

APAC Regional Webinar: Monetary and Fiscal Factors vs. Real Factors: Which will Dominate in 2021?

26 November 2020



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CFA Institute



SESSION CHAIR

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HOUSEKEEPING

- Today's webinar is scheduled for 60 minutes.
- All participants are muted, we welcome questions via the Q&A function on your screen.
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SPEAKER

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Chief Economist, Invesco



Global Economic & Investment Outlook

Presentation to CFA Institute, Hong Kong

26 November 2020

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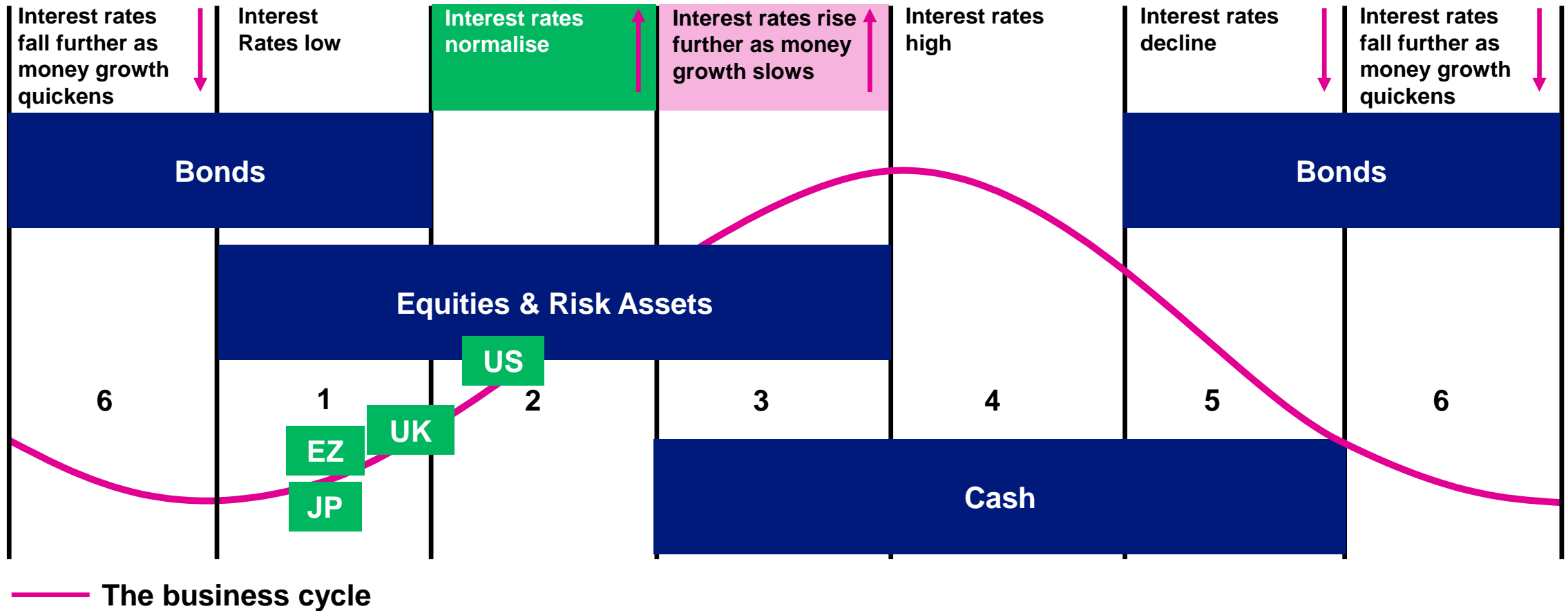


Agenda



- Two types of money
- Why this recovery will differ from the post-GFC recovery
- The Banking System and Shadow Banking System
- The Transmission Mechanism and the Lags-in-Effect
- Spending – and Recovery – driven by Broad Money Growth in DMs & EMs
- Forecasting the effects of brief, strong monetary injections: US & UK
- Why no focus on fiscal policies?
- Why no focus on interest rates?
- Conclusions

Asset allocation through the business cycle: The world before the pandemic



For illustrative purposes only

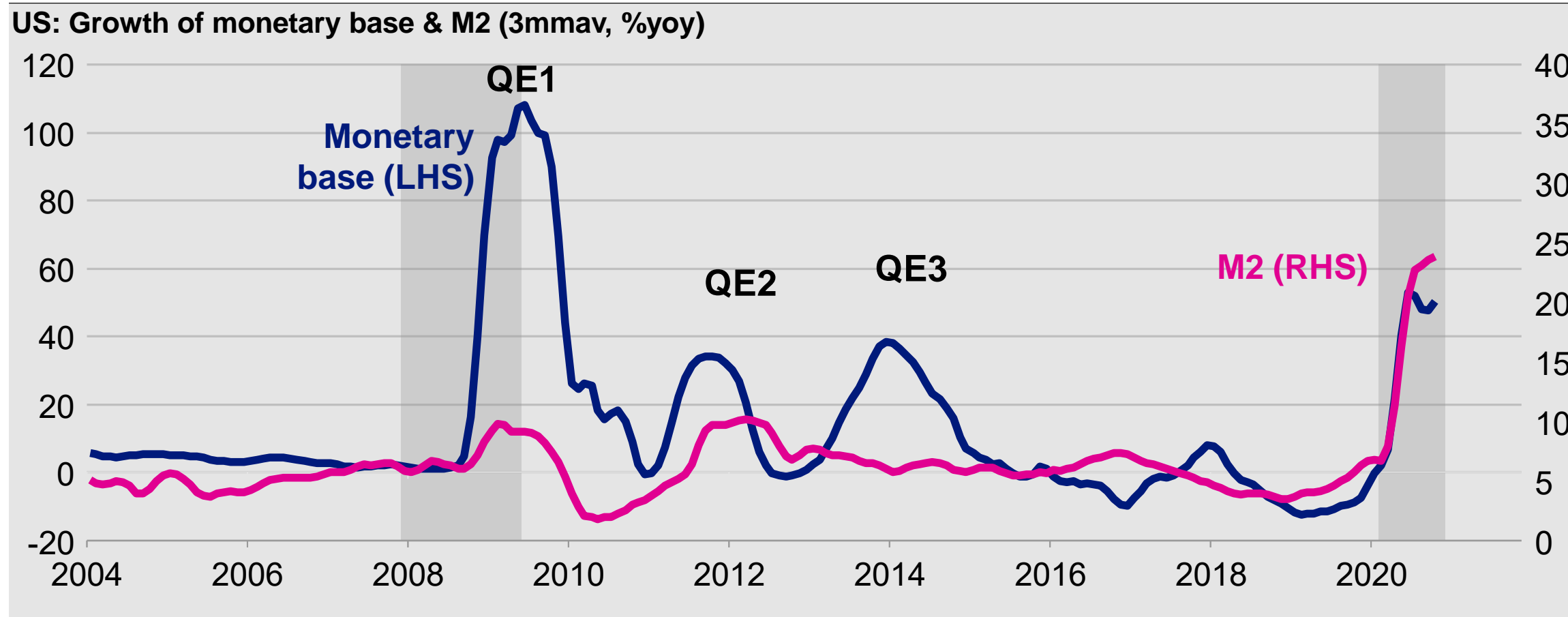
Two types of money



“Central Bank Money”	“Money in the Hands of the Public”
Balance Sheet of Central Bank: Fx & Domestic Securities/QE (Assets) Monetary Base (Liabilities)	Broad Money: M2, M3, M4x Currency & Deposits held by public
Cash currency Reserve deposits of banks	Money for spending on: Assets, goods and services

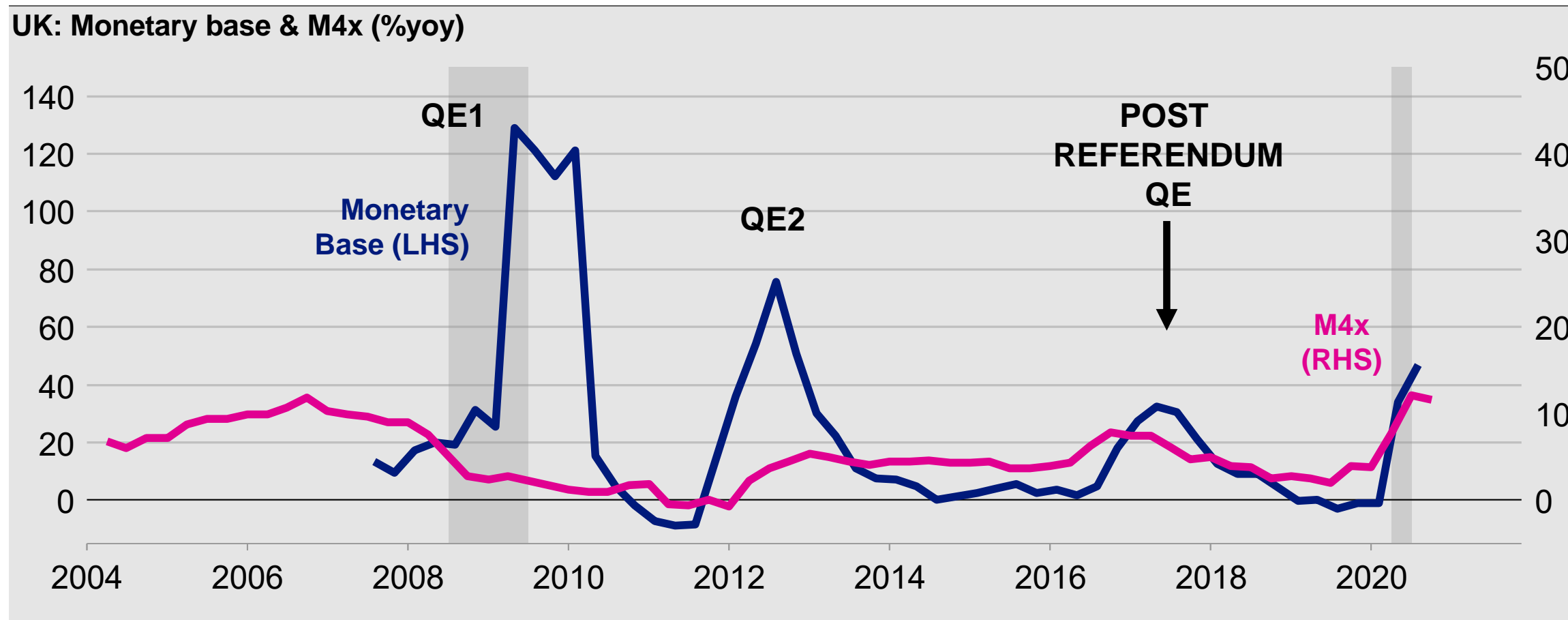
Source: Invesco

US Monetary Policy is far more stimulatory than it was for GFC: both the monetary base and M2 have surged



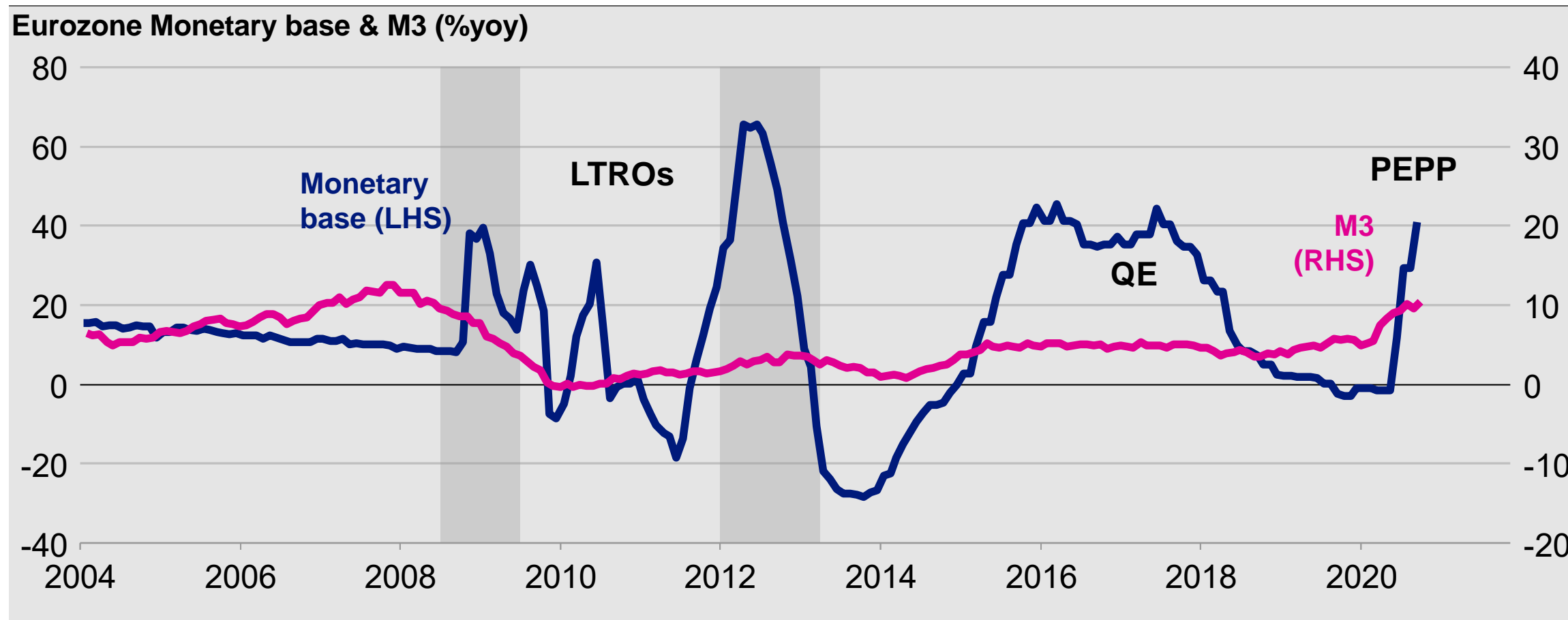
Source: Refinitiv as at 16 November 2020.

Similarly in UK: Bank of England has increased its balance sheet and the broad money supply M4x has surged



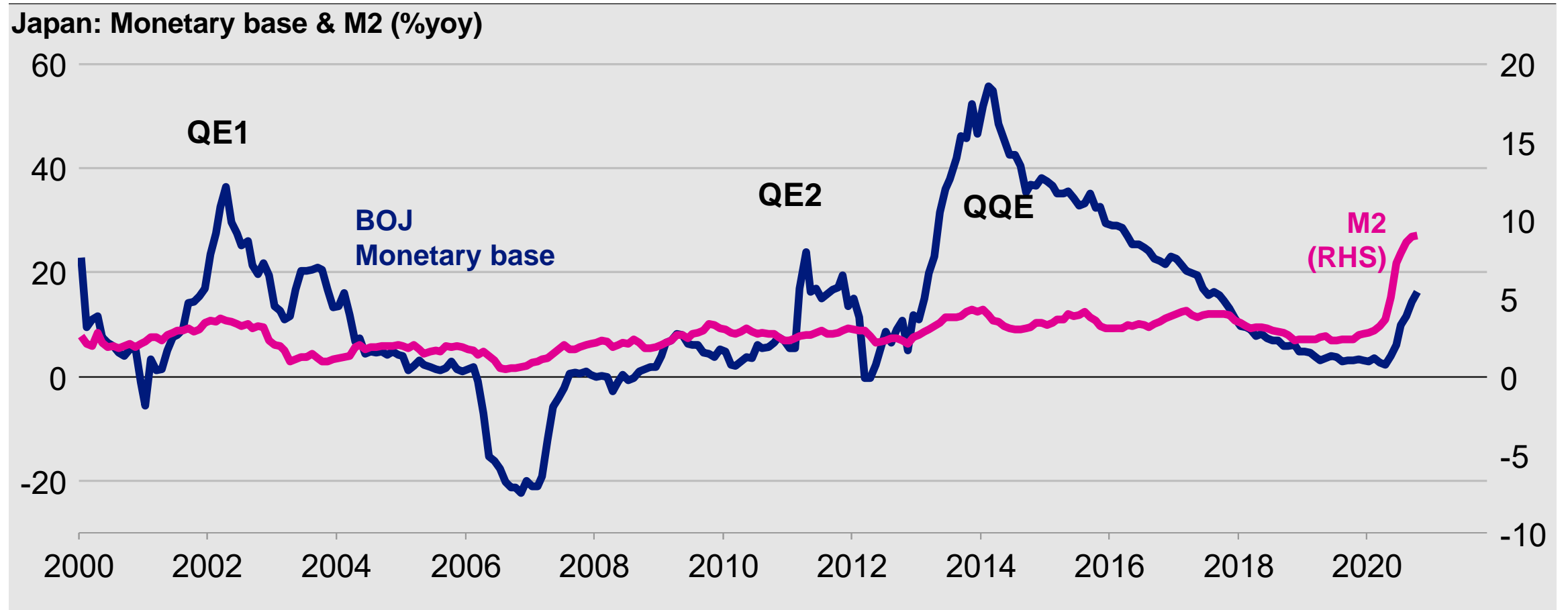
Source: Refinitiv as at 16 November 2020. Shaded areas = recession.

Similarly in Euro-area: The ECB's balance sheet has expanded and growth of M3 has surged



Source: Refinitiv as at 16 November 2020. Shaded areas = recession.

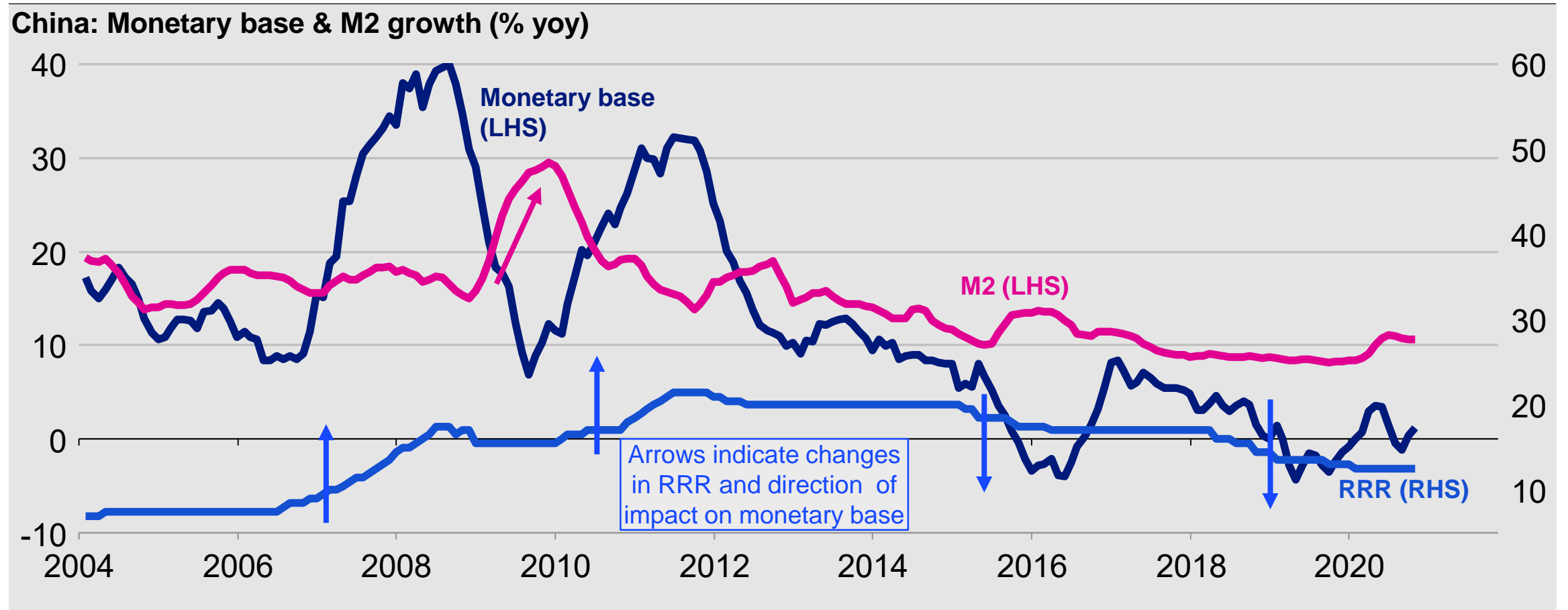
Similarly in Japan: BOJ balance sheet has expanded, and M2 growth has surged more than since 1990.



Source: Refinitiv as at 16 November 2020.

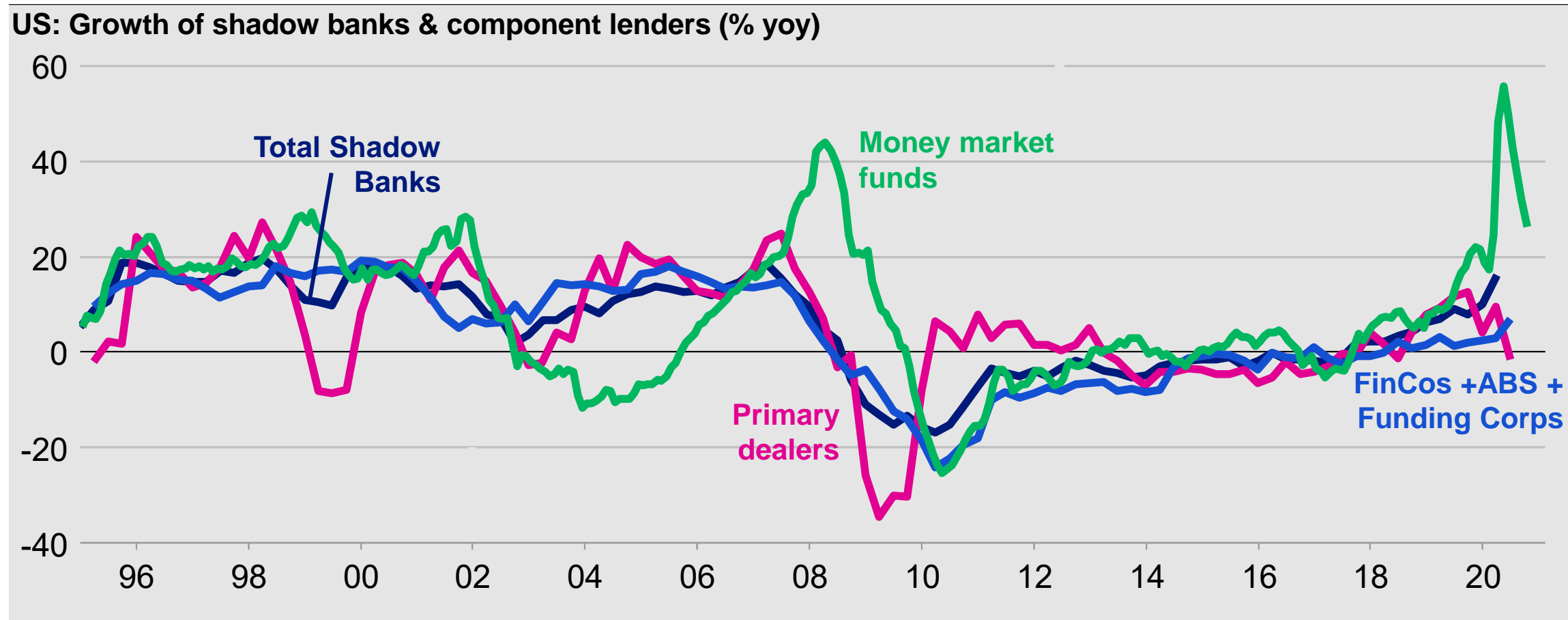
China's Monetary Base & M2: An Exception

Huge M2 Surge after GFC, not being Repeated in 2020



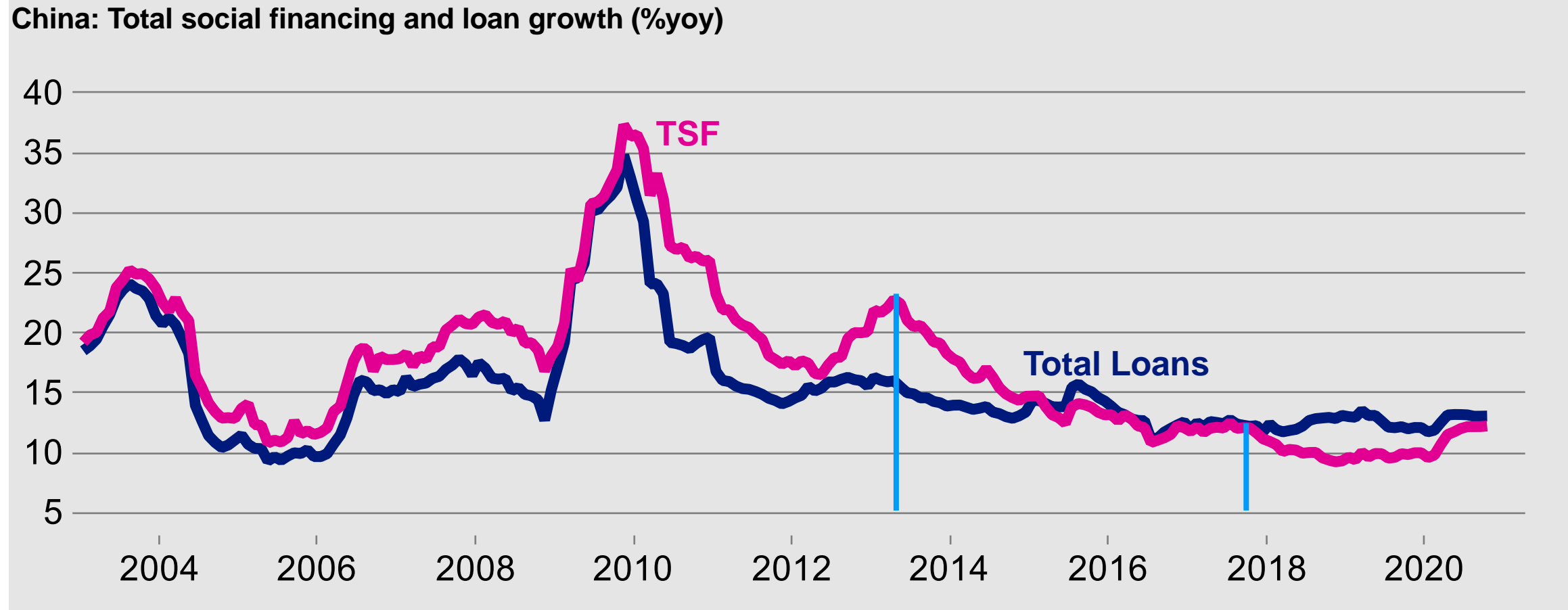
Source: Refinitiv as at 16 November 2020. RRR = Reserve Requirement Ratio.

The “dash-to-cash” in March & April resulted in an increase in US Govt money market funds of \$1.2 trillion



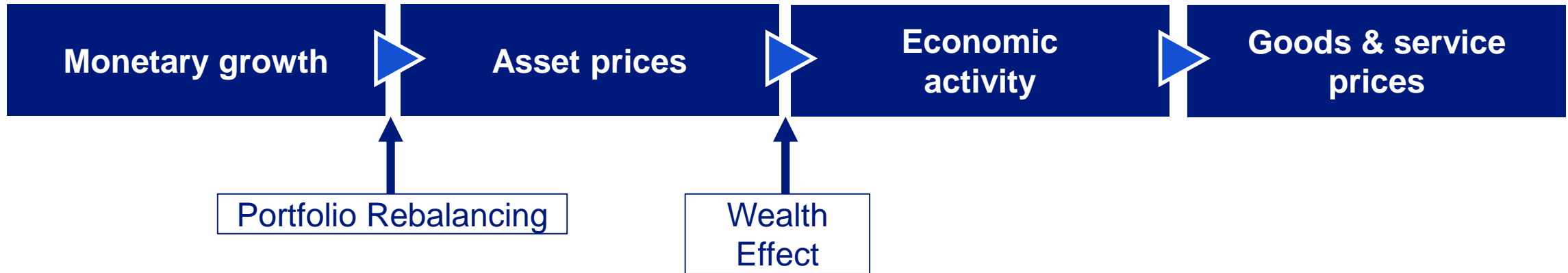
Source: Refinitiv as at 16 November 2020.

China: Since 2017 Growth of Shadow Banking and “Total Social Financing” have Slowed



Source: Macrobond as at 16 November 2020.

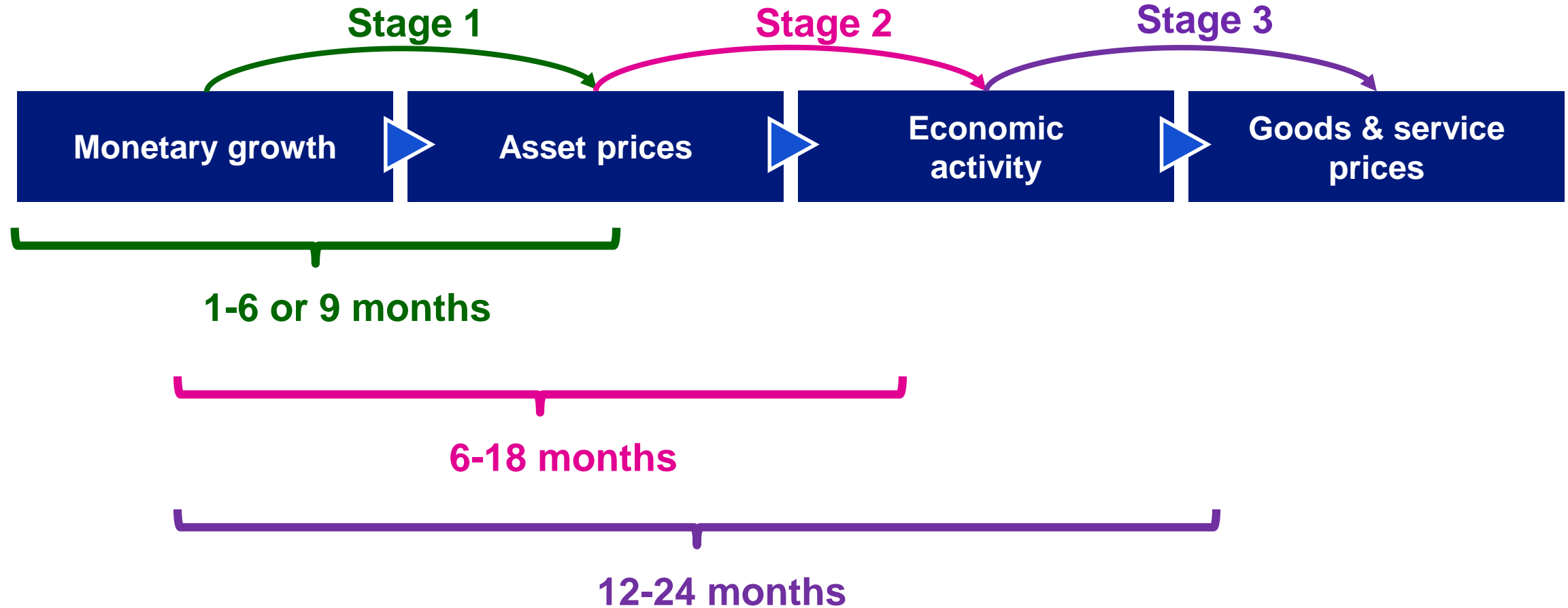
The transmission mechanism of the business cycle



- ***“Monetary policy is not about interest rates; it is about the rate of growth of the quantity of (broad) money.”***
- **The initial transmission of faster money growth is mainly through asset prices, not interest rates.**

For illustrative purposes only

Monetary policy: the lags in effect

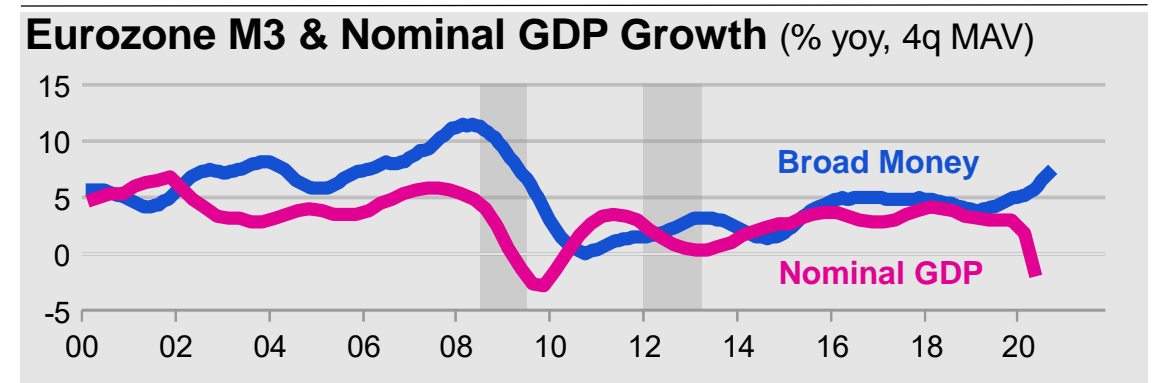
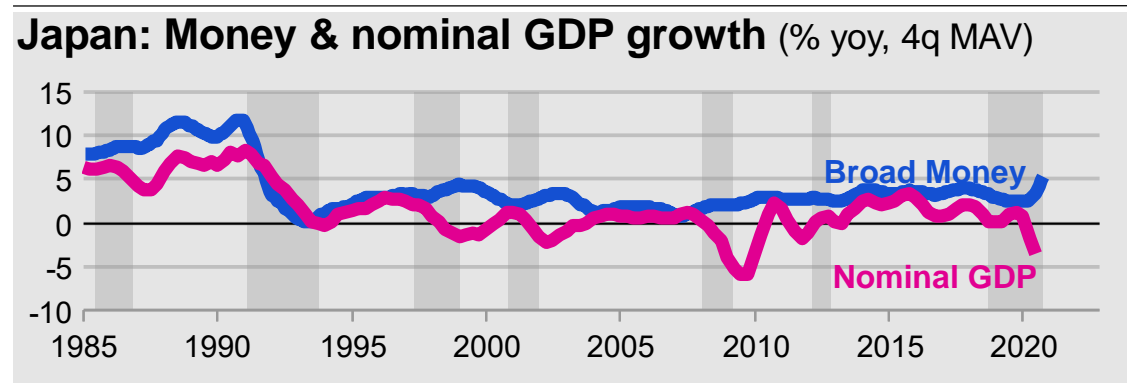
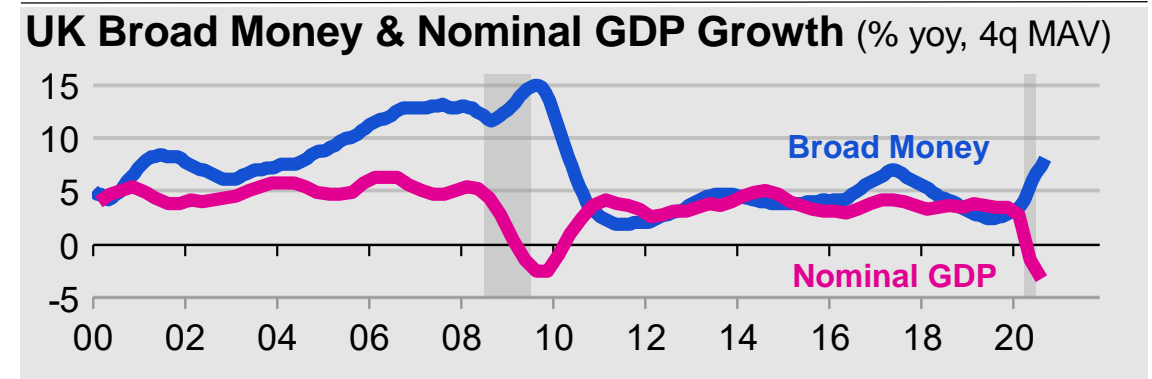
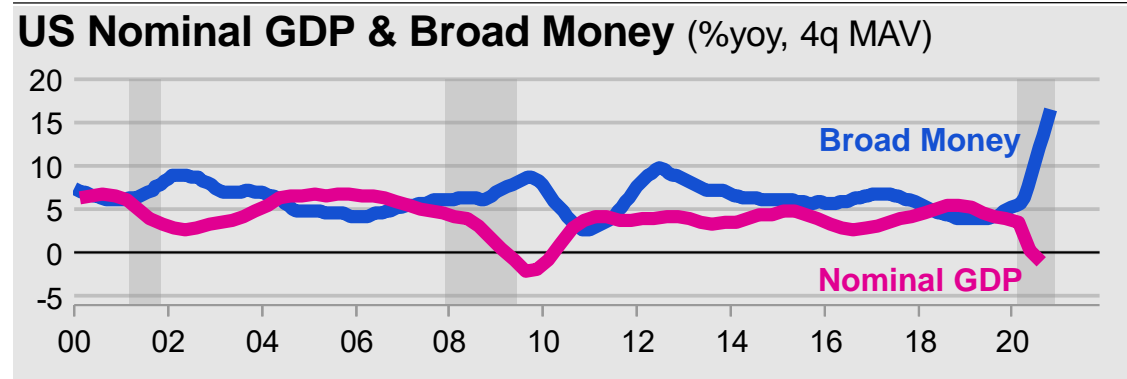


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“Monetary policy is not about interest rates; it is about the growth of broad money”



Broad money growth imposes a ceiling on nominal GDP growth

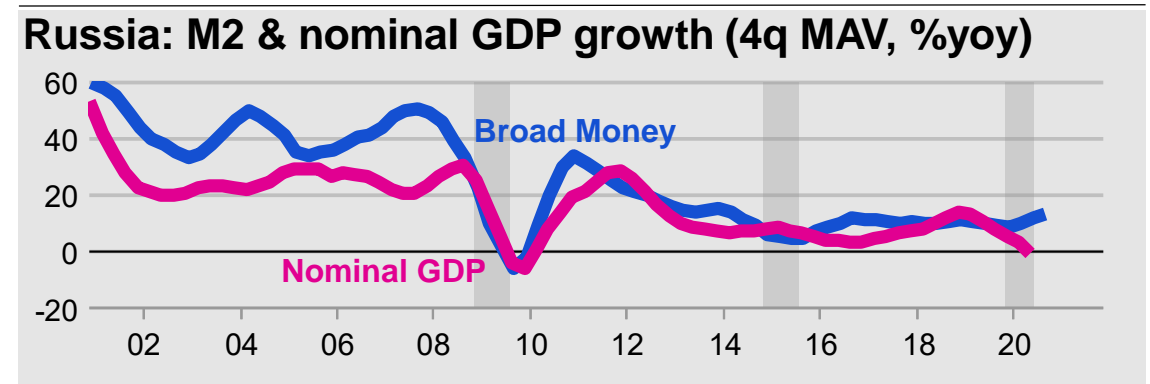
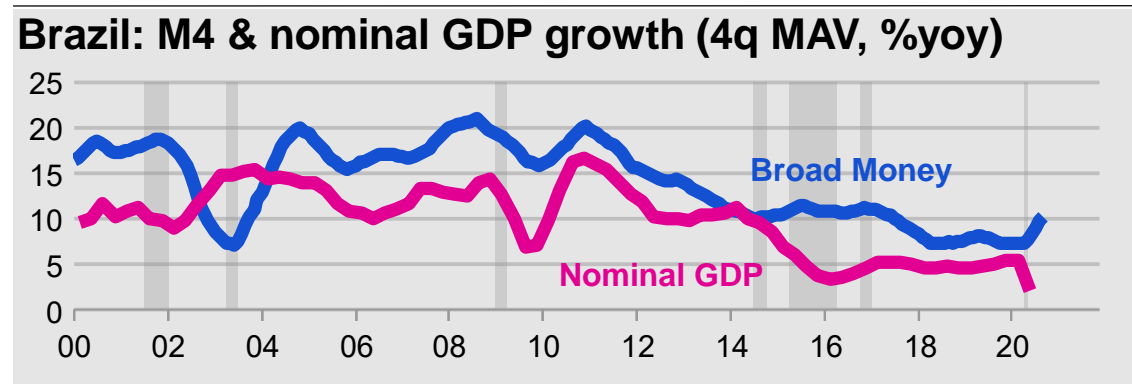
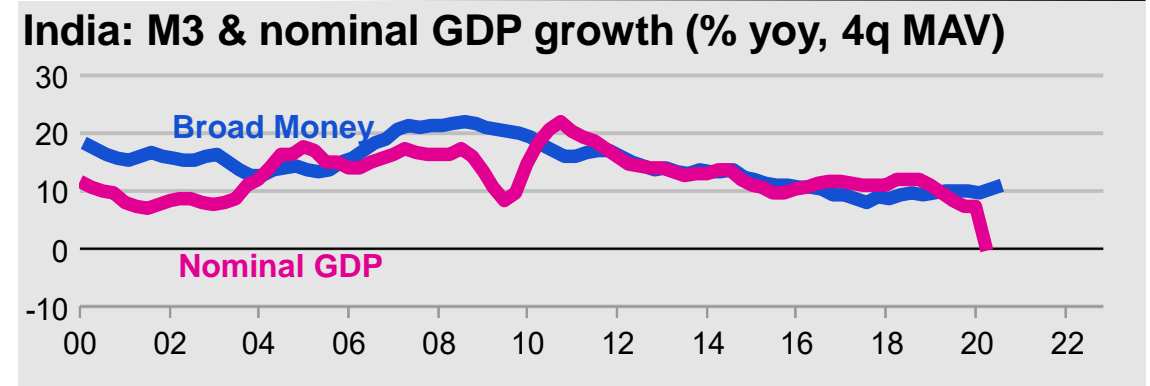
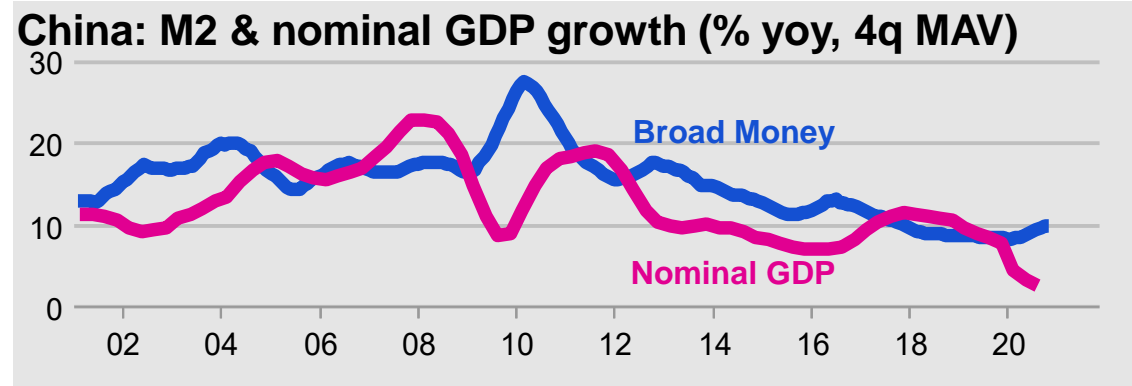


Source: Refinitiv as at 16 November 2020. Grey bars indicate recessions. Broad money is M3 in US, M4 & M4x in UK, M2 in Japan, and M3 in Eurozone.

“Monetary policy is not about interest rates; it is about the growth of broad money”

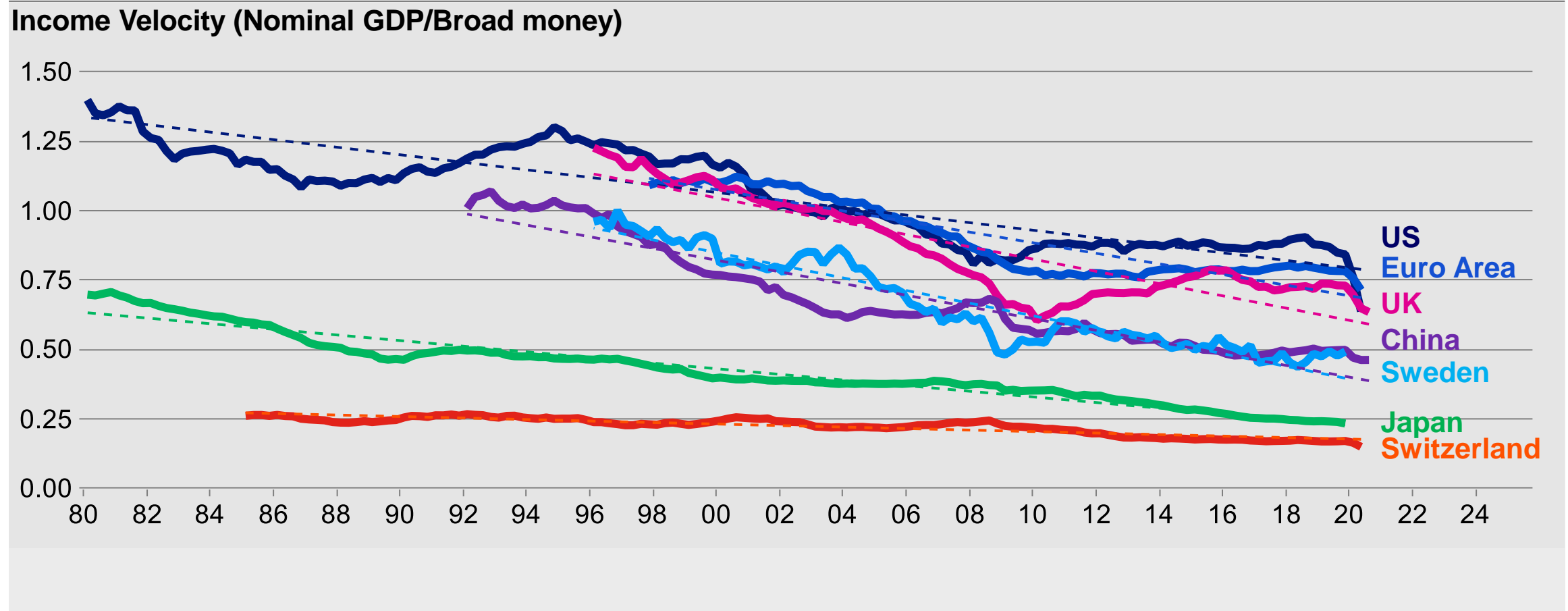


Broad money growth imposes a ceiling on nominal GDP growth



Source: Refinitiv as at 16 November 2020. Grey bars indicate recessions.

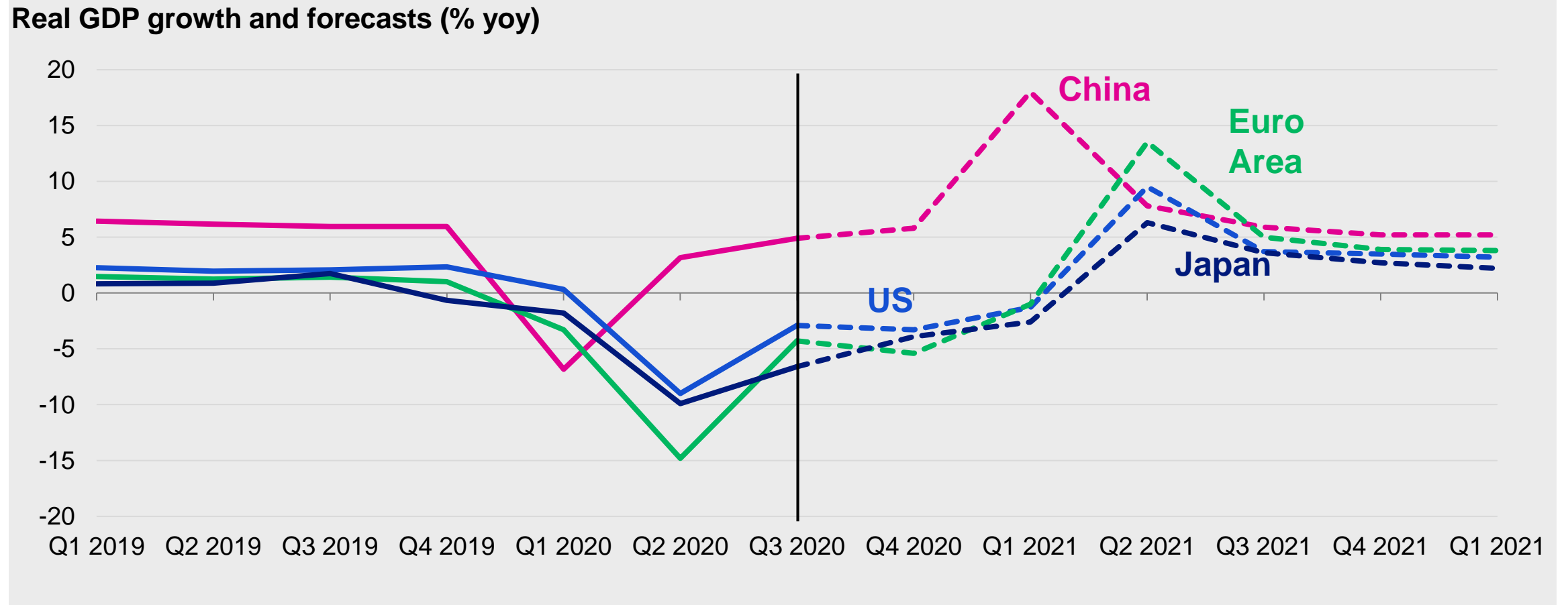
Why does money drive (and limit) spending? Because income velocity has a stable, downward trend



Source: Macrobond, BEA, Eurostat, CaO, ONS, Fed, ECB, BoJ, BoE, NBS, PBoC, SCB, SECO, SNB as at 16 November 2020.

Impact of the Pandemic on major economies

China: First in, First out

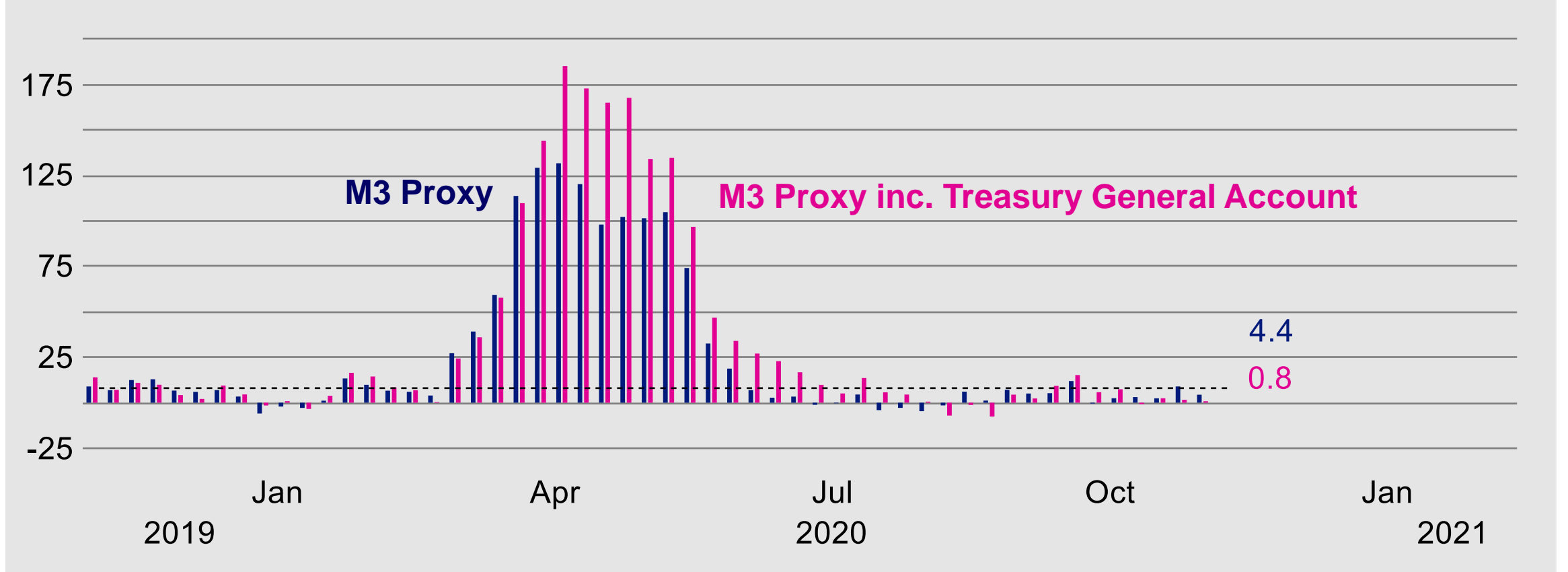


Source: Refinitiv, Invesco. Data and forecasts as at 3 November 2020.

The weekly rate of US M3 broad money growth has fallen significantly since the end of May 2020

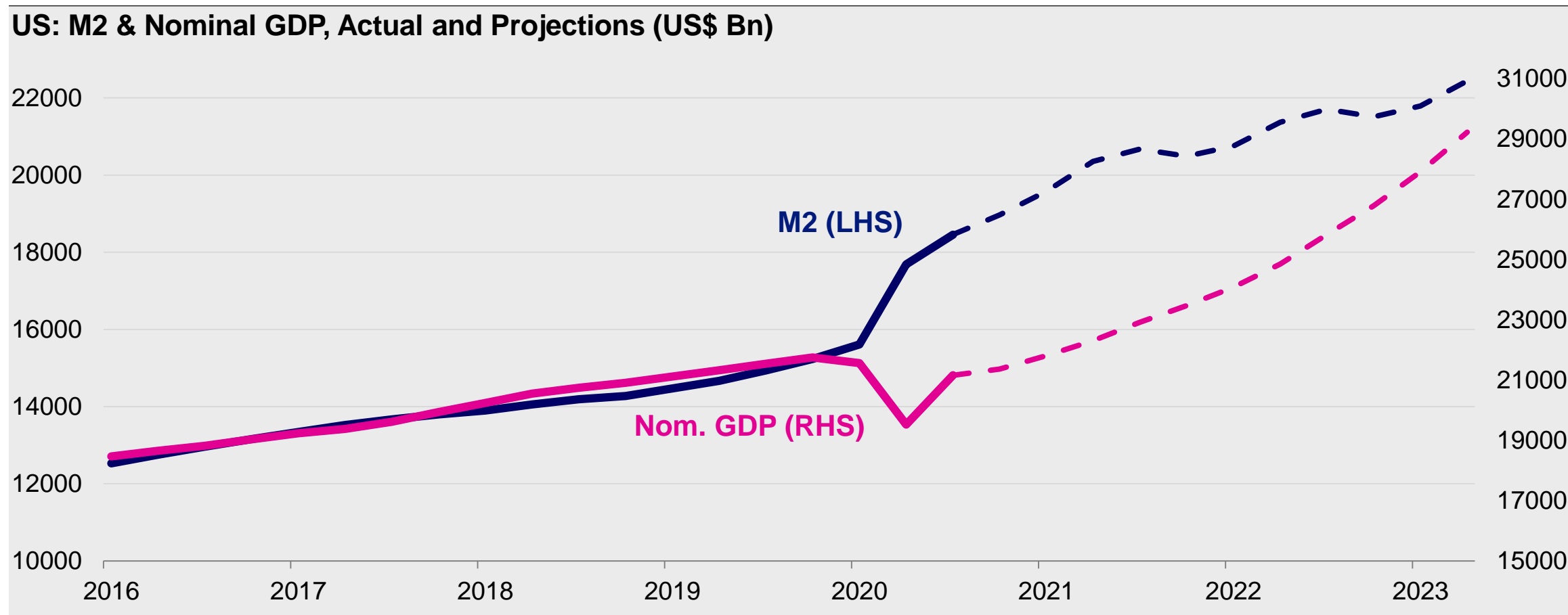


US: M3 Proxy inc TGA (% WoW annualised, 4-week rolling)



Source: Macrobond, Federal Reserve, Federal Reserve Bank of New York as at November 2020.

US: How quickly will the gap between M2 & Nominal GDP be closed?

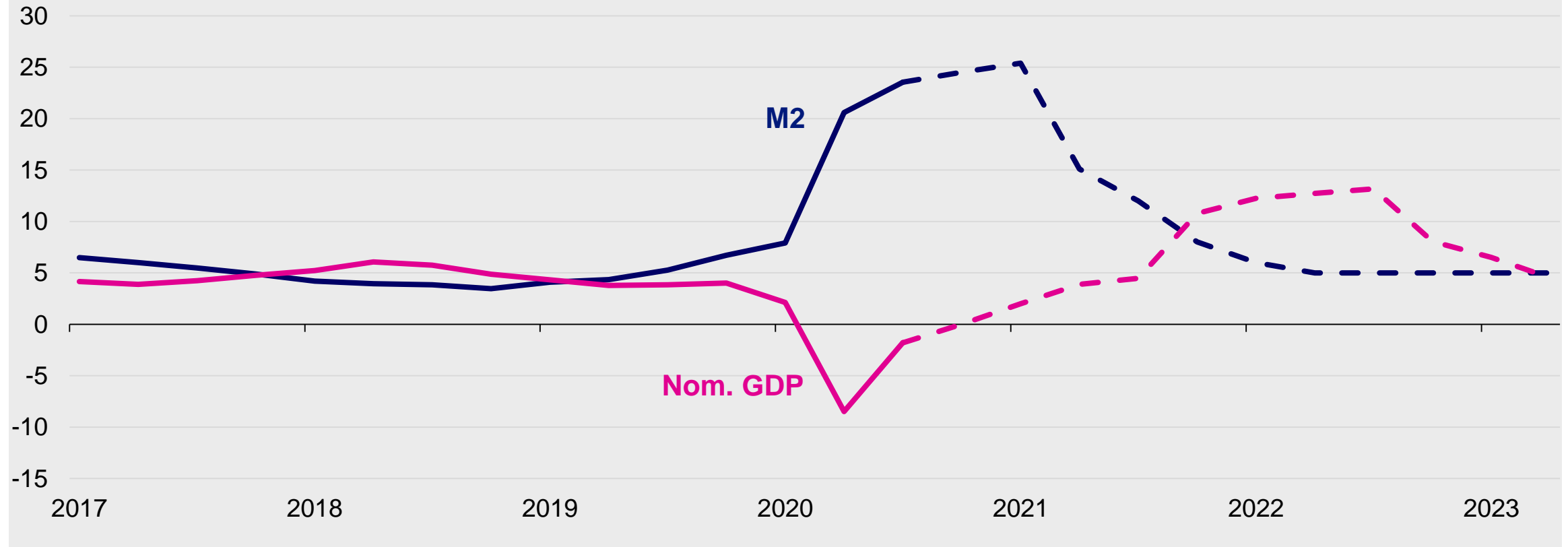


Source: Refinitiv as at 29 October 2020.

US: Impact of M2 surge on nominal GDP: Timing is uncertain, but likely to be delayed

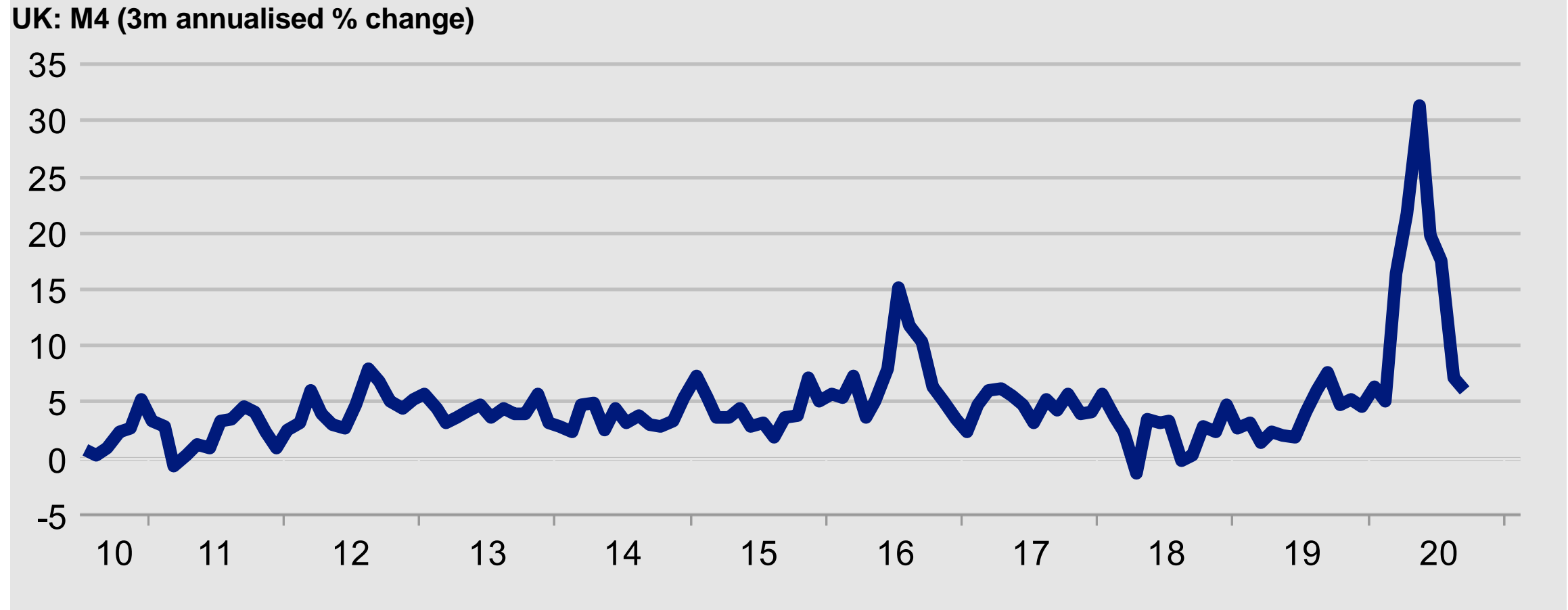


US: Nominal GDP forecast based on actual & forecast M2 (% YOY)



Source: Refinitiv as at 29 October 2020.

UK: M4x accelerated sharply in April-June to 31%, but slowed in July-September to 6%

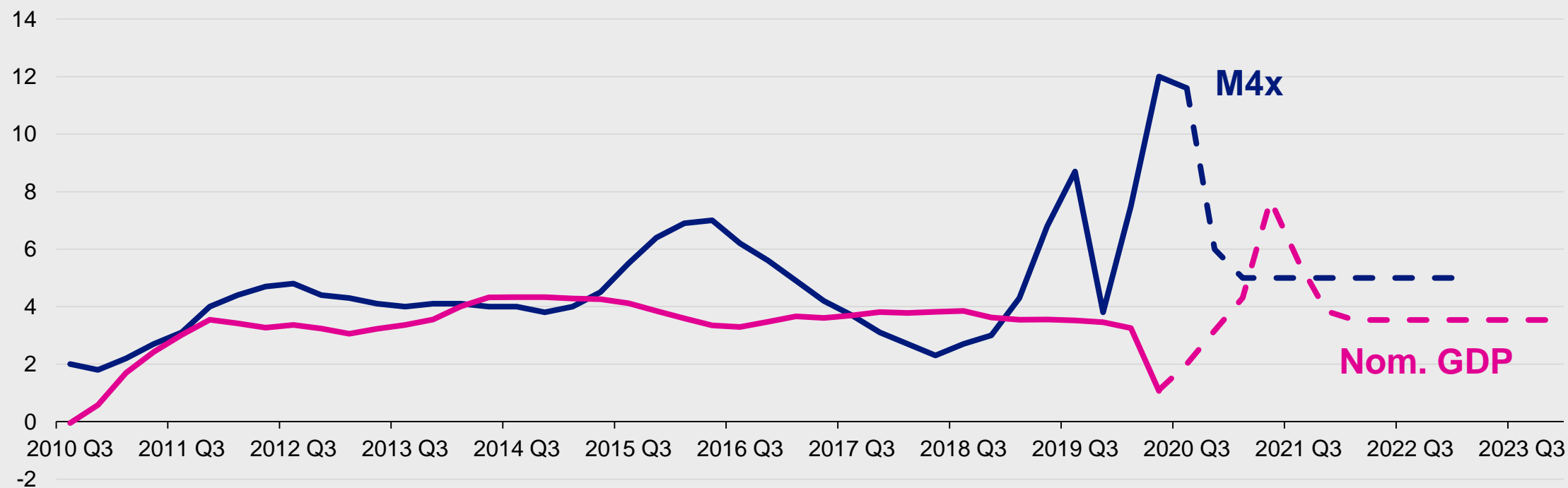


Source: Refinitiv as at 16 November 2020.

UK: After M4x spike in 2020, nominal GDP will only increase moderately due to long lags which will smooth out its impact

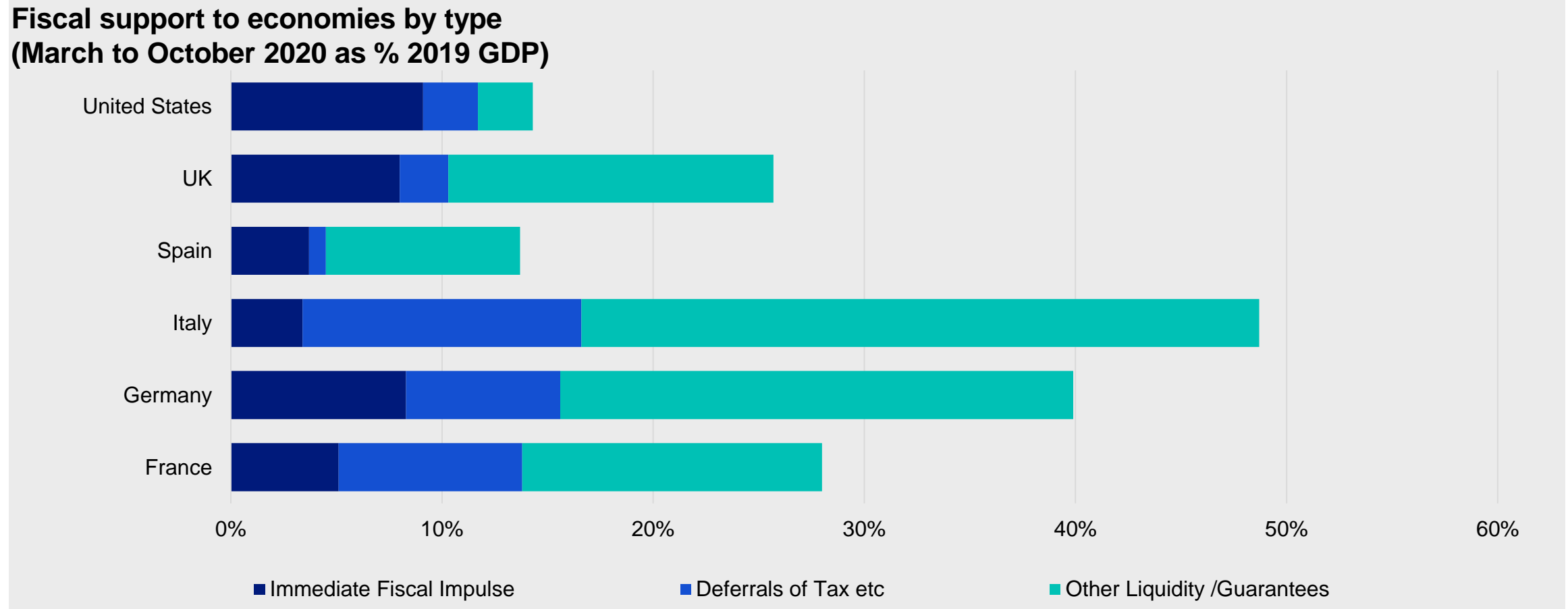


UK: M4x & nominal GDP forecast,
Based on relation for 2010-2019



Source: Refinitiv & Invesco as at October 2020.

Why no focus on fiscal policy?



Source: Bruegel Institute, 14 Nov 2020

Why no focus on fiscal policy?

Because fiscal only works if it is accompanied by monetary expansion:

- 1. Taxation** Crowds out private sector spending
- 2. Borrowing** Crowds out private sector borrowing and investment
- 3. Printing Money** Boosts total spending including govt. spending

- i.e. fiscal policy on its own is not an effective tool for macro-economic policy

The interaction of fiscal and monetary policy:



		MONETARY POLICY	
		Easy	Tight
FISCAL POLICY	Expansionary	Case 1 China's "fiscal" stimulus of 2008-10 Govt Deficit: 0% → -1.8% Money growth: 15% → 25%	Case 2 US, UK, Eurozone, Japan after GFC, 2009-2018 In all cases, large fiscal deficits In all cases, low money growth
	Contractionary	Case 3	Case 4

Source: Invesco Research, IMF Fiscal Monitor as at November 2020.

Why no focus on interest rates?

Irving Fisher, the father of econometrics, showed that interest rates mostly *followed* inflation

This has important consequences for monetary policy

“Furthermore the results and other evidence, indicate that, over long periods at least, **interest rates follow price movements**. The reverse, which some writers have asserted, seems to find little support. Experiments, made with United States short term interest rates, to test the alternative hypothesis of distributed influence of interest rate changes instead of price changes, gave results of negligible significance. **Our investigations thus corroborate convincingly the theory that a direct relation exists between *inflation* and *interest rates***, the price changes usually preceding and determining like changes in interest rates.”

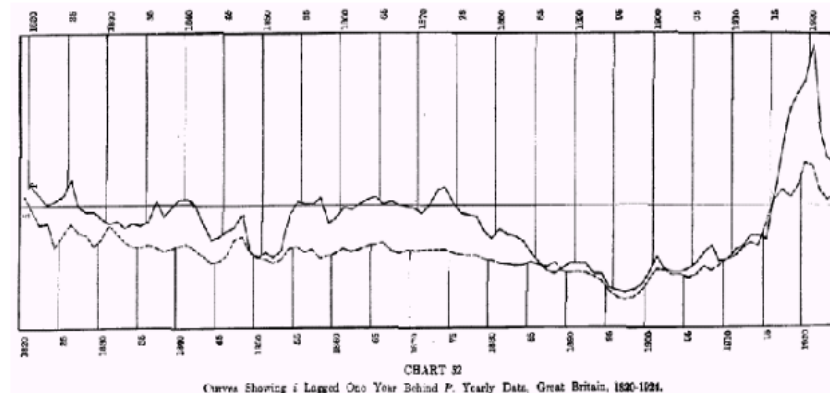
Irving Fisher, “*The Theory of Interest* (1930)

Fisher's exploration of British interest rates and price levels, 1820-1924



“These highly significant correlations seem to establish definitely that **over long periods of time high or low interest rates follow high or low prices by about one year.**”

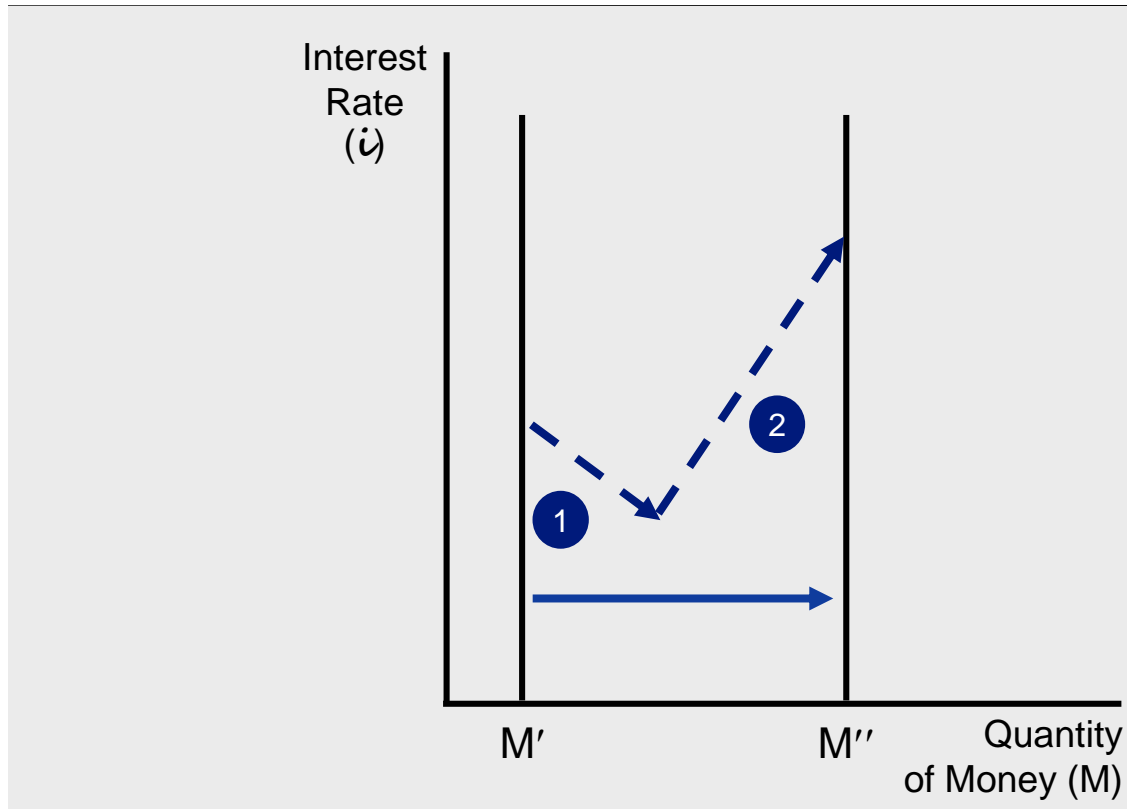
“Chart 52 shows the British long term interest rates (bond yields) plotted with the wholesale price index for the years 1820-1924”



“It is apparent that the P curve and the i curve, as plotted, conform very closely. Furthermore, lagging interest rates one year gives the highest obtainable degree of correspondence.”

Source: Irving Fisher, The Theory of Interest (1930)

3. Consequences of increasing the quantity of money



Irving Fisher did detailed statistical research showing that the Liquidity Preference Theory chart does NOT hold.

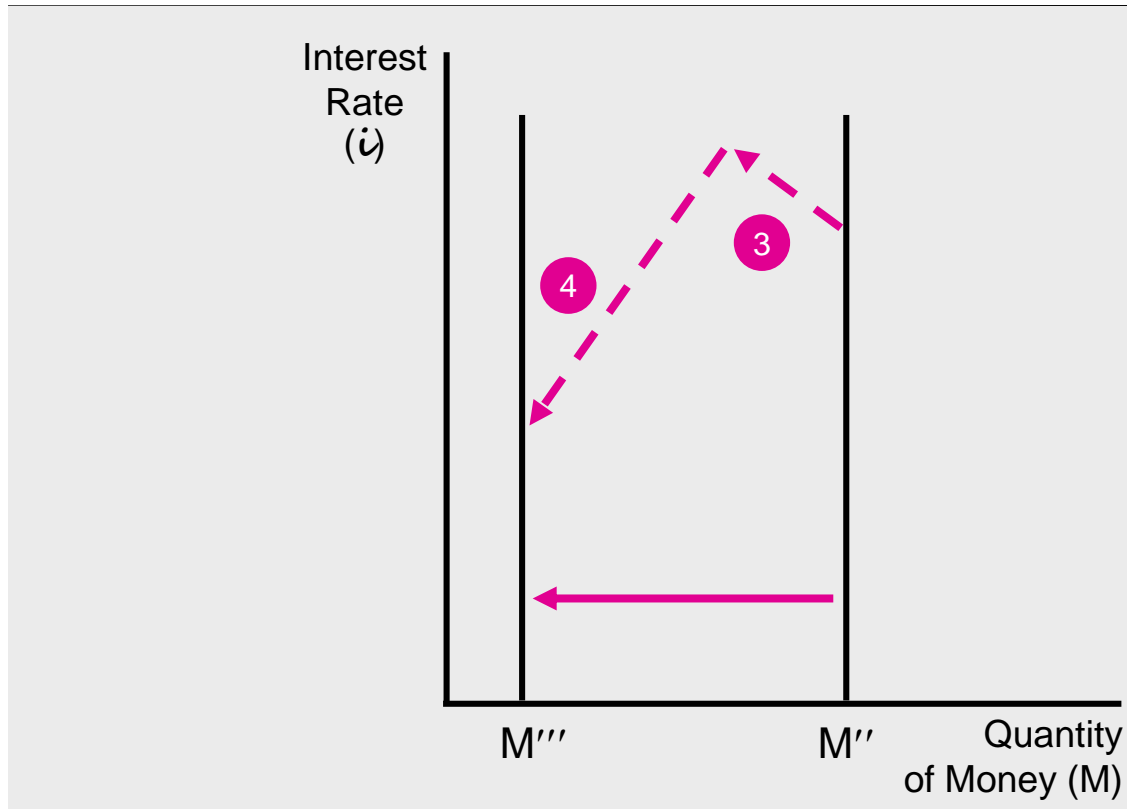
He pointed out that high interest rates are generally found where inflation is high, and conversely, low interest rates are found where inflation is low.

Changes in the quantity of money, he found, have a two-stage effect on interest rates.

First effect is to lower interest rates;
the second effect is to raise them.

Source: Invesco as at November 2020

4. Consequences of reducing the quantity of money



Irving Fisher's Theory (cont'd)

If the growth of money doubles and the higher money growth rate persists, interest rates will initially fall, but then later they will rise as the economy strengthens, the demand for loans increases, and inflation rises.

The opposite is also true.

Interest rates are not a monotonic* function of money or money growth

**First effect is to raise interest rates;
the second effect is to lower them.**

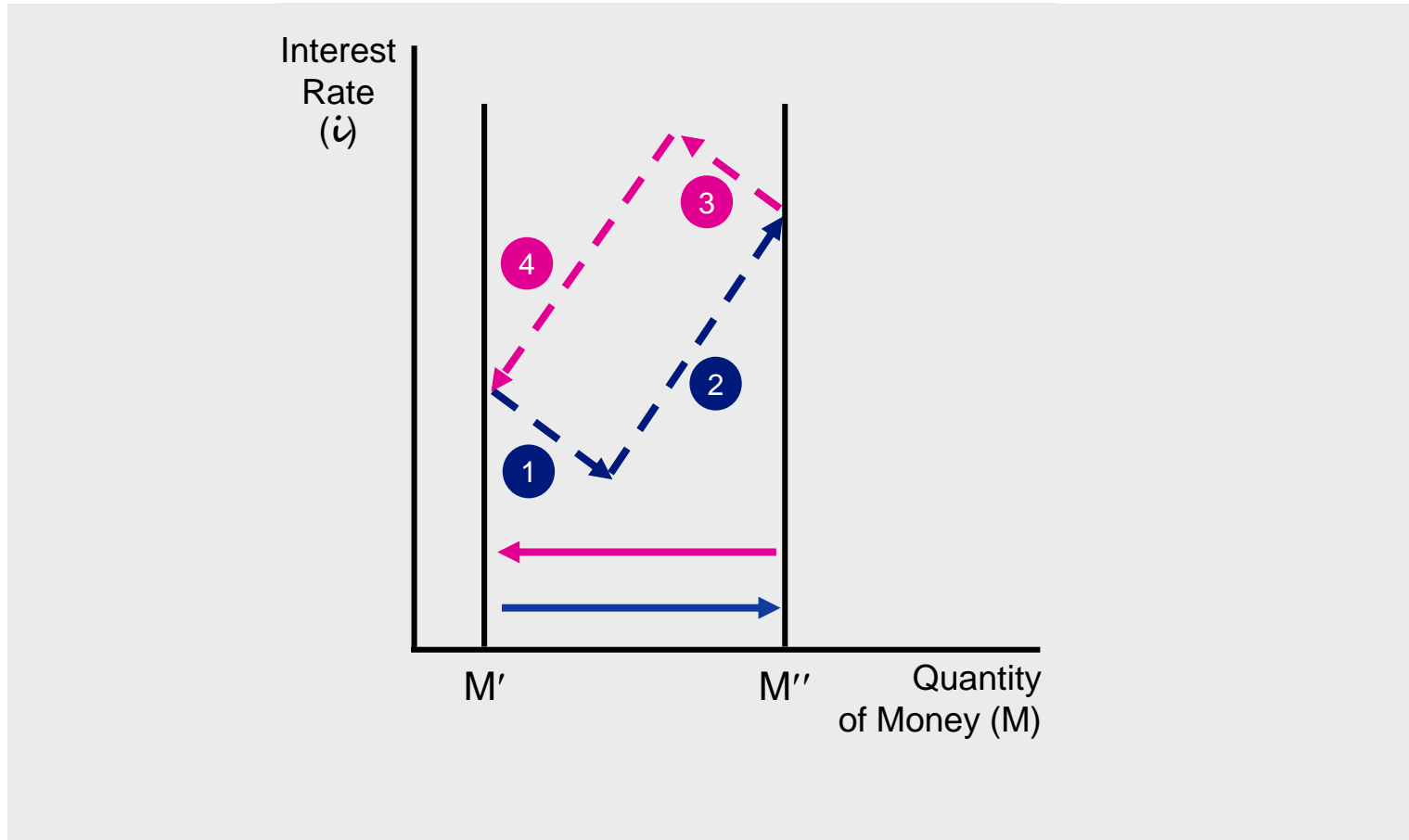
* A monotonic function is one which is entirely non-increasing or non-decreasing.

Source: Invesco as at November 2020

5A. A complete monetary cycle

Easing & then Tightening, but FOUR Changes in Interest Rates

Money on horizontal axis

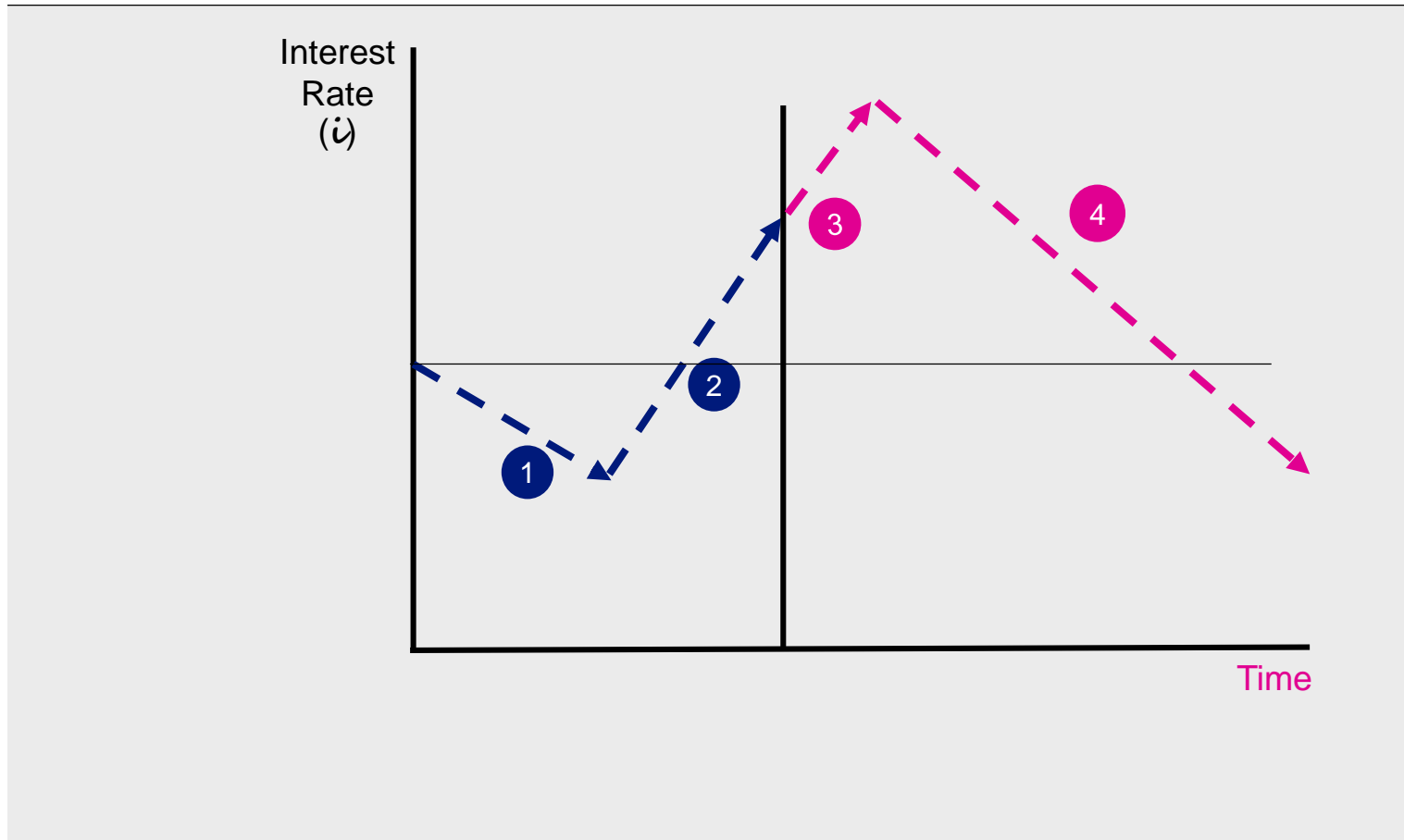


Source: Invesco as at November 2020

5B. A complete monetary cycle

Easing & then Tightening, but FOUR Changes in Interest Rates

Time on horizontal axis



Source: Invesco as at November 2020

Summary: Monetary policy and interest rates – A two-stage relation between money & interest rates

Given a sustained acceleration of monetary growth,

- the **first effect** is lower interest rates, but
- the **second effect** is higher interest rates, and this is a longer lasting effect.

Conversely,

Given a sustained deceleration of monetary growth,

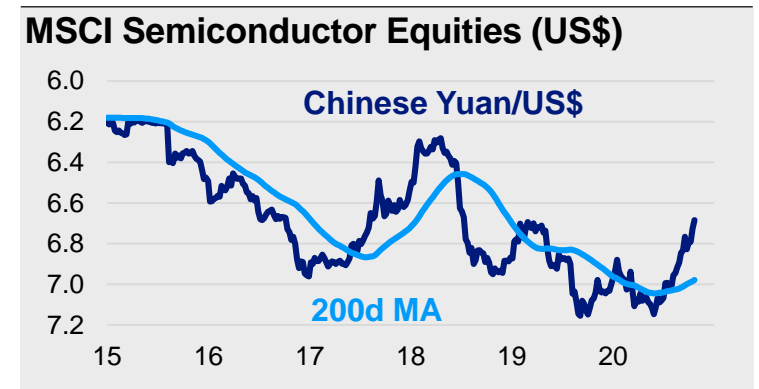
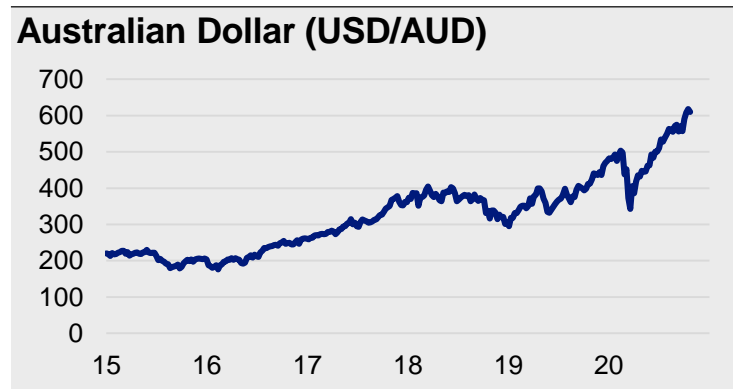
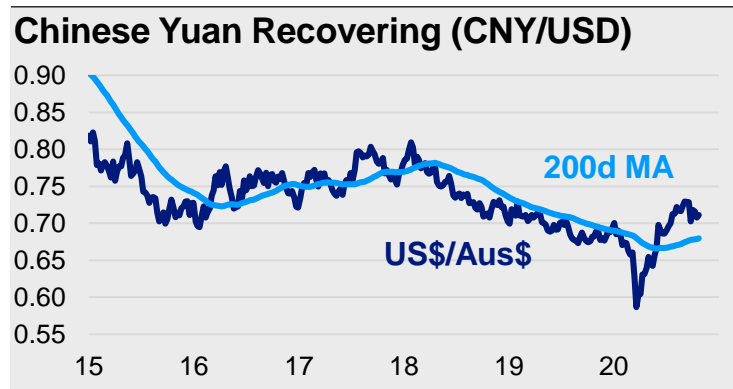
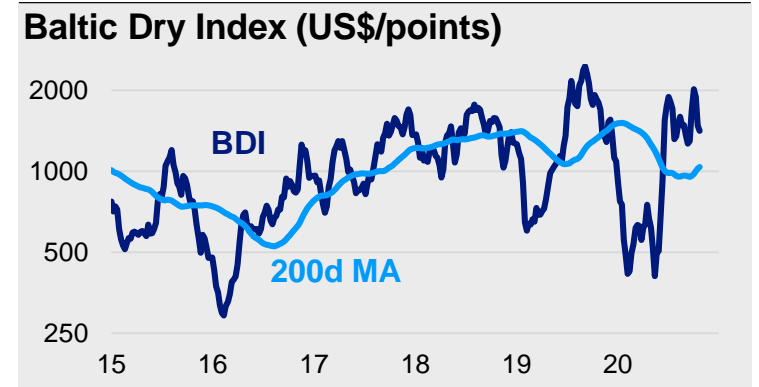
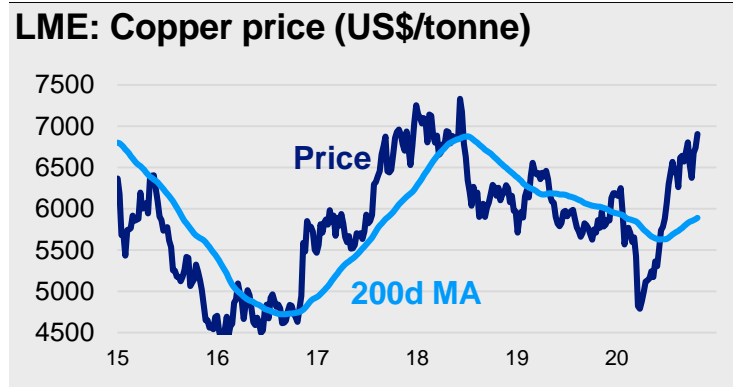
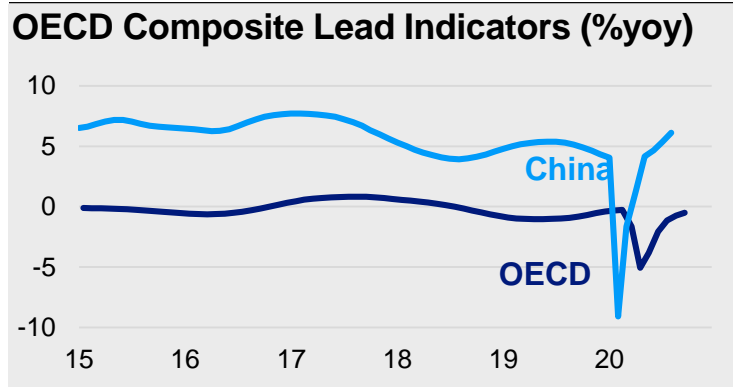
- the **first effect** is higher interest rates, but
- the **second effect** is lower interest rates, and this is a more lasting effect.

KEY TAKE-AWAY:

Do not rely on interest rates as a guide to monetary policy.

Better to rely on monetary growth in judging monetary policy.

The World on the verge of recovery... ...Waiting for a solution to the pandemic



Source: Refinitiv as at 28 October 2020.

Conclusions



- Developed economies are currently in sweet-spot enjoying strong asset price gains as a result of rapid money growth
- Consumers and businesses are risk averse, holding higher than normal cash balances, i.e. there are ample funds ready to participate in asset markets – equities, real estate, and later commodities
- Once the pandemic is overcome – either by a vaccine or by successful therapeutics -- the self-restraints on spending will disappear and the high money balances from the monetary (and fiscal) stimulus can start to be spent
- If this is the case, then spending on GDP will pick up strongly – pent-up spending on consumption, increased investment spending and a surge in employment
- The big question is: “What will be the inflationary impact?” If the recovery comes quickly, the risks of inflation rising to 3% or 4% or 5% are significant; but if recovery continues to be delayed by renewed outbreaks of the virus, then inflation would also be delayed and muted

Speaker biography



Dr. John Greenwood, OBE, SBS
Chief Economist
Invesco

Based in London, John is Chief Economist of Invesco Ltd. with responsibility for providing economic analysis and forecasts to Invesco portfolio managers and clients.

John started his career in 1974 as a visiting research fellow at the Bank of Japan. He joined the investment industry later that year as Chief Economist for GT Management, based initially in Hong Kong and then in San Francisco.

As editor of Asian Monetary Monitor in 1983 he proposed a currency board scheme for stabilising the Hong Kong dollar that is still in operation today. In the 1990s he was a director of the Hong Kong Futures Exchange Clearing Corporation, a council member of the HK Stock Exchange, an economic adviser to the Hong Kong Government, and he was awarded the OBE.

In 1998, John joined Invesco and became a member of the Committee on Currency Board Operations of the Hong Kong Monetary Authority. He is also a member of the Shadow Monetary Policy Committee in England and serves on the board of the Hong Kong Association.

In October 2020 John was awarded the Silver Bauhinia Star by the Hong Kong SAR government for his work in promoting the stability of the Hong Kong dollar. In the same month he was made an Honorary Fellow of the Hong Kong Securities and Investment Institute.

John holds an MA from the University of Edinburgh, and an Honorary PhD, also from the University of Edinburgh.

Source: Invesco.

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Q&A Session

1. Which countries are among the best with their fiscal and monetary policies/responses to the pandemic? What characterised these best policies?

If one combines monetary and fiscal policy together, I believe the US was the country that responded best in the sense of speed and scale. The Fed responded immediately with very large programs of asset purchases and temporary loan programs, expanding its balance sheet and providing urgently needed liquidity in exactly the way prescribed by Walter Bagehot in his famous, classic book, "Lombard Street, A Description of the Money Market" in 1873. The result was an increase in its assets of \$3 trillion, and a similar increase of the money supply, M2 – i.e. money held by the non-bank public. The Congress responded soon after with a roughly similar-sized fiscal program, mainly through the CARES Act which authorised numerous support programs for individuals, firms and sectors. We will not know the full results until the middle or end of 2021, but the temporary, rapid increase in US money growth to 24% year-on-year is unprecedented in peacetime, and far larger than any other major economy – the euro area, Japan or the UK. Since monetary policy is far more important for the cyclical behaviour of the economy than fiscal policy, I think this will make a major contribution to a strong recovery in the US during the second half of 2021.
2. Do you have similar charts of velocity of money over the same time periods?

Yes. It is very important to study velocity if you want to make sense of monetary policy. Velocity is the amount of income that is generated per unit of money or Nominal GDP/Money. We can also express its inverse (Money/Nominal GDP) as the amount of money that households and firms hold relative to income, which is easier to think about than velocity. The important truth about velocity is that it has a broadly stable relation to income, typically falling by about 2% p.a. in most developed economies, and by rather more in many emerging economies. This means that if we know the quantity of money and the behaviour of velocity, we can make a reasonable prediction of national income or nominal GDP.
3. Would you say that the current situation is sustainable? In other words, how much longer can the real economy sustain these expansionary pressures without an equivalent sustainable upturn in employment conditions for example?

Fortunately, the rapid growth of money in the US, the UK, the euro area and Japan that I showed in my slides has been fairly short-lived. If you look at the recent rates of money growth – since July – you will see that in all major economies money growth has slowed down to roughly the pace that it was before the start of the pandemic. This should mean that the additional purchasing power will help the economies to recover – including reviving employment levels -- without creating any long-lasting inflation.
4. What is the implication for non-fiat currency / hard asset price like gold?

Hard assets like gold generally perform well in periods of inflation. Gold is usually a reasonable inflation-hedge, especially when inflation is expected to accelerate or when people distrust the banks or distrust government debt. But nowadays there are no longer any currencies that are convertible at fixed rates into gold or silver (i.e. commodity-backed currencies), so non-fiat currencies in that sense no longer exist. It is much more difficult to be sure about the outlook for crypto or private currencies because they do not all share the same three attributes as money (medium of exchange, store of value, unit of account) in the

same degree, and their future is still uncertain – especially if central banks introduce their own digital currencies.

5. How do we assess the monetary growth in an economy?

The appropriate rate of money growth for (say) an inflation target of 2% is different in different economies. In general, the right rate of money growth is higher for EM economies, lower for developed economies. If you start with the modern form of the quantity theory of money, i.e. $MV=Py$, and then differentiate with respect to time, we get:

$m + v = p + y$, where lower case letters in this equation represent rates of change of the variables in the previous equation.

This latter equation can only be applied over a period of years, not months. For a country like China, if the inflation target is 2%, the underlying real GDP growth rate is 6%, and the annual average decline in velocity is 3% p.a., then an appropriate rate of M2 money growth will be:

$m = 2 + 6 - (-3)$, or about 11% p.a.

In contrast, for a developed economy like the euro area, if the inflation target is 2%, the underlying real GDP growth rate is 1.5%, and the annual average decline in velocity is 2% p.a., then an appropriate rate of M2 money growth will be:

$m = 2 + 1.5 - (-2)$, or about 5.5% p.a.

6. Monetary policy effect is faster than fiscal policy effect, would that also be one factor why you conclude that monetary policy is more important?

No. I said that monetary policy is more powerful than fiscal policy; in general, monetary policy (in the sense of money growth, not interest rates) acts more slowly than fiscal policy. I can assert this confidently on the basis of numerous statistical and historical studies conducted with a colleague covering many countries and many periods of history. In all these studies we compared the effects of fiscal policy and monetary policy on the cyclical behaviour of economies. Time and again monetary policy is clearly more powerful than fiscal policy.

7. As you said monetary policy is more important, do you think it's critical for the US Congress to pass the fiscal stimulus bill?

No, another fiscal stimulus bill is not essential. Enough money has already been created to enable the US economy to grow until mid-2021 – even if no more money is created from now until June next year! This means that talk of a “fiscal cliff” is exaggerated scare talk, not realistic economic analysis.

8. How do you reconcile the relatively low monetary growth in China with your expectation that China will get out of recession first (achieve higher GDP growth) compared to the developed economies?

China was first into the pandemic recession (in 2020 Q1), whereas most other economies entered recession in 2020 Q2. China has been first in, first out. In this sense China has already emerged from its first quarter decline in real GDP or “recession”. The economy is growing again and will likely continue to recover. Economies have a natural tendency to revert to their normal growth rate (in China's case about 5-6% p.a.). In addition, monetary growth over this past year has accelerated from around 8% in January 2020 to around 11% in October. That 3% extra boost will be enough to ensure China's domestic demand recovers fairly strongly, even though it cannot ensure strong export markets.

9. If interest rate is to rise in the later stage, will the banks benefit with an expanded interest margin/spread?

Almost certainly yes. Long term rates are artificially low at present due to widespread QE, which means central banks are buying long term government bonds, very weak private

sector demand for funds, and low inflation expectations. I expect all of these factors will change in the second half of 2021.

10. How do you assess the crypto market according to your economic (framework)? Do you think that these kinds of financial instruments would create the difficulties to calculate the monetary supply or monetary base?

I mentioned my views about cryptos as an inflation hedge above, and their shortcomings as currencies. Their size relative to the money supply or the monetary base is still very small, and in any case not a problem. The outstanding amount of the largest cryptos is similar to the market capitalisation of a medium or large-sized company listed on the S&P500 Index. Also, when someone buys crypto currency, he or she must pay with fiat money, so it is just like buying units or shares in a mutual fund. The quantity of money outstanding is unchanged; it merely shifts from the buyer's deposit account to the seller's deposit account.

11. If my understanding is correct, expansionary monetary policy increases money supply, interest rate decreases, prices go up and drive inflation.

Yes, that is a correct but rather brief description of the transmission process. However, I would add two very important qualifications. First, in order to have these effects the money growth rate must change significantly for a sustained period of time. If it surges suddenly for just one month, that is not enough to generate all those effects. It needs to grow much faster for at least six months, perhaps even one year. Second, if it does accelerate for a sustained period of time (e.g. if money growth went from 15% p.a. to 25% p.a. for two years as it did in China in 2009-10), then in an economy with liberalised interest rates we should expect to see interest rates fall first and then rise later – as I explained in my lecture.

12. Given the change of Fed approach to managing monetary policy – i.e. tightening guided by average inflation or backward looking rather than expected inflation with the likely implication treasury rates being lower for longer – what do you think would be its effect on asset prices, economic activity and business cycles?

I do not think the Fed's change of its inflation target to an average inflation rate will have any appreciable effect on the way it manages the economy. The FOMC does not pay any attention to monetary aggregates or monetary growth. Also, it is wrong to suggest they can control the yield on long term Treasury bonds. These rates will be largely determined by inflation expectations. The Fed's strategy is to try to manage everything by adjusting short term rates – they do not consider the 2-stage effect of money growth on interest rates that I explained.

13. You discussed about filling the holes created by the lockdowns worldwide and how governments have come up with packages to fill the gaps by supporting various sectors, but what about developing countries like India that are low on funds and infrastructure. How would those countries tackle this and sustain if this pandemic continues?

Many EM economies like India have also introduced fiscal support measures for their economies during lockdowns. However, because the ability of EMs to borrow is more limited than developed economies, the fiscal support packages are mostly smaller as a percentage of GDP. In India's case, money growth (M3) has slowed to single digits on average since 2017. This is the first time this has happened since the 1970s, and this is why India's inflation has slowed to an average of only 5% p.a. since 2017 – also for the first time since the 1970s. Unlike the developed economies, India has not seen any significant acceleration of M3 since the onset of the pandemic.

14. Do you think we will see government trying to inflate their way out of the debt?

No. The introduction of independent central banks since the 1990s will ensure that inflation does not rise very much in most economies. Also, the fact that interest rates are very low

implies that the burden of financing large fiscal deficits will not be as onerous as it was when inflation and interest rates were higher. After the Second World War countries like Britain had debt of 240% of GDP but they did not solve that problem with inflation. Mostly the GDP in the denominator grew strongly, gradually reducing the debt-to-GDP ratio over time.