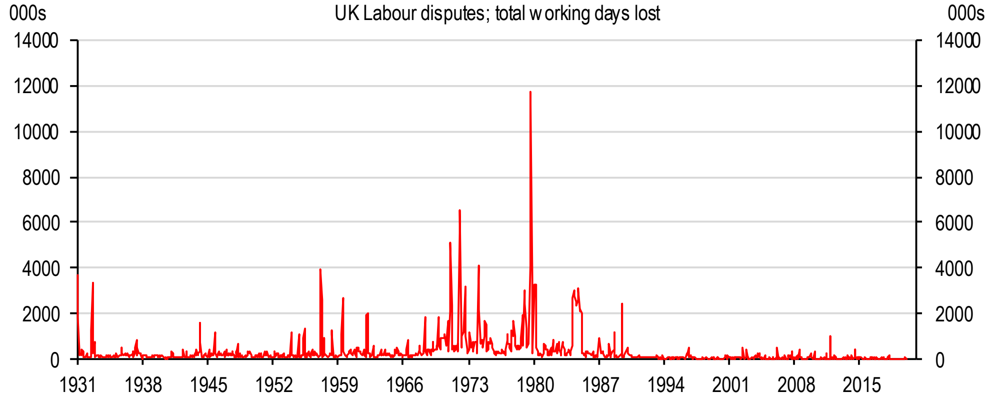
Once the inflationary cat is out of the bag, it's very difficult to put it back in. Inflation can have a corrosive effect on social stability, leading to an arbitrary and entirely undemocratic redistribution of income and wealth, with some gaining even as others are left behind.

The gainers typically include organised labour – able to push for inflation-busting wage increases – and oligopolistic industries – able to increase their selling prices more than their costs. The gainers are not, however, restricted to those who happen to have the strongest negotiating positions. Those with high levels of debt – new homeowners, leveraged companies, most governments – will, in effect, see some of that debt written off if (as has been the case in the recent inflationary pick-up) interest rates do not rise at the same pace as inflation. Relative to their – now inflating – nominal incomes, their (real) debts will effectively shrivel. It's one reason why central banks were eventually given their independence: after the experience of the 1970s, governments could no longer trust themselves to keep inflation low when the temptation to inflate – at least with regard to fiscal debt dynamics – was so high.

The losers typically include atomised labour – workers unable to form a union or hired by the hour – and companies operating in highly competitive markets with little in the way of pricing power. Those with savings and lacking financial sophistication may also, however, prove vulnerable: cash is, after all, the worst thing to hold during periods of inflation. Pensioners and those dependent on benefits are likely to be particularly exposed, especially if their sources of income – fixed pension payments, social security handouts – are not fully indexed against inflation.

In the event that inflation takes off, there's every chance that these competing groups will become more and more polarised. Those who are able to take advantage of inflation will simply strengthen their demands. Seen this way, industrial unrest (chart 14) is not just a cause of future inflation but also a consequence of current and past inflation: some will use all available means to demand compensation for a country's inflationary sins, including the possible withdrawal of labour (through strikes, job hopping or, in the case of the wealthy, becoming tax exiles). By doing so, however, they only end up shifting the burden even more unfairly onto others.

**14. Does unrest cause inflation, or does inflation cause unrest?**




Source: ONS

Obviously, the tax and benefit system could be used to deliver roughly the same effect – tax breaks for debtors, reductions in benefits for the poor, higher taxes on pension incomes – but few political parties would be willing to incorporate such measures into their manifestos. That, however, is precisely the problem with inflation: it creates winners and losers on a mostly stealthy basis and, over time, leads to a reduction in trust within society.

## The macro and microeconomy of inflation

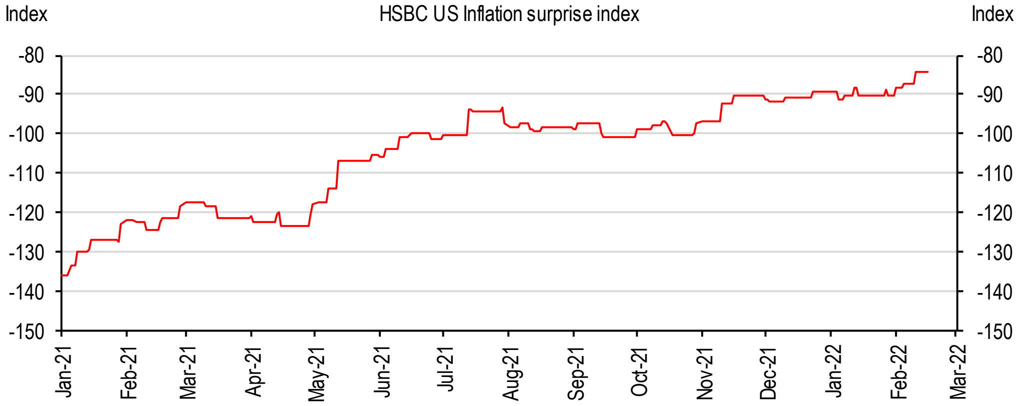
If we think of inflation as the process by which excessively loose monetary policy feeds into an economic system, the story sounds entirely macroeconomic. Yet a macroeconomic problem can lead to serious microeconomic consequences. No one has yet devised an economic system that is perfectly indexed for inflation. Some prices move early, some move late, some never move, but few move precisely at the "right moment". And, even if rare examples do, no one can know for sure if they genuinely reflect changing inflationary conditions.

What this means, in turn, is that periods in which inflation is volatile are periods during which standard microeconomic price movements cannot so easily be relied upon. Your gym membership has gone up in price. Should you cancel your membership? Perhaps, but what happens if, in a few months' time, you receive an inflation-busting pay increase? You then reinstate your gym membership, suddenly feeling flush with cash. Thereafter, inflation rises still further, implying that your inflation-busting pay increase wasn't quite so attractive after all. You now cut back on visits to the theatre and decide to opt for a cheaper holiday. Each of your decisions is, ultimately, made at a moment in time when you have only partial, distorted, knowledge of movements in relative prices.

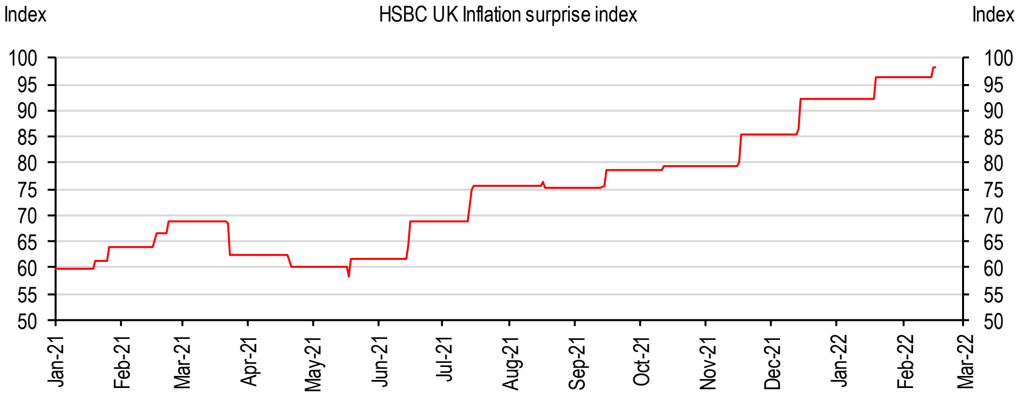
Now consider a situation in which everyone is in the same inflationary boat. In effect, periods of inflation volatility lead to a mixture of confusion and ignorance. The price mechanism's role as the provider of information sufficient to allow most of us to make reasonable decisions is undermined. There is, if you like, too much noise and not enough signal. Too much noise, in turn, means heightened uncertainty and, as such, either poor or delayed economic decisions. As such, it's likely that periods of high and volatile inflation will ultimately be associated with poorer productivity performance and lower economic growth, precisely the conditions seen in the 1970s.

This uncertainty even feeds into economists' forecasts for future inflation. A standard approach to forecasting the monthly inflation numbers is to identify last month's "outliers" and assume they return to "normal". This approach, however, fails for the rather obvious reason that it simply assumes what "normality" happens to be. If the technique is used during the early stages of a period of rising inflation, too many relevant signals – the goods and services that move "early" in response to overly loose monetary policy – are simply dismissed as noise. Only when many other prices are also rising is there likely to be a change of heart. Even then the chances are that economists will dismiss the most relevant signals. Chart 15, showing HSBC's surprise indices for US, UK and German inflation, reinforces the point: even now, after months of persistently rising inflation, economists are surprised that inflation keeps rising.

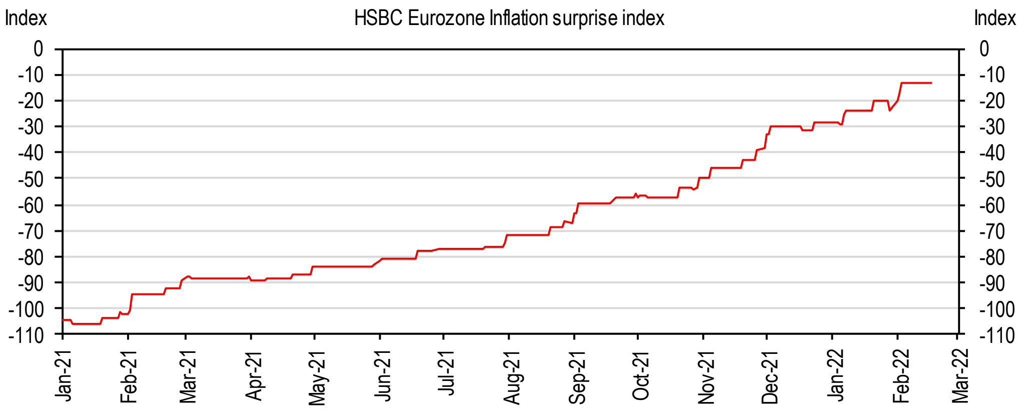
**15. Inflation has a nasty habit of surprising… and surprising… and surprising**




Source: HSBC, Bloomberg




Source: HSBC, Bloomberg



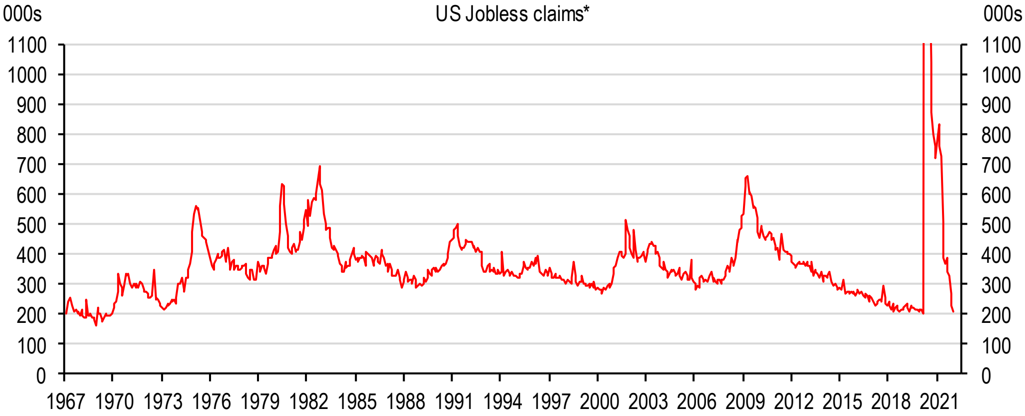

Source: HSBC, Bloomberg

Official forecasts don't help matters. It is difficult – perhaps impossible – for a central bank to admit that it may miss its inflation target two years down the road. After all, most central bankers argue that today's monetary policy stance works with a lag of around two years. In other words, even if inflation isn't where it should be now, it should always be possible to manoeuvre inflation back to target over a typical forecast time horizon. Often, however, very little manoeuvring typically takes place. Like other forecasters, most central bankers today assume that recent price increases – of energy, of tradable goods – are merely transitory and that, as COVID-19 eases, those prices will, at the very least, stop rising and, perhaps, go into reverse. Moreover, central bankers typically assume that any near-term wage pressures will ease, based largely on the idea that, if prices rise faster than wages, real incomes will decline and, thus, demand will soften, forcing unemployment higher.[5]

This "self-correcting" process might yet happen. But it rests on assumptions that appear to be increasingly unsafe, most obviously that much of the inflation seen so far results from "external forces" and that indicators of labour market tightness – historically high vacancies, very low jobless claims – can largely be ignored. Tight labour markets, however, cannot be dismissed: it is their very tightness, after all, which threatens to contribute to the development of a wage price spiral. Official projections of either inflation or interest rates may thus prove to be wide of the mark: either inflation will end up too high for a given level of interest rates or, instead, interest rates will have to rise a lot further than many central bankers believe to enable inflation targets to be met.

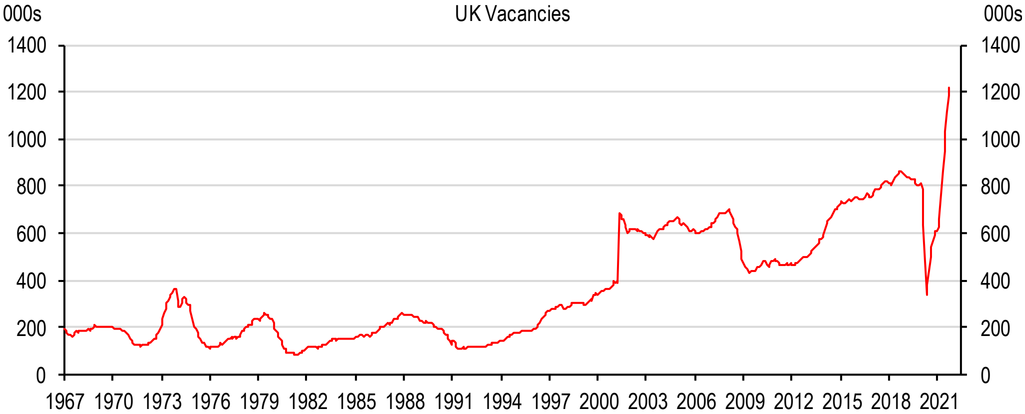
[5] See, for example, Broadbent, B., *Lags, Trade-Offs and the Challenges Facing Monetary Policy*, Bank of England, 6 December 2021, available at https://www.bankofengland.co.uk/-/media/boe/files/speech/2021/december/lags-trade-offs-and-the-challenges-facing-monetary-policy-speech-by-ben-broadbent.pdf?la=en&hash=D8CDECB9AFF06D2ACD062C4EEFBC4B20D5343384. Broadbent argues that "There's a good chance that this shock too…will have dissipated by the time a policy decision taken now could take effect. Indeed it's quite possible that, in a couple of years, some of these tradable goods prices will be falling, pulling down on inflation. And even if you took a different view, and thought it was more likely that they'll still be rising at that point, you would also need to judge the extent to which that would depress domestic demand and spending (especially at a time when, on current plans, tighter fiscal policy will be doing the same). Persistent rises in import prices introduce a trade-off between the MPC's primary and secondary objectives, complicating the appropriate response to them."

**16. US jobless claims soared but they're now at rock bottom**



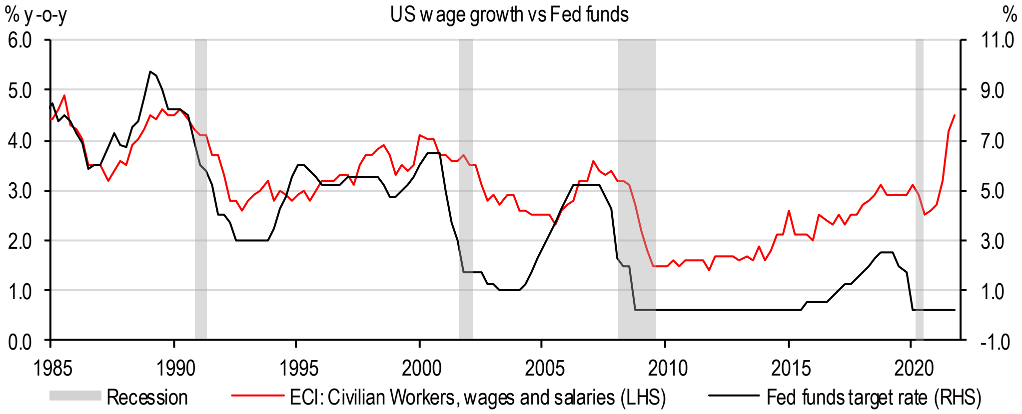

Source: Refinitiv Datastream Note: *Jobless claims were recorded at 5,985k in April 2020, 2,784k in May 2020, 1,605k in June 2020 and 1,436k in July 2020

**17. UK vacancies are, by past standards, "off the scale"**




Source: Refinitiv Datastream

**18. US wage growth is remarkably high relative to the level of policy rates**




Source: US Bureau of Labor Statistics, Refinitiv Datastream

## The political economy of inflation revisited

In the short run, it is easier to assume that any increase in inflation is likely to be temporary. The "self-correcting" economy is, after all, relatively pain-free. What happens, however, if the "self-correction" fails to materialise? One option is simply to allow inflation to take off in an uncontrolled fashion. This is particularly likely to be the case in emerging markets where many in the population are poor, the political promises are big and the fiscal pockets are shallow. Remember that inflation tends to reward debtors in the short term. If the government happens to be one of the biggest debtors, inflation can, for a while, work to the government's advantage.

Unfortunately, it's also easy in these circumstances for inflation to get completely out of hand. If the population suspects the government is printing too much money, many will try to get rid of their cash holdings as quickly as possible (or swap them into "hard currency") reflecting their increased expectation of future inflation. Spending cash reserves, however, simply means that the velocity of money goes up: and, as it does so, nominal GDP will rise. Without some kind of supply-enhancing productivity miracle, the chances are that the resulting increase in demand will be met either through higher imports, a worsening balance of payments and, in time, an exchange rate collapse or, more directly, through higher prices. Should the public lose faith in the financial intentions of their government, there's a good chance that inflation runs rampant.

For the developed world, where fiscal pockets are typically deeper and, for the most part, capital markets are more forgiving, inflation is less an issue with regard to the stability or otherwise of the public finances and more a threat to social stability and economic efficiency[6]. Dealing with it is, however, painful. Monetary policy is, for the most part, a relatively blunt instrument. Fiscal policy can be hijacked by the timing of the electoral cycle. And, as argued in *Fighting Inflation: Are Price Controls About to Make a Comeback?*[7], price controls are both tempting and, for the most part, useless. It is easier, in the short term, to pretend that inflation is transitory and, thus, to marshal all available arguments to support that view.

The Labour government of the mid-1970s tried to do exactly that. The fear of unemployment persuaded politicians to conclude that policy tightening would be a disaster. Ministers hoped, instead, to use a mixture of moral suasion and prices and incomes policies to limit the inflationary consequences of expansionary demand policies. The markets weren't buying it. Between the beginning of 1975 and the end of 1976, sterling fell from around USD2.40 to USD1.60. As we've already seen, UK inflation was significantly higher than inflation elsewhere. Eventually, the Labour leadership was forced into a U-turn. Denis Healey, the then-Chancellor of the Exchequer, called in the IMF to provide an external "discipline" to force through reforms that otherwise would have not been acceptable to the Cabinet or, for that matter, the trades unions. Jim Callaghan, the Prime Minister, tried to persuade anyone prepared to listen that it was time for a change. In his words:

*"We used to think that you could spend your way out of a recession, and increase employment by cutting taxes and boosting Government spending. I tell you in all candour that that option no longer exists, and that in so far as it ever did exist, it only worked on each occasion since the war by injecting a bigger dose of inflation into the economy, followed by a higher level of unemployment as the next step. Higher inflation followed by higher unemployment…That is the history of the last 20 years. Each time we did this the twin evils of unemployment and inflation have hit hardest those least able to stand them. Not those with the strongest bargaining power, no, it has not hit those. It has hit the poor, the old and the sick."*[8]

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[6] A possible exception to this general point is within the Eurozone, where individual countries may get caught in an unfortunate fiscal feedback loop as interest rates rise

[7] See King, S., *Fighting Inflation: Are Price Controls About to Make a Comeback*, 24 January 2022

[8] Labour Leader's speech, Labour Party Conference, Blackpool, 28 September 1976

Admittedly, a lot has changed since the 1970s. Callaghan's *mea culpa*, however, is remarkable for several reasons. First, he accepted that the Keynesian conventional wisdom was no longer working. Second, he realised that policy itself had played a key role in creating the twin scourges of inflation and unemployment. Third, he anticipated the monetarism of Margaret Thatcher almost three years before she was elected. Indeed, had the country not had such a huge convulsion with the so-called Winter of Discontent at the tail end of 1978 and the beginning of 1979, perhaps Thatcher might never have defeated Callaghan in the general election of May 1979.

Put another way, inflation has a nasty habit of interfering with political ambition. The same is true today. Those who wish to "build back better" can do so only to the extent that inflation remains well-behaved or, if not, can be brushed to one side by pretending that any unexpected increase is transitory. In other words, the short-term incentive is to do nothing and hope that the problem goes away. Sometimes the instinct is correct: the European Central Bank has raised interest rates on at least two occasions over the last fifteen years in response to heightened inflation fears and monetary fears, only to discover that any initial increase in pricing pressures was indeed transitory. On other occasions, however, the instinct should be resisted. Inflation has a nasty habit of reappearing when you least expect it.

## Towards a better understanding of inflation

The standard approach to gauging inflation is to rely on the so-called output gap, a measure of the degree to which demand is either above or below potential supply across the economy as a whole. The Bank of England's Monetary Policy Committee, for example, regularly publishes its own projections for where the output gap is apparently heading. In the Committee's latest Monetary Policy Report (February 2022)[9], we learn that there is currently excess supply equivalent to ½% of GDP but that, in a year from now, there will be excess demand equivalent to ½% of GDP. With this "knowledge", it's relatively easy to see why the Bank is confident it is doing all it can to keep medium-term inflation pressures in check.

It is, however, an approach that offers spurious precision. Table 19 shows how IMF estimates for the output gap in the UK between 2007 and 2011 have changed over the years. In 2007 itself, the output gap for that year was estimated to be a positive 0.4% of GDP, or, to use the Bank's language, there was "excess demand" amounting to 0.4% of GDP. By 2012, however, the IMF's estimate of "excess demand" in 2007 had risen to a rather loftier 2.2% of GDP. In later years, the 2007 estimate was revised still further, settling at a remarkable 3.5% of GDP.

**19. Estimates of the UK output gap: it's not much more than guesswork**

| April 20xx IMF WEO database – % GDP | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| 2008 | 0.4 | -0.7 | -1.6 | - | - |
| 2009 | 0.4 | -0.6 | -5.5 | -6.7 | - |
| 2010 | 0.4 | -0.3 | -5.5 | -6.7 | - |
| 2011 | 1.0 | 0.7 | -3.7 | -2.7 | -2.6 |
| 2012 | 2.2 | 1.3 | -3.3 | -2.7 | -3.2 |
| 2013 | 3.7 | 1.7 | -2.1 | -1.8 | -2.5 |
| 2014 | 3.5 | 1.7 | -2.2 | -1.9 | -2.5 |
| 2015 | 3.5 | 1.7 | -2.2 | -1.9 | -2.5 |

Source: Successive April editions of the IMF WEO database

It's another way of saying that, in real time, measurement of the output gap is nothing more than a guess, offering only the benefits of a child's comfort blanket. The "precision" associated with such estimates is, in truth, a case of the blind leading the blind. Meanwhile, the relationship between the output gap and inflation changes over time: output gaps of similar size are associated with much higher inflation in the 1970s than in, for example, the 2000s.

[9] See Monetary Policy Report - February 2022 | Bank of England

Indeed, it's difficult to escape from the conclusion that, in some loose sense, inflation has to be a story involving money. In a world of barter, after all, inflation simply wouldn't exist: without a unit of account, there is no price level and, hence, there can be no inflation. Moreover, even if an output gap could be accurately measured in real time, it would still be of no real help in distinguishing between decades of generally high inflation and decades of generally low inflation. To understand inflation – and, in particular, why some periods of history are inflationary while others are not – we need to move away from the "real world" of output gaps, business cycles and productivity growth to the nominal world of monetary growth, interest rates, asset prices and balance sheets.

## Six lessons

Adopting this approach, it becomes easier to see why inflation, today, is proving to be so problematic. Six lessons need to be learnt.

- First, central bank independence was an important step in cementing lower inflation over the last thirty years. However, in itself, independence is no guarantee of price stability. Central banks have too easily taking comfort in the idea that, if inflationary expectations are stable, inflation will always behave itself in the medium term. We know, however, that inflationary expectations can respond to changes in actual inflation. Put another way, the rest of us may recognise before a central bank does that inflation is running out of control, thereby undermining the central bank's own credibility.
- Second, although there is no strong link between small changes in monetary growth and inflation, a commitment to "sound money" still matters. The Bundesbank understood this well in the 1970s and 1980s. More often than not, it missed its annual target for money supply growth. No one, however, doubted its commitment to monetary and financial stability and, as such, its chances of success regarding price stability. Today, central banks rarely talk about the link between monetary conditions – however defined – and inflationary outcomes. As such, major shifts in monetary growth – as was witnessed in the US in 2020 – end up being ignored. When inflation subsequently picks up, it may look as though the central bank has taken its eye off the ball.
- Third, the appropriate level of nominal interest rates cannot depend on the past alone. True, interest rates have been trending lower for decades now, but a continuous downward trend in the past says little about the appropriate level of interest rates today. Chart 18 shows the relationship between annual changes in the US employment cost index and the level of Fed funds. The acceleration in nominal wages may have been unexpected, but it has left policy rates adrift at a seemingly remarkably low level. Changes in the real economy tend to be slow but changes in the nominal economy can be unusually rapid. Interest rate policy needs to place limited weight on the former and considerably more weight on the latter. That, in turn, suggests that central banks should not commit themselves in advance to historically low "terminal" policy rates.
- Fourth, central banks have been too willing to embrace multiple objectives, too confident in the idea that the inflationary dragon had been slain. Admittedly, central banks should always take into account financial stability risks – both to avoid episodes such as the Global Financial Crisis and, indirectly, a possible link between asset price inflation and more generalised inflation – but to suggest that they should also be responsible for activity, unemployment, economic growth and climate change is stretching their mandates too far.
- Fifth, central banks have ended up being both judge and jury of their own policies. Inflation projections always reach "target" – however defined – within the appropriate time frame for the simple reason that central bankers cannot admit to either mistakes or impotence. They are, it seems, both omniscient and omnipotent. One possible solution would be to make

the inflation forecasting process independent from the monetary decision-making process (the European Central Bank might already claim to embrace this approach given that the role of the "staff forecasts" for inflation, but whether the staff would ever forecast a large inflationary miss is, to say the least, unlikely). Doubtless, however, the media would hugely enjoy the spectacle of a central bank's policymakers being "admonished" by its forecasters. Another would be to set out more clearly how the risks to a given forecast are skewed: a central view doesn't necessarily have to be a simple average. A third approach would be to clarify the conditions under which policy might need to be adjusted swiftly: in other words, policy frameworks should focus on contingencies, not on a (dubious) central view.

- Sixth, central banks have to recognise that, once the trade-off between growth and inflation has deteriorated, there is no easy way back, largely because the consequences of monetary actions have political and social ramifications. Over the last thirty years, central bankers have found the control of inflation a relatively easy task. They may be on the verge of entering an entirely different world in which both their actions and their failures to act come with far greater political baggage than has been seen in many a year. Indeed, by allowing inflation to rise, central banks have left themselves vulnerable to political interference on a scale not seen in decades.

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