

# COVID-19 update: A disinflationary shock - Part 2

## Longer-term inflation drivers: Government debt financing and institutional change



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### Key points

- We forecast inflation to fall to around 0.5% in the main developed economies in 2020, before rising modestly in 2021. We see inflation below targets in 2022
- Most concerns for rising inflation reflect government borrowing. There is little evidence that greater indebtedness per se lifts inflation. Greater spending could boost inflation over time, but we judge spending commitments so far as insufficient to achieve that end
- Central bank balance sheet expansion aims to lift inflation. We are not persuaded by monetarist arguments that fast money growth will see inflation surge
- The long-term allows for institutional changes. We consider the prospect of changing central bank inflation targets, increased protectionism and green inflation
- We do not rule out the prospect of inflation rising over the longer-term. Indeed, we anchor our long-term inflation forecasts around central bank targets. But we see the immediate pandemic impact as likely disinflationary through 2022.

### The great inflation debate continues

In the first of our two papers,<sup>1</sup> we considered the debate about the impact of coronavirus on the inflation outlook and we presented the case for a subdued outlook for Consumer Price Inflation (CPI) over the coming three years. We forecast inflation to average around 0.5% in 2020 in the US, Eurozone and UK, with Japan expected at 0.1%. We then see it rising to 1.7% in 2021 in the US, but envisage it remaining subdued at 1.5% in the UK, 0.7% in the Eurozone and -0.1% in Japan. We have not yet forecast inflation for 2022 but believe it likely to remain subdued – and below target – in each jurisdiction.

We discussed how the pandemic should impact different sectors of the economy very differently and that although the general price level likely to be muted, this would disguise greater price dispersal across different sectors. We looked at some of the specific difficulties of measuring inflation in this environment, before concluding with an overview of the system-wide approach we adopt to assess the general price level.

In this concluding note, we look at some of the longer-term implications for inflation. First, we consider the impact of government debt, government spending and central bank quantitative easing (QE) on inflation – areas of key concern to investors. We then consider a number of other institutional features that could shape the inflation outlook, including

<sup>1</sup> Page, D., "Covid-19 update: A disinflationary shock – Part 1", AXA IM Research, 10 July 2020

inflation targets and industrial and trade protectionism. We conclude with some observations on current market rates.

## The government debt finance debate

Perhaps the strongest contention that COVID-19 will be inflationary comes in response to the massive stimulus that has accompanied this shock to activity. In a recent [series of papers](#)<sup>2</sup>, we documented the large-scale policy responses to the pandemic in key jurisdictions. We have frequently heard the argument that the often unprecedented scale of official interventions is something that is ultimately likely to prove inflationary. In principle we concur – we do expect central banks to eventually be able to return inflation to their long-term targets, and even see some scope for these edging higher. This is what such policies are intended to achieve. However, we do not think this will occur over the next two to three years.

Many of the arguments we hear surrounding a shorter-term inflation pick-up (or longer-term above-target surge) are invariably made with reference to the level of government debt, the level of government spending or the expansion of central bank balance sheets that has occurred in parallel to this fiscal expansion. We address each in turn.

Historic evidence suggests that there is no association between extreme historic periods of government indebtedness and inflation. Exhibit 1 illustrates average UK inflation rates around the times of the Napoleonic, First and Second World Wars (WWI and WWII), when public debt rose to relative peaks<sup>3</sup>. It shows that looking at a five-year timeframe – the most relevant for our argument – inflation averaged lower in the following five years than the five years before. Inflation also averaged lower over a 10-year and 20-year timeframe for the Napoleonic War and WWI but was higher after WWII – albeit marginally over a 10-year average. For the latter we should consider that the extended comparison periods include the 1930s global depression and the 1920s, which in the UK were unusually disinflationary as the UK battled with retaining the gold standard.

The empirical evidence of this extreme indebtedness does not provide evidence for rising inflation. This is despite that the wars inevitably resulted in reduced supply potential through extreme capital destruction, which is specifically different from the current experience. In fact, we would contend that these figures are more suggestive of increased indebtedness being associated with a disinflationary outlook, something that would be more consistent with a view that increased debt was likely to be consistent with subdued demand.

**Exhibit 1: Total estimated policy stimulus**

	Napoleonic	WWI	WWII
20 years before	3.2	3.6	1.7
20 years after	-1.3	-0.7	4.3
10 years before	2.6	6.6	5.0
10 years after	-0.5	-0.7	5.5
5 years before	0.9	11.8	8.2
5 years after	-0.6	-0.6	4.9

Source: Miles, D. and Scott, A., "Will inflation make a comeback after the crisis ends?", CEPR, April 2020

If indebtedness per se does not appear to point towards rising inflation, then what of the spending that it enables? This appears a more plausible potential driver. Indeed, we directly account for this in our medium-term assessment as we consider the likely growth outlook. As we explain in our [policy paper series](#), we consider the fiscal response across the globe as a key feature supporting activity in the face of the enormous shock that the pandemic and its prevention have caused. In the US, for example, we consider fiscal stimulus likely to deliver much of the around 10ppt of boost to GDP which we forecast in 2020. However, we still forecast a 4.5% contraction in the economy notwithstanding that boost (consensus -5.7%). More fiscal stimulus appears likely in the US and elsewhere, and it is plausible that fiscal stimulus could lift demand faster than we currently forecast, close the output gap more quickly and generate inflationary pressure. We certainly do not rule this out. However, our forecast currently is that the level of public spending is not sufficient to offset the drop in private demand and see inflation above target over the medium term.

This leaves the impact of the central banks' expansion of their balance sheets-QE. First, we must reiterate that central banks are undertaking QE precisely because it is inflationary. The prima facie case for QE is to ease financial conditions to lift inflation back towards target. However, this inflationary monetary policy expansion occurs against a deflationary economic shock and the observed inflation rate is a combination of the two. This helps explain why in the US there has been little observable impact of the Federal Reserve (Fed)'s balance sheet expansion on Consumer Price Indices (CPI) from 2007 to 2014, and only a slightly more obvious relationship in the Euro area from 2011 to 2014.

That said, academic efforts to isolate the inflation lift from QE alone provide a range of estimates but suggest a material contribution. In the UK, Bank of England (BoE) research<sup>4</sup> suggests that the £300bn of QE delivered so far this year could deliver a 1-2.25% ppt boost to the CPI outlook. A Bank for International Settlements paper<sup>5</sup> suggests that the same increase in the BoE balance sheet (13.5% of GDP) and similar in the Fed's (\$2.4tn, or 11% of GDP) could add over 2.5ppt

<sup>2</sup> "COVID-19 Update", Macro Research Team, AXA IM Research, June 20

<sup>3</sup> Public debt approached 200% GDP after the Napoleonic War, 175% after WWI and 250% after WWII.

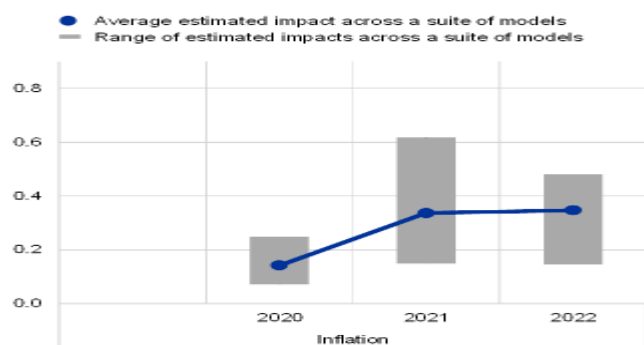
<sup>4</sup> Joyce, M., Tong M., Woods R., "The UK's quantitative easing policy: design, operation and impact", Bank of England Quarterly Bulletin, Q3 2011.

<sup>5</sup> Hesse, H., Hofmann, B. and Weber, J., "The macroeconomic effects of asset purchases revisited", Bank of International Settlements (BIS), Dec 2017.

over three years. Meanwhile the European Central Bank (ECB) estimates that its combined balance sheet activities will lead to a cumulative 0.8ppt boost to inflation (Exhibit 2). However, these central banks envisage inflation remaining below their target levels over the next three years. The Fed expects Personal Consumption Expenditures inflation to get back to 1.7% by end-2022, the ECB to 1.4% and only the BoE with its 'plausible' scenario forecasts inflation getting back to its 2% inflation target.

### Exhibit 2: Money supply measures have not explained movements in CPI inflation for decades

(percentage points)

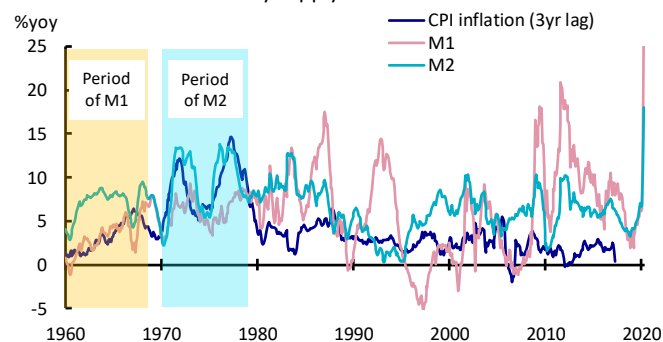


Source: ECB Calculations, June 2020

However, monetarist economists are concerned at the acceleration in broad money growth and fear that this is a harbinger of long-term inflationary pressure. This is particularly so in the US, where the M2<sup>6</sup> measure of money supply has accelerated to a 60-year-plus annual growth rate high of 18% in May.

### Exhibit 3: Money supply measures have not explained movements in CPI inflation for decades

US CPI inflation and money supply



Source: Bureau of Labour Statistics (BLS), Federal Reserve Bank (FRB) and AXA IM Research, June 2020

<sup>6</sup> The Federal Reserve produces estimates of the monetary base (MB), M1 and M2 money supply. MB is a very narrow definition including currency and commercial banks deposits at the central bank – commonly referred to as the monetary base. M1 additionally includes broadly individual bank accounts and travellers' checks. M2 is a broader measure, additionally including savings, money market accounts and retail money market funds and small denomination time deposits.

Exhibit 3 illustrates how various measures of the US money supply have evolved alongside inflation over the last 60 years. It illustrates that for much of the 1960s, inflation consistently followed M1 money supply growth and for much of the 1970s it more closely followed the broader measure of M2. Since 1980, there has been no discernible relationship where changes in the money supply have led to changes in inflation, with money supply growth being much more volatile. This has included periods where M2 growth has been relatively elevated (12.7% in 1983 and 10.1% in 2012). This occurred particularly after the Global Financial Crisis (GFC) when the Fed first embarked upon QE as a policy tool, directly boosting M1 and feeding through to a lesser extent to M2 growth, while inflation fell.

This appears to contravene the central tenet of monetarist economics, that the quantity of money should equal the nominal value of the economy:

$$MV = PT^7$$

However, rather than contravening this identity, we would argue that, as has regularly been the case, it simply reflects a simultaneous decrease in the velocity of circulation (V)<sup>8</sup>, as witnessed after the GFC. Intuitively, this argues that there has been a large increase in money holdings, but for precautionary, rather than spending motives. This includes a large drawdown of credit lines, and significant issuance of corporate debt, as the economy fell into lockdown – facilitated by various central bank measures. However, that drawdown would either be held in reserve, or used to finance a shortfall of incomes elsewhere as companies and households increasingly manage expenditure against an expectation of reduced incomes.

In short, we do not believe that the increased lending that has taken place across the past quarter will finance elevated spending, foreseeing no boom in either corporate or household spending. Over time, and similar to what we have seen since the financial crisis, we would expect the precautionary level of cash holdings to subside and money supply growth to decelerate. But we do not believe either will affect the overall rate of inflation.

### Broader institutional change

When considering long-term implications many factors could change – both in response to the pandemic and more broadly – that could have a major influence on future inflation.

We fully expect to see short-term investment spending weakened by the pandemic as corporate indebtedness rises

<sup>7</sup> Here, M stands for the money stock, V for the velocity of circulation, P for the general price level and T for the number of transactions.

<sup>8</sup> V is not directly observable and is thus estimated ex-post by dividing M/PT. Hence, ex-post it becomes a tautology.

and broader economic uncertainty has increased materially. This is likely to lower productivity growth – which is inflationary – over the medium term. However, it is possible that the increased adoption of technology in our day-to-day lives spurs a broader boost in productivity, research and development and investment for the future.

Moreover, many people view the pandemic as something that will further drive a realignment in supply chains against a broader backdrop of increased global tensions. While we see this as a distinct possibility, we have no conviction on the long-term inflationary impact at this stage, in part as we await to see whether such supply chain realignments occur and whether they result in onshoring or shifts to separate third parties.

## Changes to central bank inflation targets

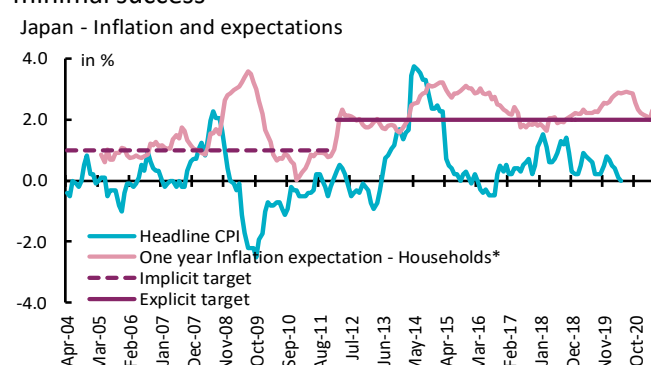
Central banks have once again received criticism for the support they have provided to markets-to-date and their role as inflation targeters. Our own view is that much of this criticism is misplaced. A common criticism is that asset purchases exacerbate inequality. However, insofar as asset price increases are a feature of all types of monetary policy and that monetary policy is consistent with minimising unemployment – which we would argue was a more pernicious contributor to inequality – we are not convinced that an ex-post analysis will suggest a different role for central banks. Additionally, the one tool per objective limit to policy making suggests monetary policy has been reasonably successful at delivering low and stable inflation over recent decades and is ill-suited to other policy goals, including tackling inequality. We expect central banks to remain inflation targeters.

However, we do consider the possibility of a change to inflation targets themselves. This has already been foreshadowed in the Fed’s and ECB’s Monetary Policy Reviews. Although neither of these has concluded, the Fed has hinted at shifting to an inflation-averaging target that would commit it to deliver an inflation overshoot after prolonged periods of sub-target inflation. The ECB was also rumoured to be dropping the asymmetric bias to its current target of “close to, but below 2%”.

Such shifts would be subtle attempts to stop inflation expectations softening further – a risk we consider likely after the pandemic. Arresting the decline in inflation expectations is likely to be a necessary feature of meeting inflation targets consistently in the future. There is also a case to be made for raising inflation targets more generally. Most developed economy central banks find themselves for the second time in a decade pinned to the Emergency Lower Bound – some having never moved from it. This is a recognised side-effect of the fall in long-term real rates and can be expected to occur more frequently as real rates remain low and perhaps fall further. However, this constrains nominal monetary policy as central banks must keep nominal rates close to 0% at a minimum.

An increase in inflation targets would ease this lower bound constraint on conventional monetary policy. It may be considered that the cost of modest incremental inflation would not exceed the benefits of additional monetary policy flexibility. Indeed, inflation targets of around 2% that have come to characterise most major international central banks’ mandates were first adopted in the 1990s. What was an appropriate inflation target then may not be 30 years later as lower real rates have become more prevalent. However, that said, the experience of the Bank of Japan (BoJ) – which introduced a higher inflation target of 2% in 2013 – is that the impact on achieving that target – or managing expectations – can be two different things (Exhibit 4).

## Exhibit 4: BOJ’s inflation target increase had only minimal success



Source: BoJ and AXA IM Research, June 2020

## Institutional Reversion to restrictive practice

It is also perhaps no surprise that for most developed economies inflation peaked in the 1970s. This was an era before the introduction of significant deregulation, globalisation and following a reduction in labour union power. Yet following 10 years of subdued growth and the current pandemic, it is possible that individual countries increasingly revert to isolationist and protective behaviours. In many areas these trends have been underway for some years. In some there are new and disturbing elements.

The US under President Donald Trump is one example of an economy that has embarked on populist economic policies and identity politics. This has seen an increased use of sanctions, tariffs and a retreat from multilateral international cooperation on issues from international trade, security and climate change. More recently, the US has initiated visa restrictions for immigrant workers on the populist - but economically irrational - view that this will boost domestic employment. The US administration is also considering a further round of tariff increases. Moreover, recent research<sup>9</sup> suggests that competition in many sectors – including some of the most innovative ones, such as telecommunications – is now more intensive in the European Union (EU) than in the US. Intense lobbying has gradually eroded the anti-trust legal apparatus in the US, triggering a

<sup>9</sup> “The Great Reversal” by Thomas Philippon, 2019

movement of concentration in many key industries. To some extent, “detaching” competition policies – mainly falling in the purview of the EU – from national governments has resulted in a more stringent enforcement of antitrust policies in Europe.

However, even in Europe the pandemic threatens to tip the delicate balance of intra-European competition and efficiency. National governments have been increasingly forced to intervene in their own economies given the lack of effective union-wide fiscal response. This support has increasingly favoured national champions. Germany recently bailed out its national air operator, Lufthansa, with few of the European Commission’s competition criteria to accompany this state aid being met. This may supplement an inherent bias towards national champions across the Eurozone, as appears to have been the case in the German regulator BaFin’s regulation of the now bankrupt Wirecard.

Finally, other perfectly legitimate policy objectives could foster some “regulation-triggered inflation” in the long-term. The principle of a climate change “border tax” – i.e. incorporating foreign suppliers’ carbon footprint in customs duties – is now explicitly endorsed by the European Commission. Its implementation would reduce what has been a source of disinflation in developed markets for three decades: The capacity to source low-cost foreign producers. This gets us back to a simple observation: Climate change is a negative externality. To deal with this externality its implicit cost must be made explicit, usually through taxation. “Carbon inflation” is a new phenomenon which we will need to account for in the future.

This regression in many developed economies to less efficient, less globally-integrated economies does present a long-term threat to inflation that may be enhanced by the pandemic. However, we argue that this is something that is likely to play out over many years, likely beyond our cyclical outlook, if it continues.

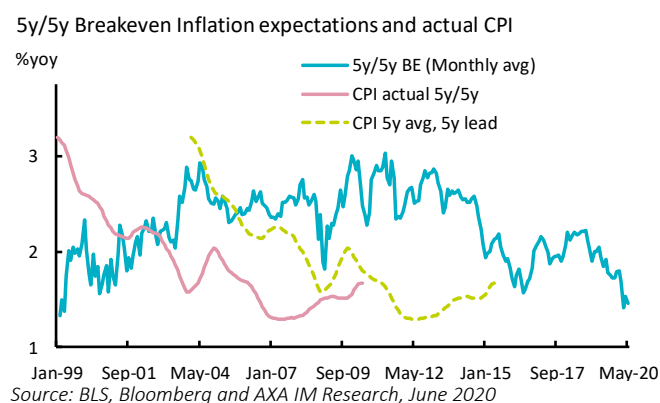
## Market implications and breakeven inflation expectations

Our forecasts for inflation are below central bank inflation targets for the next three years. This is broadly consistent with inflation forecasts from the Fed (rising to 1.7% by end-2022), the ECB (to 1.4% by 2022) and the Bank of Japan (to 0.4-1.0% by 2022).

Moreover, this subdued outlook for inflation is directionally consistent with market breakeven (BE) inflation expectations. Exhibit 5 illustrates that 5y/5y BE expectations are not good predictors of actual inflation (its five-year average in five years’ time). In part, this reflects other factors including liquidity and convexity premia that affect the difference between nominal and inflation-linked bonds. However, we illustrate by shifting the five-year average forward five years that BE expectations have been better – but still not great – indicators of the current

five-year inflation outlook. And indeed, the current 5y/5y breakeven rate around 1.5% in the US is broadly consistent with our outlook for inflation for the next five years. However, insofar as we expect headline inflation to trend back towards 2% (or higher) inflation targets over the longer run, we argue that the long-term outlook for inflation is likely to be higher than suggested by current market readings.

### Exhibit 5: Breakeven inflation subdued



Fiscal dominance – when central banks have become more focused on ensuring cheap financing for governments, rather than maintaining economic objectives (i.e. inflation targets) – is also likely to be an ongoing discussion in markets over the coming years. This is probable as central bank actions to lift inflation back towards targets on a sustainable basis are likely to be largely indistinguishable from actions to suppress yields for their own sakes. However, if markets begin to believe that fiscal dominance is prevailing, market inflation expectations could rise further above target. Central banks will need to watch market expectations closely over the coming years for material moves in either direction.

## The subdued road ahead

In this paper, we have addressed some of the broader considerations around the longer-term outlook for inflation. An analysis of highly-indebted governments, increased fiscal spending and central bank balance sheet expansion does not alter our opinion that inflation is likely to be subdued and below target for the next three years, an outlook exacerbated by the pandemic.

However, we also consider longer-term changes that could take place beyond this framework. We argue that over the longer-run (three years plus) increases in central banks’ inflation targets and institutional changes in key developed economies could complicate the evolution of inflation as could changes in investment, productivity and globalisation. We do not want to argue that inflation will continue to drift lower indefinitely. And our best estimate of long-term inflation outlooks is for them to remain anchored to central bank inflation targets. However, our conviction, shared by central banks and market consensus, is that the medium-term impact of the pandemic will add to a disinflationary outlook.



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