

**South African Reserve Bank**  
**Occasional Bulletin of Economic Notes**  
**OBEN/21/01**



SOUTH AFRICAN RESERVE BANK



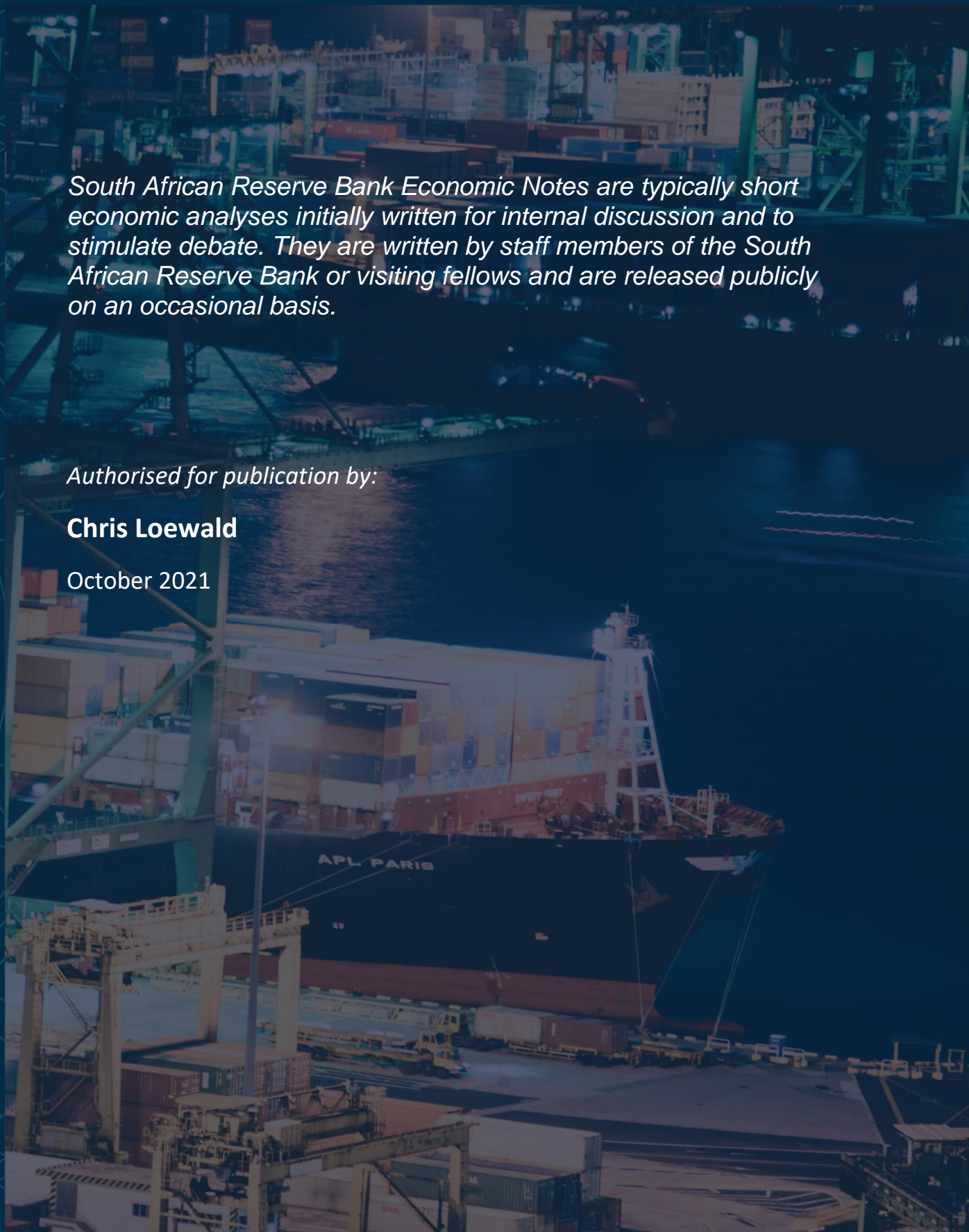
A purposeful journey

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*Authorised for publication by:*

**Chris Loewald**

October 2021



# SARB Occasional Bulletin of Economic Notes

## October 2021

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#### Enquiries

Head: Research Department  
South African Reserve Bank  
P O Box 427  
Pretoria 0001

Tel. no.: +27 12 313-3911  
0861 12 SARB (0861 12 7272)

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# OBEN 2101\* – May 2021

## Inflation in the time of Covid-19: (II) the liquidity surge

*Jean-Francois Mercier*

### Abstract

Sizable policy stimulus since the start of the Covid-19 crisis has resulted in a sharp acceleration in global money supply. However, this acceleration is uneven, and in many cases not unprecedented. Furthermore, some typical elements of a monetary boom, such as rising demand for new loans or lax bank lending standards, are not present at this stage. Hence, this latest surge in money supply need not result in sustainably higher inflation, and indeed in most major economies money growth has been a poor predictor of inflation in recent decades. However, were fiscal policies to remain expansionary for an extended period and not be matched by a timely normalization of monetary policies, the strong money supply expansion could be sustained and eventually trigger higher inflation.

### 1. Introduction

Governments and central banks have responded to the Covid-19 pandemic with aggressive stimulus across the board. Policy rates have been slashed, many central banks have boosted purchases of bonds (through “Quantitative Easing” programmes), and public deficits have ballooned, reflecting discretionary measures as well as automatic stabilizers. Most economists argue that quick and sizable stimulus was necessary to prevent an even deeper recession and limit permanent economic “scarring”. However, some voices are now raising concerns that sizable stimulus – if extended well beyond the closing of output gaps – could sow the seed of future inflation.<sup>1</sup> Market participants seem to share these concerns: A recent Deutsche Bank survey shows rising expectations of inflation in the medium term (Figure 1).

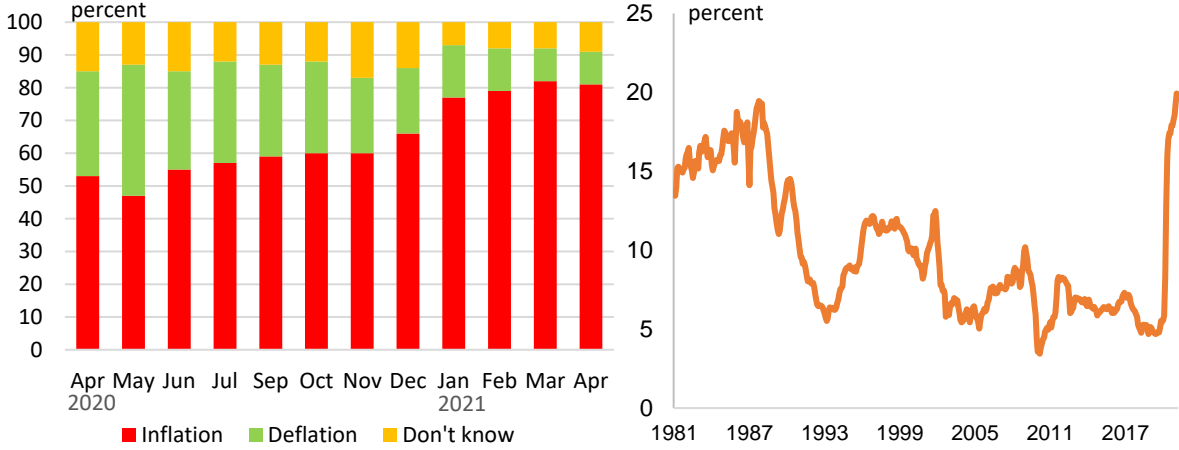
This note, the second in a series looking at whether the Covid-19 crisis should prove inflationary or deflationary over time, focuses on the consequences of policy stimulus, and specifically at how the resulting increase in money supply can feed into inflation. It finds that while the surge in liquidity is undeniable, it is uneven across countries, and furthermore, money supply – especially when not driven by strong and sustained demand for credit – is often a poor guide to future inflation. Ultimately, whether both fiscal and monetary stimulus are phased down in appropriate fashion or not is likely to determine the risk of a sustained spike in inflation.

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<sup>1</sup> For example, Larry Summers and Olivier Blanchard have expressed concerns that the latest US fiscal stimulus is “too much” and could, in the former’s words, raise inflation to levels unseen in a generation.

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**Figures 1 and 2: Market participants’ opinion on risks of inflation vs deflation in 1-5 years (left) and Y/Y growth in aggregate OECD broad money (right)**



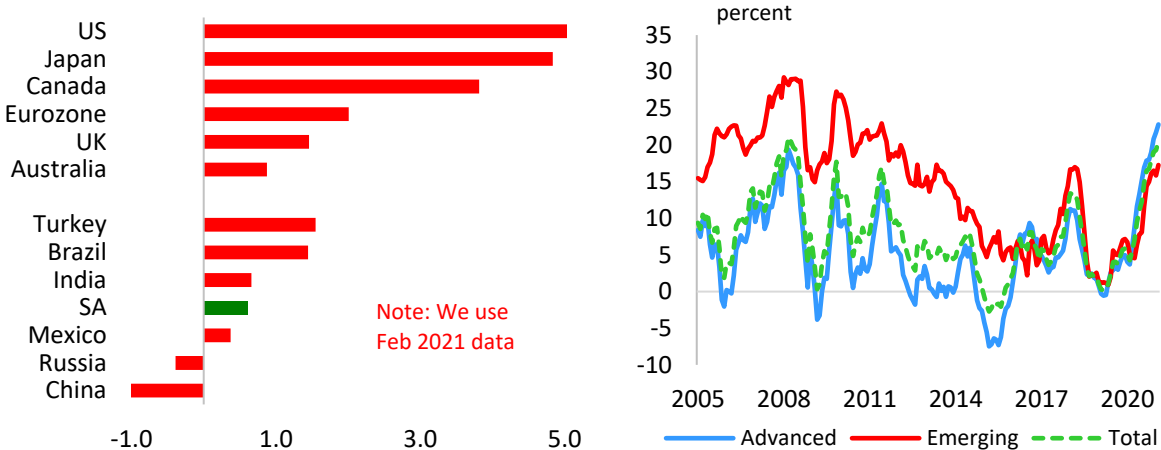
**2. Some monetary (or monetarist?) arithmetic**

A key consequence of stimulus appears to be a sharp expansion in liquidity, which is reflected in monetary aggregates. For example, the median M1 growth rate for G-20 countries jumped from 7.9% year-on-year in February 2020 to a high of 22.9% in January 2021.<sup>2</sup> This exceeded the peak of 19.9% seen in early 2008, before the Global Financial Crisis – a period in which global inflation accelerated. If we use broader M2 monetary aggregates, the acceleration in the median growth rate is less pronounced, though still strong (14.1% in October, versus 7.9% in February). These findings coincide with the OECD’s calculation of a broad money index for the aggregate of its member countries, which jumped to 19.3% year-on-year in January 2021, the highest since 1988 (Figure 2).

If one holds the traditional monetarist view that a sudden surge in money supply is inflationary, then the above-mentioned figures are of concern. However, the reality is more complex. First, while money supply growth has picked up throughout the world, the pace of acceleration varied significantly across countries. If we calculate the z-score of M2 growth for a number of countries, we see a much stronger pickup in US, Canada and Japan than in other countries; within large EMs, only Turkey and Brazil stand above the lot (Figure 3).<sup>3</sup> And splitting our G-20 M2 aggregate between its AE and EM components, we see that current money growth is much less divergent from its longer-run average in EM (Figure 4).

<sup>2</sup> We adjust the M1 series for the US for a jump in May 2020, which reflected the Federal Reserve’s decision to include all savings deposits and not just checkable deposits in the narrow money definition.  
<sup>3</sup> The z-score refers to the difference between the February reading and the average of the past 15 years, divided by the standard deviation over that period.

**Figures 3 and 4: Z-score of M2 growth in selected AEs and EMs (left) and split of aggregate G-20 M2 growth by major regions (right)**

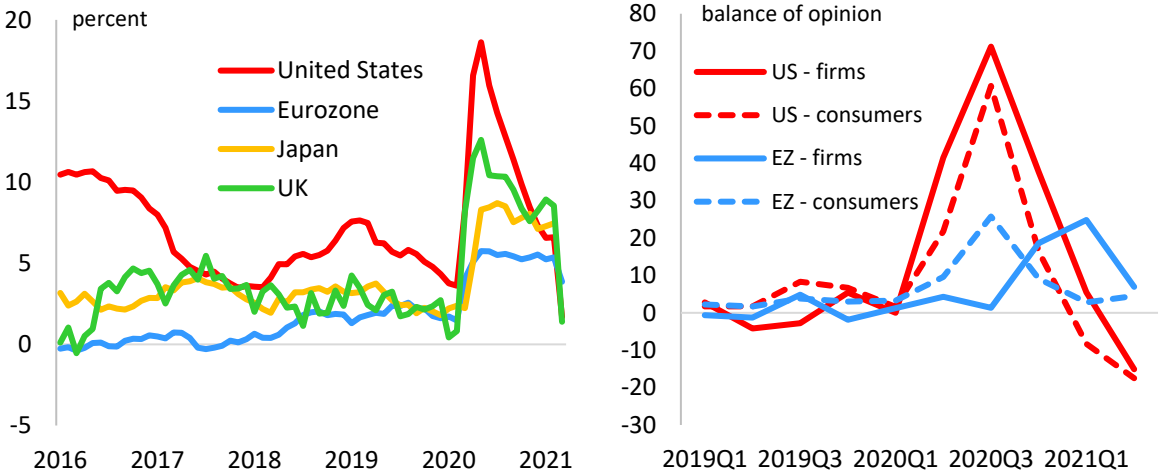


**3. What drove the money acceleration?**

The current surge in liquidity is unusual insofar as not all characteristics of a traditional monetary expansion are met. Admittedly, there has been a broad-based easing of monetary policy, through both a reduction in rates, central bank asset purchases and targeted lending schemes for specific sectors. However, there has been no sustained, broad-based acceleration in bank lending to the private sector. In most AEs, there was a strong pickup in loans to the corporate sector in Q2 of 2020, as companies sought “bridging finance” to deal with a sharp, lockdown-related decline in cash-flow; however, that acceleration was short-lived and has mostly reversed (Figure 5). At the same time, lending to households has been subdued (or even, in the US contracting, suggesting that consumers are keen to use public cash transfers to pare down their debt). Across major EMs, lending only picked up significantly in Brazil, Turkey and Russia.

Nor is the situation about to change quickly, according to loan officer surveys in major economies. In the US, Eurozone, UK and Japan, banks have not indicated a pickup in demand for loans, with the exception of the housing sector. Also, a sustained loosening of lending standards – traditionally a typical feature of monetary booms – is not present this time. In fact, these same loan officer surveys reported that banks typically tightened their standards in Q2 and Q3 of 2020, sometimes significantly (Figure 6).

**Figures 5 and 6: Bank lending to corporations in major AEs (left) and split of aggregate G-20 M2 growth by major regions (right)**



Rather, the 2020 surge in liquidity appears to have largely reflected significant fiscal easing, mostly focused on direct cash transfers to households and unemployment benefits/furlough schemes. In many cases, these payments more than made up for job-related income losses. Their timing also affected money supply growth: As the OECD (2020) highlighted, payments happened at the height of the lockdown, when households and businesses were constrained about how much they wanted to spend.<sup>4</sup> Consequently, household savings surged; a large share of these transfers were re-deposited with banks, and did not circulate in the “real” economy. As a consequence, the velocity of money fell markedly, and has yet to pick up. The surge in money growth may also have reflected private agents’ willingness to keep a large part of these payments in cash, as protection against income uncertainty.

**4. Money supply and inflation – empirical observations**

In a February testimony to Congress, Federal Reserve Chair Jerome Powell remarked that “right now, M2 does not really have important implications”.<sup>5</sup> But is it a fair assessment? A simple comparison of inflation and M2 growth for advanced economies suggests that money supply has shorter, and more pronounced cycles than inflation: Thus, while the pickups in inflation in the last 30 years (2008, 2011, 2016) were preceded or accompanied by faster money growth, other instances of money acceleration (2001-03, 2018) did not result in inflation. This would suggest that monetary expansion will only be expansionary if other factors of inflation are present, for instance a positive output gap (2008) or a surge in commodity prices (2011).

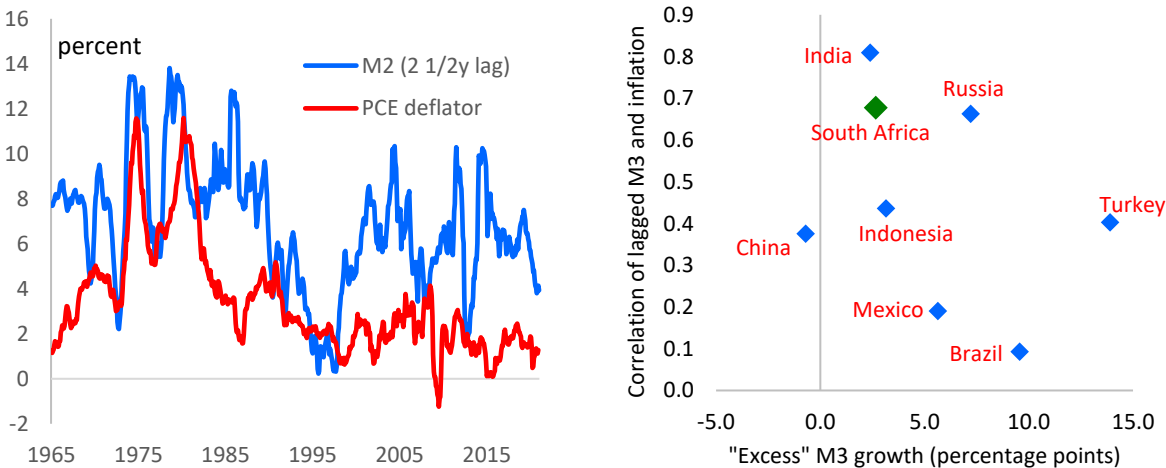
For many years, academic literature has shown that linkages between money and inflation only really occur in countries with high inflation or hyper-inflation, and that in advanced economies, the power of money as inflation predictor has faded.<sup>6</sup> Indeed, a look at these

<sup>4</sup> “The increase in bank deposits during the COVID-19 crisis: Possible drivers and implications”, Box 1.3 in the OECD Economic Outlook, Volume 2020 Issue 2, December 2020.  
<sup>5</sup> “Powell’s Econ 101: Jobs not inflation. And forget about the money supply”, Reuters, 23 February 2021.  
<sup>6</sup> See “Is Inflation Always and Everywhere a Monetary Phenomenon?”, Paul de Grauwe and Magdalena Polan, Scandinavian Journal of Economics Vol. 107 No. 2, June 2005; “Money growth and inflation in the Euro Area: A time-frequency view”, Antonio Rua, Bank of Portugal Working Paper 22/2011; and “What Does Money Velocity

advanced economies where money supply accelerated the most since Q2 of 2020 shows a weak money/inflation link in recent decades:

- In the **United States**, both narrow and broad money growth have largely decoupled from price gains since the “Volcker Fed” took action to bring down inflation in the early 1980s (Figure 7). While the correlation between PCE inflation and M2 growth (lagged two and a half years) was as high as 71% in 1960-79, it was only 27% in the four decades that followed. This is consistent with evidence of stable inflation expectations through the cycle, and a flatter Phillips curve;
- In **Canada**, some strong positive correlation was also observed between CPI inflation and one year-lagged M2 growth, reaching as high as 86% up to 1995, four years after the Bank of Canada first adopted inflation targeting. However, since that date the correlation has effectively dropped to zero;
- A similar pattern is observed in **Japan**, where M2 growth (with a lag of 20 months) and CPI inflation are strongly correlated up to 1995 – when Japan first experienced deflation – and that correlation falls to zero afterwards.

**Figures 7 and 8: US M2 growth and PCE inflation (left) and correlation between inflation and lagged money growth vs “excess” money growth in selected EMs (right)**



In emerging countries, where inflation expectations are less anchored – or have only recently been anchored – and where the Phillips curve is generally not as flat, a monetary surge might aggravate inflationary fears. Indeed, some countries show a relatively strong correlation between money supply and inflation; however, these are not necessarily the ones where last year’s money acceleration is unusually strong. Figure 8 plots – for eight emerging economies – the maximum correlation between lagged broad money and CPI inflation against “excess” money growth (defined as the latest year-on-year growth in broad money less the 2014-19 average). It would suggest that Turkey, and to a lesser extent Russia, are most at risk from money-driven inflation. India and South Africa have a high correlation to inflation but limited “excess” money growth; Brazil’s money growth is unusually high but is uncorrelated with inflation.

Tell Us about Low Inflation in the U.S.?, Yi Wen and Maria Arias, St Louis Fed on the Economy Blog, September 2014.

## 5. So is it mostly fiscal?

Deutsche Bank economists argued in 2020 that based on experience of the past centuries, the key risk of an upside inflation surprise comes from policy regime change – including a structural change in central bank tolerance for inflation, against a background of economic, social and political changes.<sup>7</sup> In the current environment, they currently see that risk being the highest in the United States, where the Administration is embarking on the largest fiscal stimulus since World War II and the Federal Reserve indicated an implicit shift from a proactive to reactive approach to inflation risks.<sup>8</sup> In a March 2021 report, they quoted Fed research highlighting the possibility of a non-linear Phillips curve, with stronger inflation responses at very low unemployment rates.<sup>9</sup> Their colleagues at Bank of America securities also highlighted the US policy response as raising the risk of a negative inflation surprise in the US, though they do not see those risks extending to other AEs.<sup>10</sup>

Indeed, while the global surge in money supply so far reflects (mostly) temporary factors, and should therefore bear limited inflation risks, the balance of risks could easily tilt should money supply growth remain very high for an extended period. This could be the case if, for example, fiscal policymakers continue to maintain a high degree of stimulus even as the drag from the pandemic fades, boosting pent-up demand, reducing risk aversion and boosting both borrowers' and lenders' appetite for excessive credit creation. And while monetary policymakers have not signalled a tolerance for higher inflation (the Federal Reserve, in particular, rejected calls from some economists for raising the inflation target), a more "reactive" stance may raise the probability of upside inflation surprises. Economic literature indicates neither the consensus nor the Fed anticipated the rise in inflation in the late 1960s, in part because the degree of slack, and the sensitivity of prices to such slack, may have been under-estimated.<sup>11</sup>

Encouragingly, most of the fiscal response to the pandemic (cash transfers, additional unemployment benefits) consisted of either one-off or limited-time transfers. As a result, as these benefits expire, the fiscal stance will automatically tighten: In its April 2021 Fiscal Monitor, the IMF estimates that 54% of AEs and 55% of EMs will witness an improvement in their cyclically-adjusted fiscal balances this year.<sup>12</sup> Non-renewal of generous fiscal transfers should also reduce the incentive for households to spend most of their 2020 fiscal "windfalls", in turn limiting the inflationary risks from runaway consumer demand. However, there are exceptions, including the United States, where the structural budget balance is only expected to decline in 2022. And the US experience shows that an environment of income inequality (exacerbated by the pandemic), ageing and inadequate public infrastructure and a push for

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<sup>7</sup> "Could COVID-19 trigger an inflation regime shift? An historical perspective", Focus Europe, Deutsche Bank Research, 15 July 2020.

<sup>8</sup> In its March 17 statement, the FOMC expected it would be appropriate to maintain the current target range for Fed funds "until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time."

<sup>9</sup> See "Goldilocks with Inflation Risk", World Outlook, Deutsche Bank Research, 16 March 2021 and "Non-linear Phillips curves with inflation-regime switching", Jeremy Nalewaik, FEDS Working Paper 2016-078.

<sup>10</sup> "Another kind of American exceptionalism", BofA Global Economic Weekly, 5 February 2021.

<sup>11</sup> See for instance "Commentary on 'Origins of the Great Inflation'", Christina D. Romer, Federal Reserve Bank of St. Louis Review 87, March/April 2005.

<sup>12</sup> For both regions as a whole, the cyclically-adjusted budget balance is expected to improve in 2021.



new public investments (in particular to combat climate change), the political consensus can shift towards larger deficit-funded public spending than was the norm in recent decades.

## **7. Conclusion**

While the Covid-19 pandemic has resulted in unusually large global money supply growth, the acceleration in monetary aggregates remains uneven across countries, and recent history shows that in AEs and also in several EMs, the growth rate in the money supply is a poor predictor of future inflation. The flattening of the Phillips curve, the focus of central banks on anchoring inflation expectations, and the mix of market liquidity and financial innovation – which can exacerbate shifts in money velocity – probably all contributed to the decoupling between money growth and inflation.

As long as the surge in money supply reflects one-off fiscal transfers rather than strong private-sector borrowing appetite and lax lending standards, it need not result in higher inflation than central banks are prepared to tolerate. Nevertheless, if political pressure results in ongoing loose fiscal policies even after output gaps have closed, and if central banks refrain from pre-emptive tightening in the belief that inflation will remain unresponsive to both real economic and money demand shocks (as in recent decades), then strong money growth could ultimately result in sustained higher inflation.