



INSTITUTE OF  
INTERNATIONAL  
MONETARY RESEARCH

Analysis and insight into trends in money and banking,  
and their impact on the world's leading economies

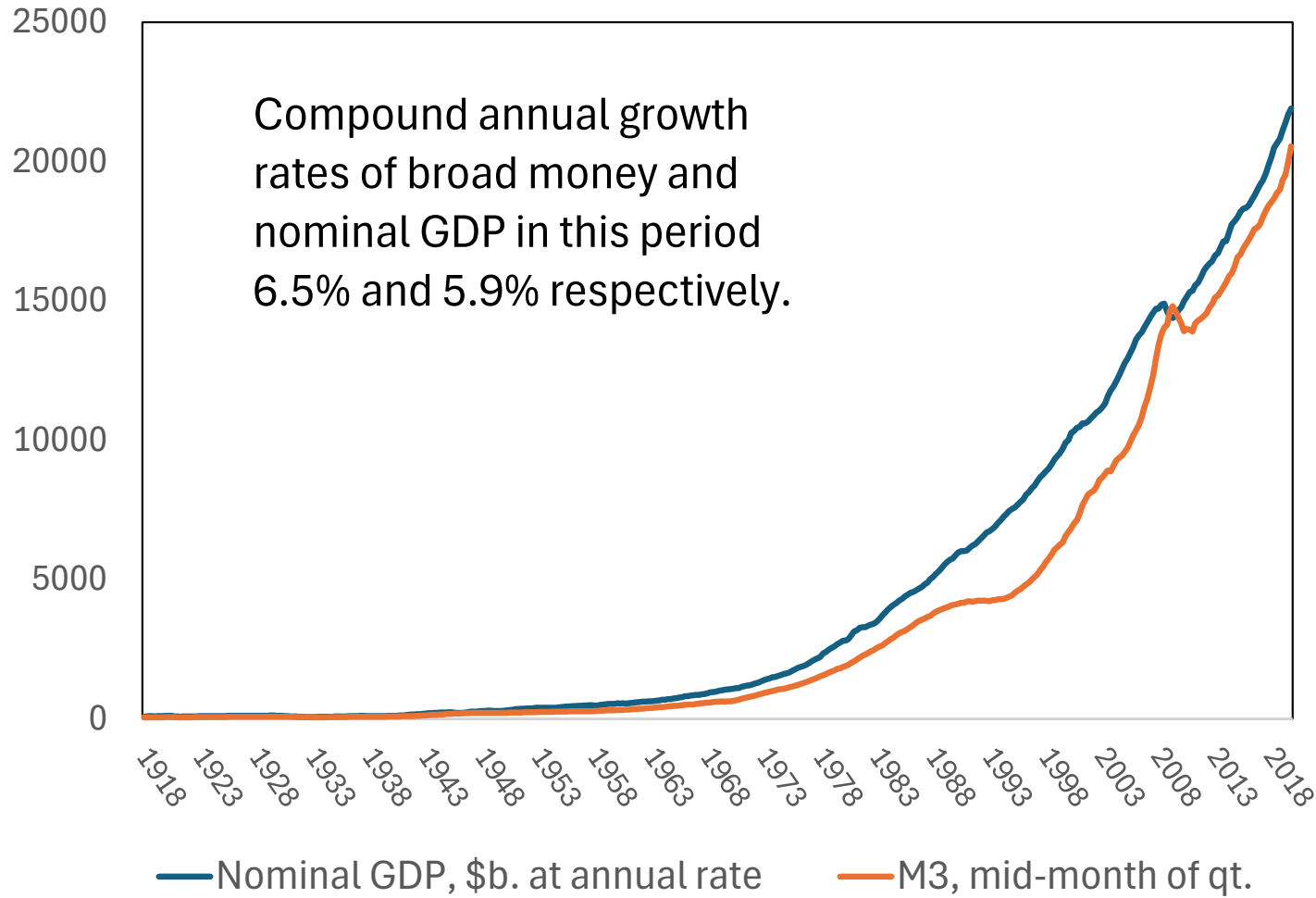
# **Understanding the velocity of money in the USA, as background to macro- forecasting**

*A presentation by Professor Tim Congdon CBE,  
Chair of the Institute of International Monetary Research,  
in July 2024*

## US broad money and nominal GDP, 1918 - 2019

- Quarterly data , levels in \$b.

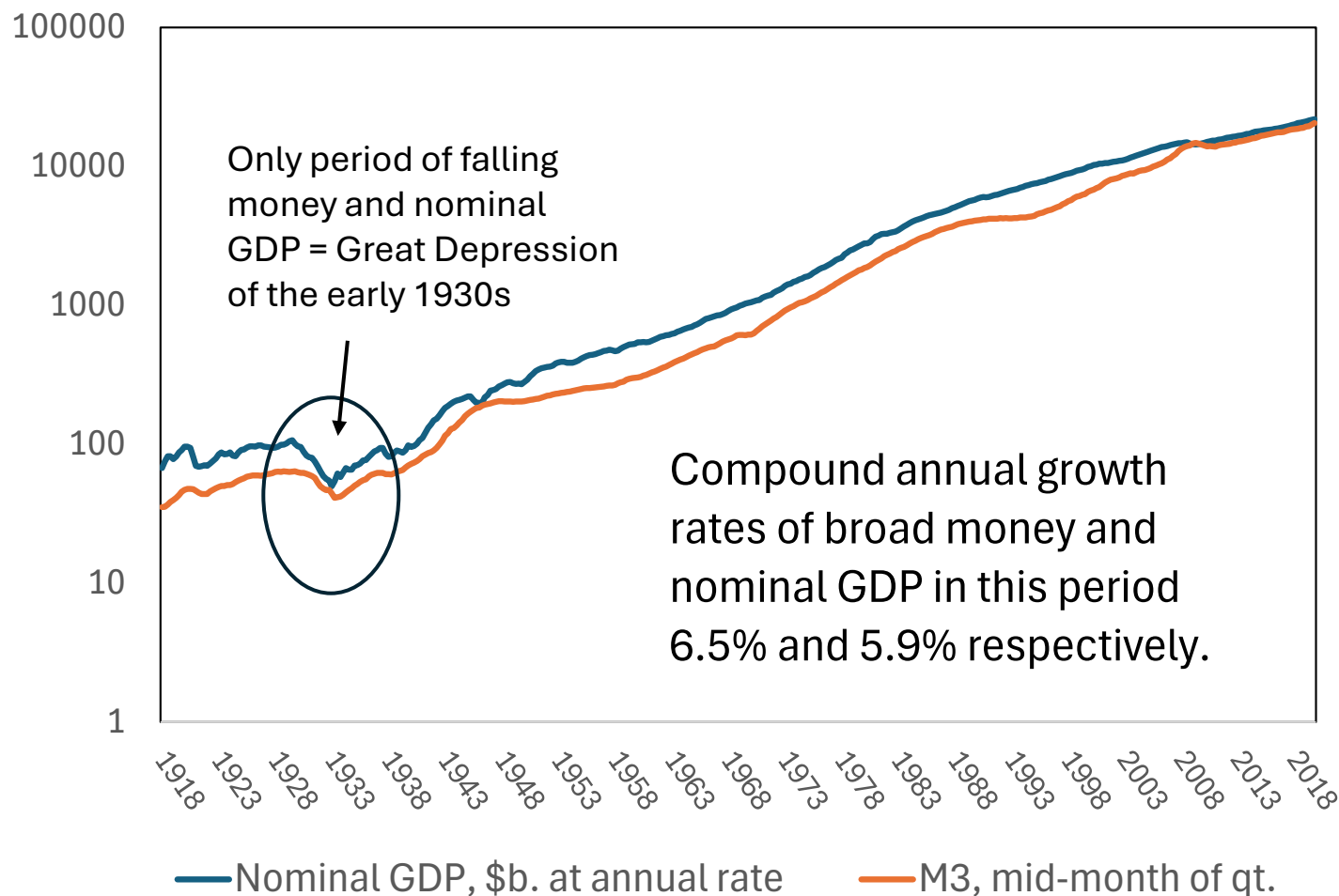
Compound annual growth  
rates of broad money and  
nominal GDP in this period  
6.5% and 5.9% respectively.



The data  
themselves say  
nothing about  
the direction of  
causation, but...

## US broad money and nominal GDP, 1918 - 2019

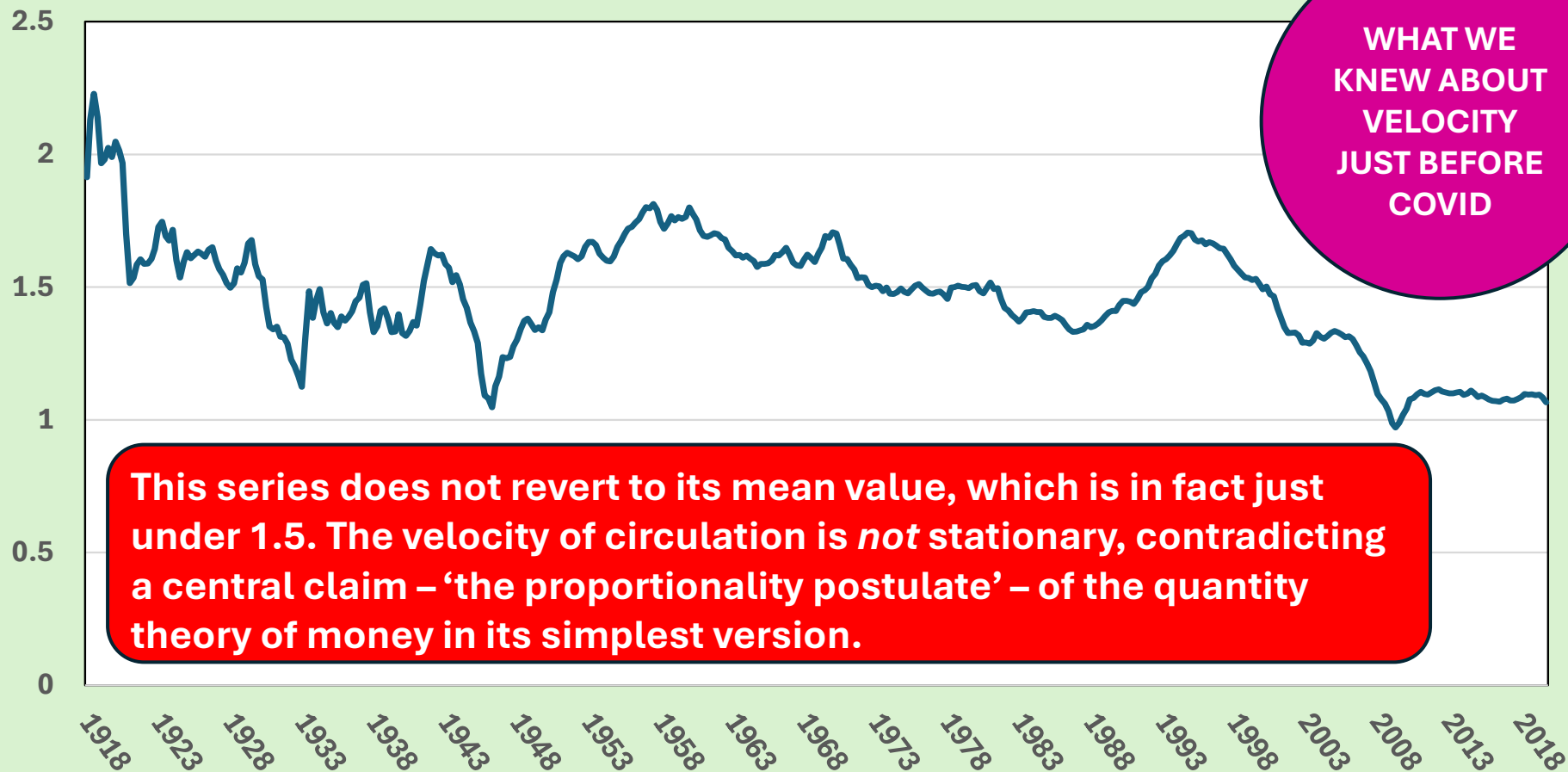
- Quarterly data , levels in \$b.



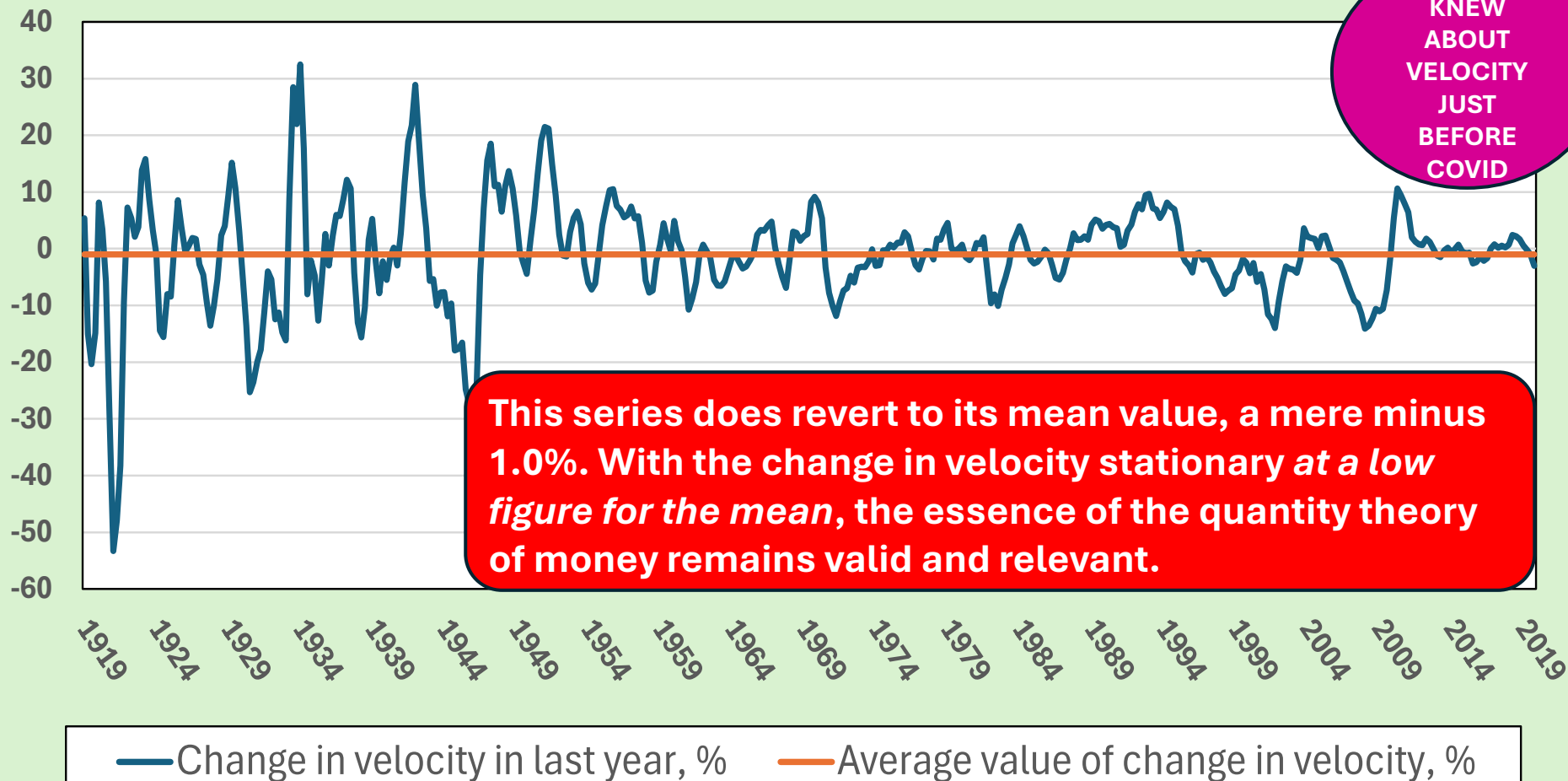
The same data presented with a logarithmic scale.

**The only multi-year period of significant falls in the quantity of money was the Great Depression.**

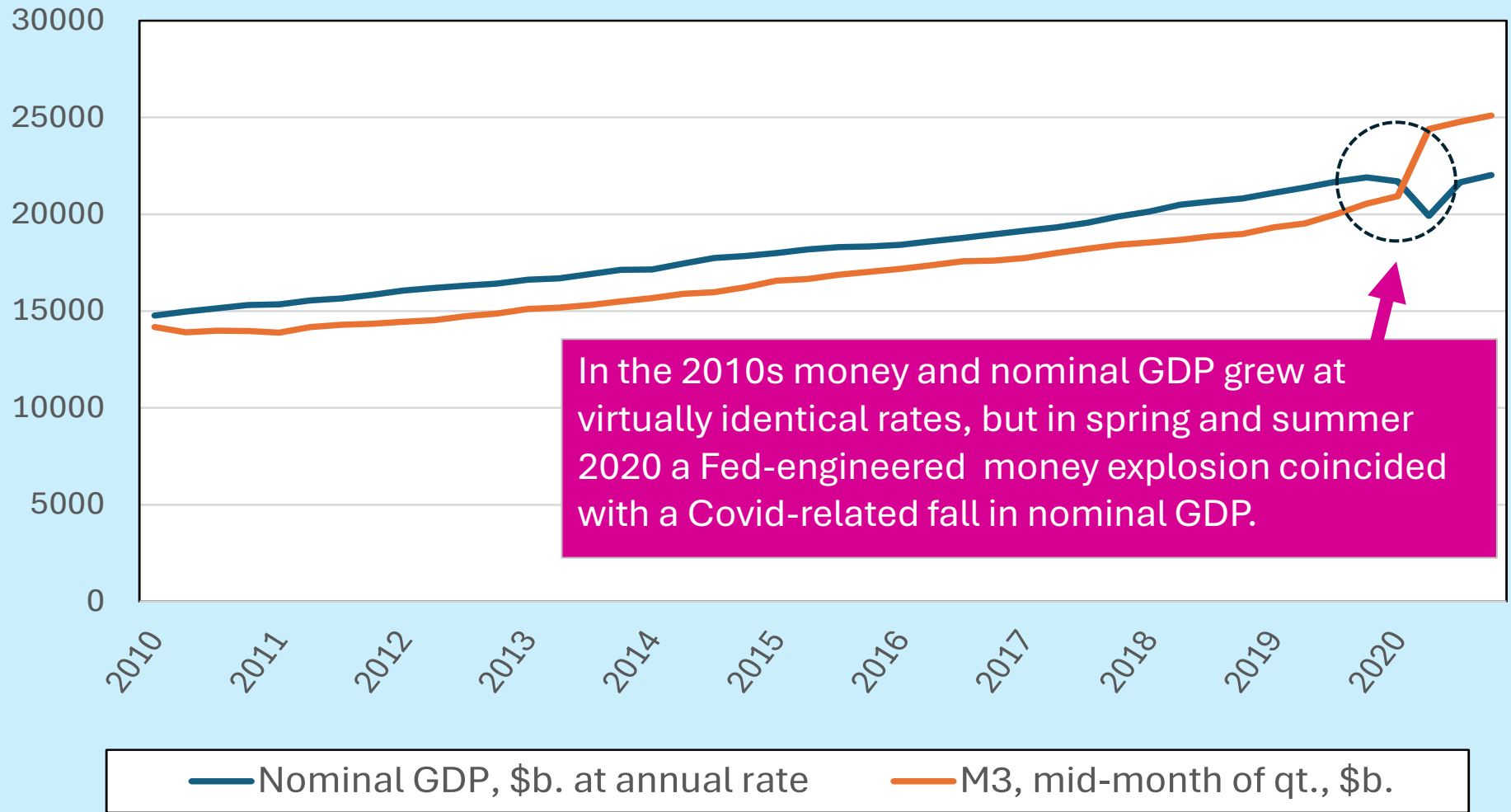
## Income velocity of circulation of M3 broad money in the USA, 1918 - 2019



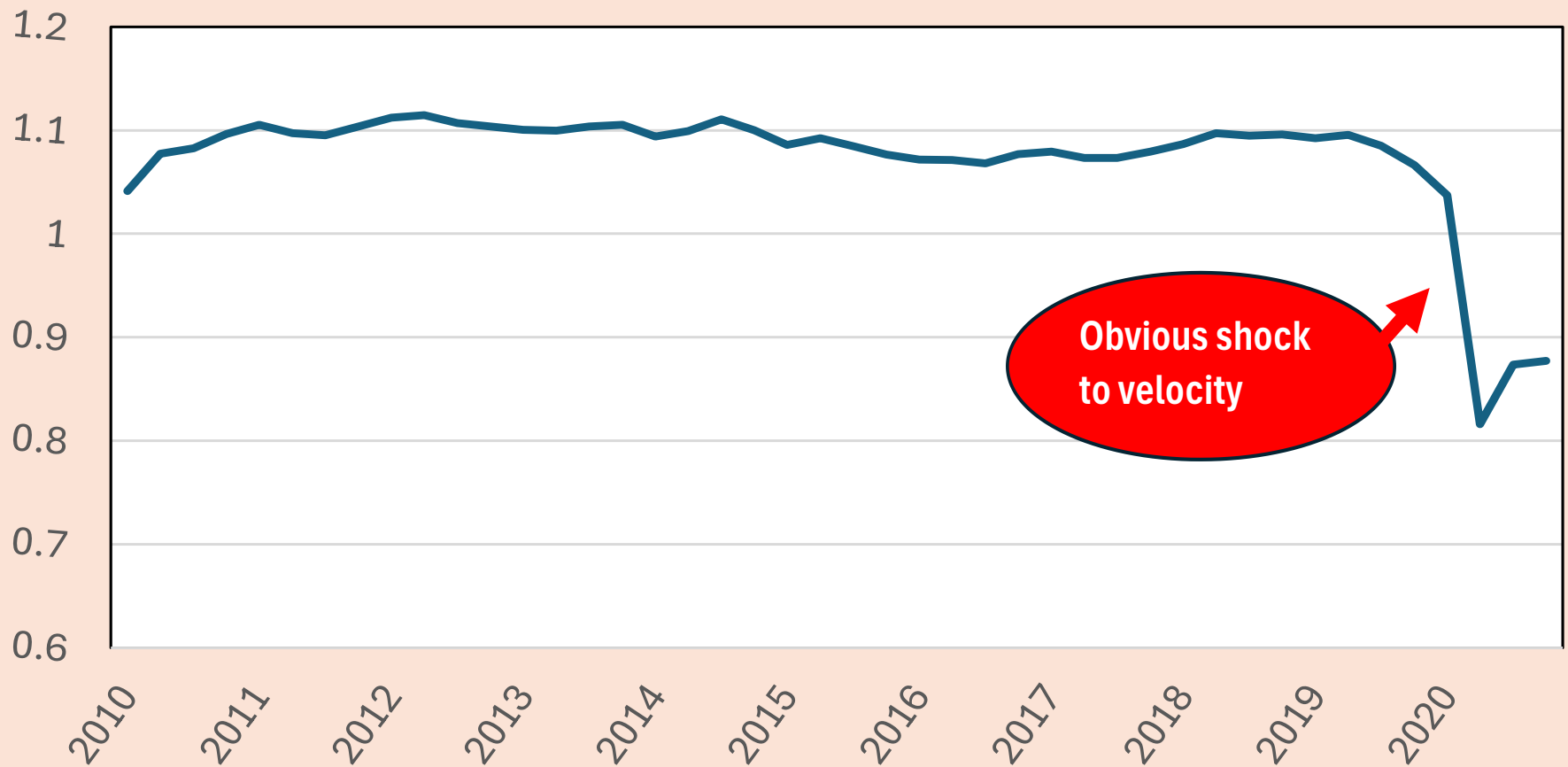
## Change in M3 velocity in last year in the USA, 1918 - 2019



## The extraordinary money explosion of 2020



# Income velocity of circulation in the USA, in the decade up to and including the 2020 money explosion





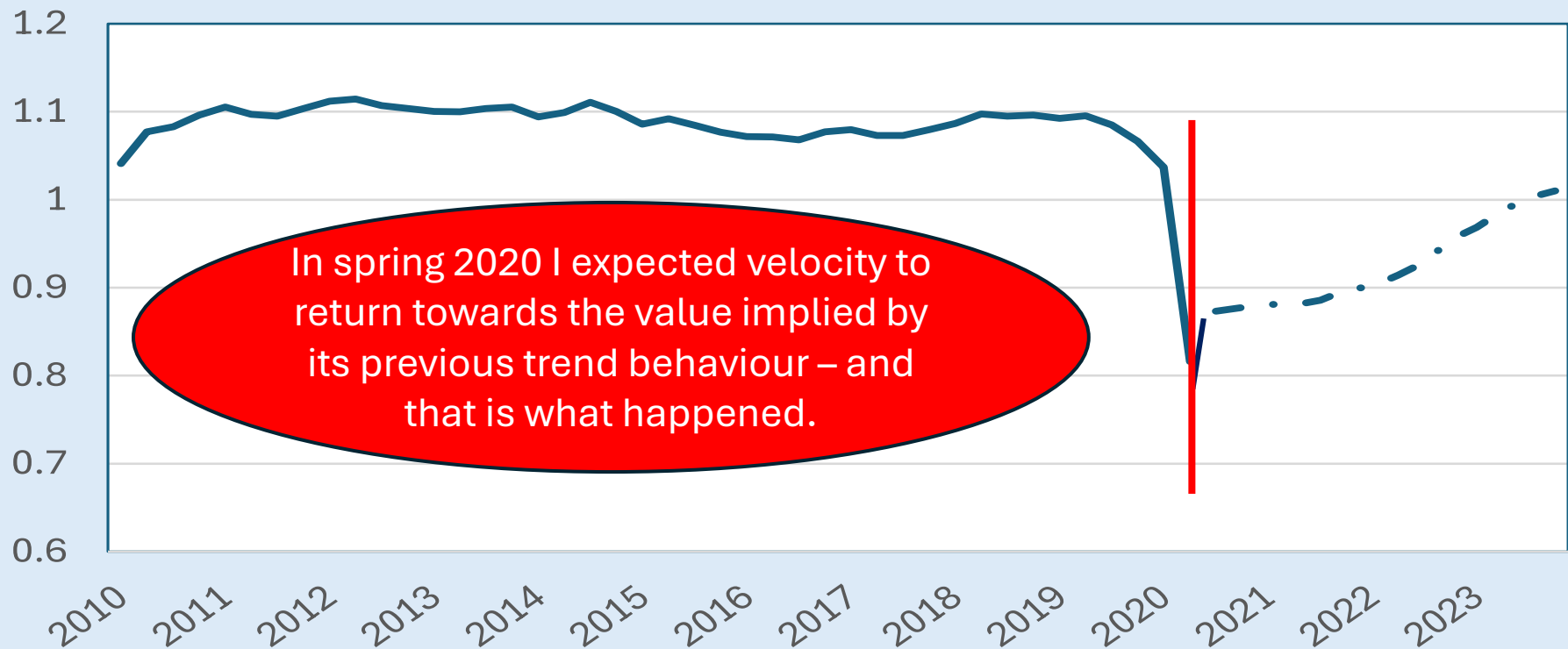
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The forecast I made in late March/early April 2020 – that Federal Reserve (and US Treasury) actions would lead to inflation in the 5% - 10% area – turned on the expected reversion to mean of (the change in) money velocity. The evidence for the stationarity of (the change in) money velocity was clear and overwhelming from over a century of data.



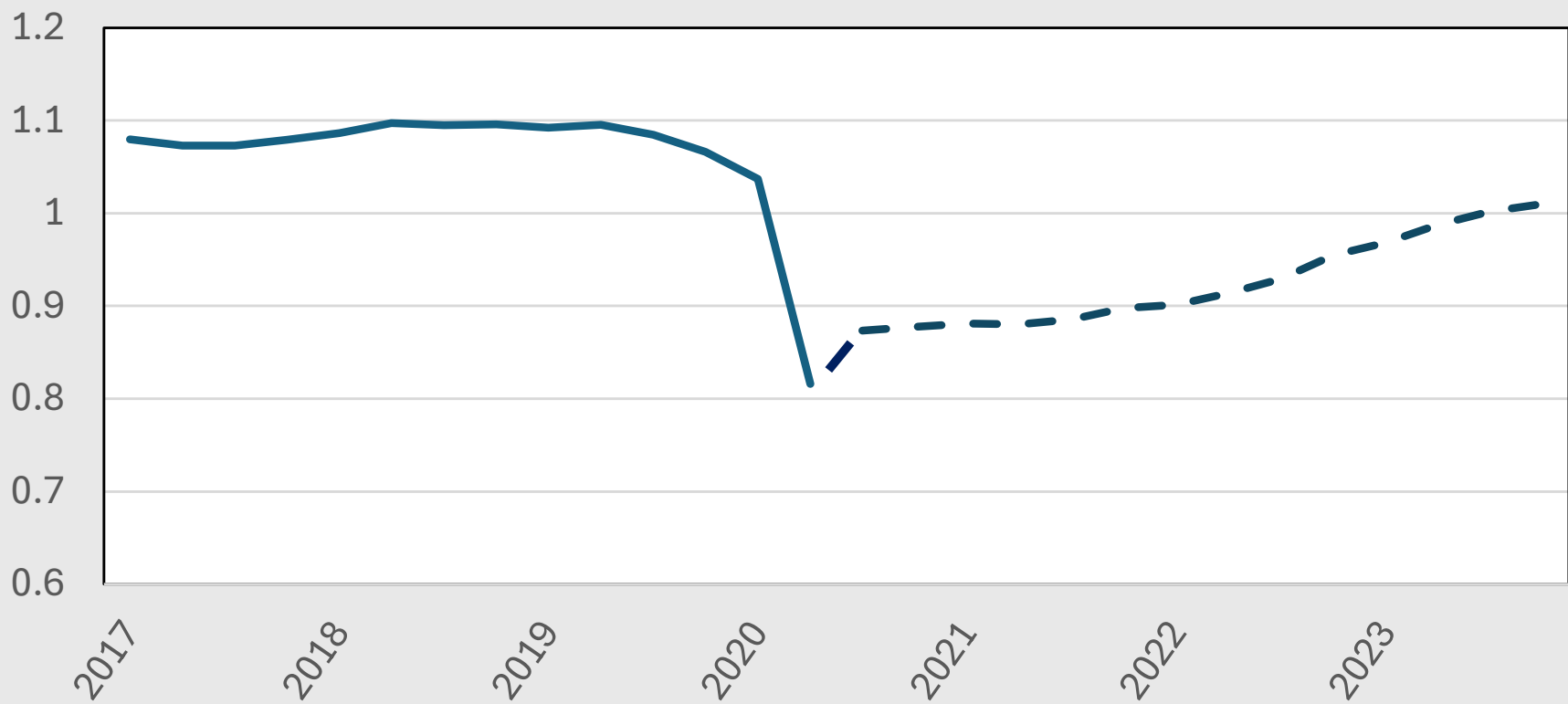
## Velocity in the USA before and after Covid



— Income velocity up to Covid

- . . Income velocity during Covid and later

## The process of mean reversion takes time



— Income velocity up to Covid    - - Income velocity during Covid and later



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Friedman proposed a roughly two-year lag between changes in money growth and inflation, a view which worked well in the latest cycle. However, it is clear that – in the USA – the level of velocity had not, even in late 2023, returned to the pre-Covid figure. (It was about 5% beneath it.) Monetary disequilibrium – after a shock to money growth – may persist for up to four or five years.



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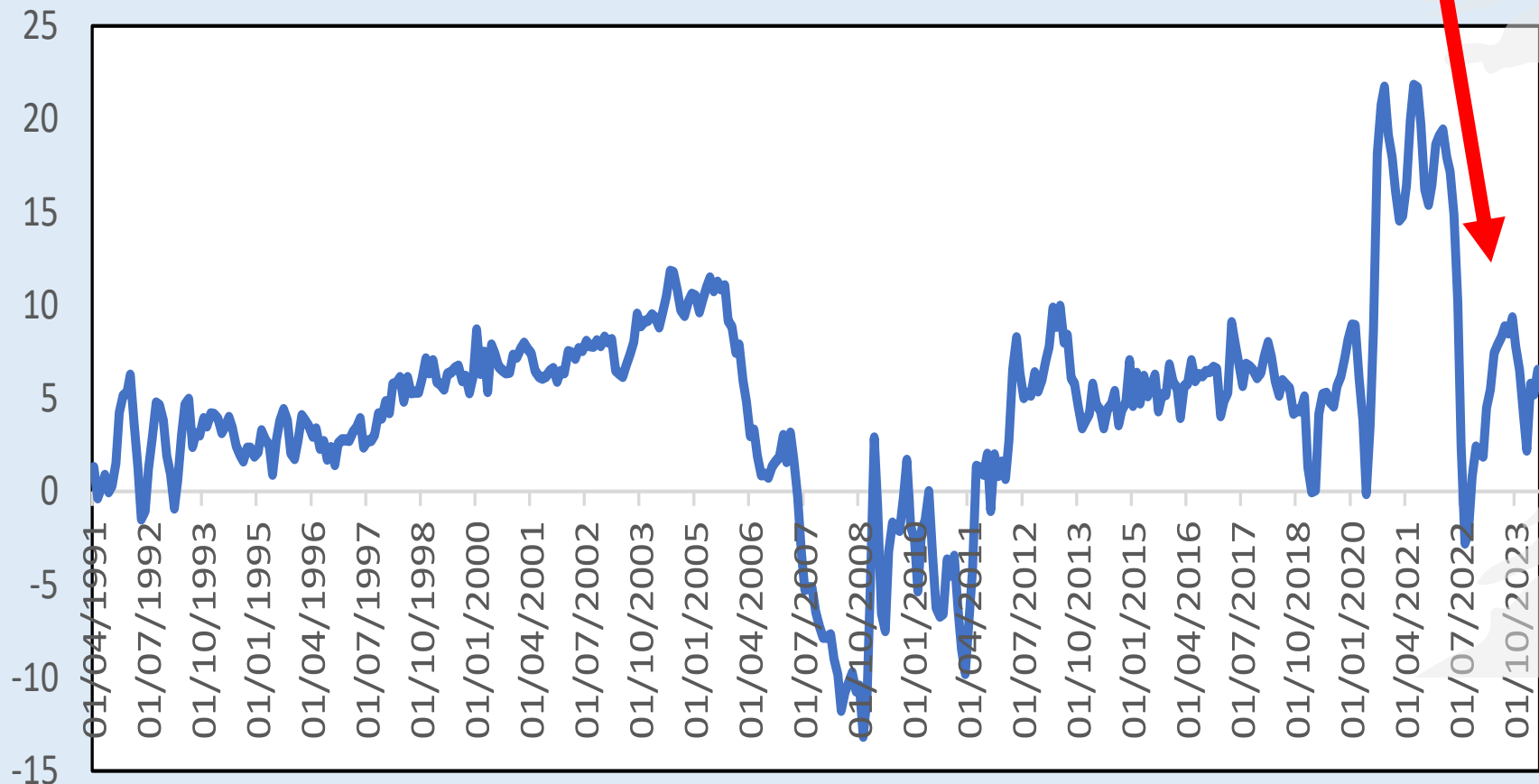
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Money growth collapsed in the USA to almost zero in spring 2022, where it remains. In summer 2022 I forecast – correctly – that this made possible inflation of as low as 2% by the time of the US Presidential election. But I wrongly said a recession would be needed to deliver that fall in inflation. Asset prices were weak in late 2022 and early 2023, but have since been resilient or even strong.

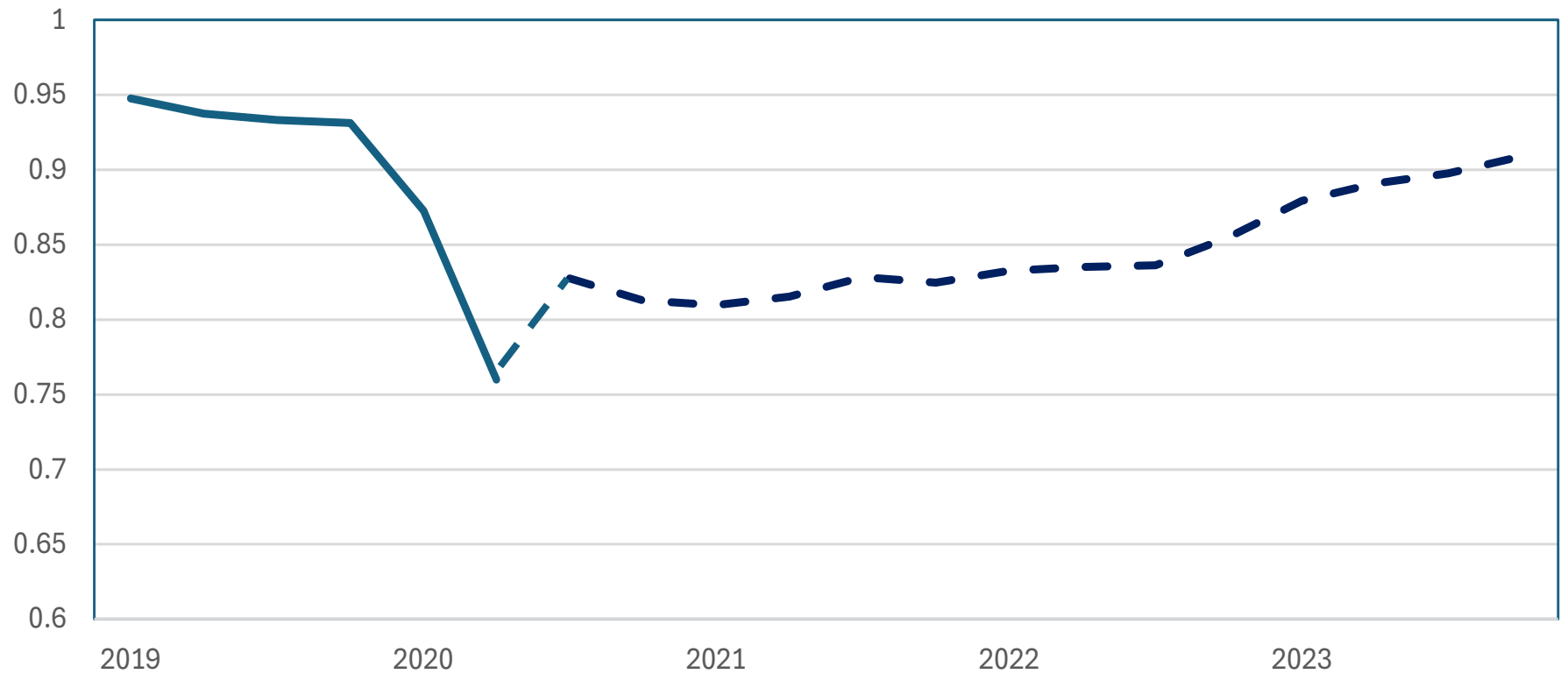
## US house prices (purchase-only, monthly)

3-month annualised rate of change, %

US house prices  
still *rising* in  
2023 and early  
2024, despite  
zero money  
growth at the  
time.

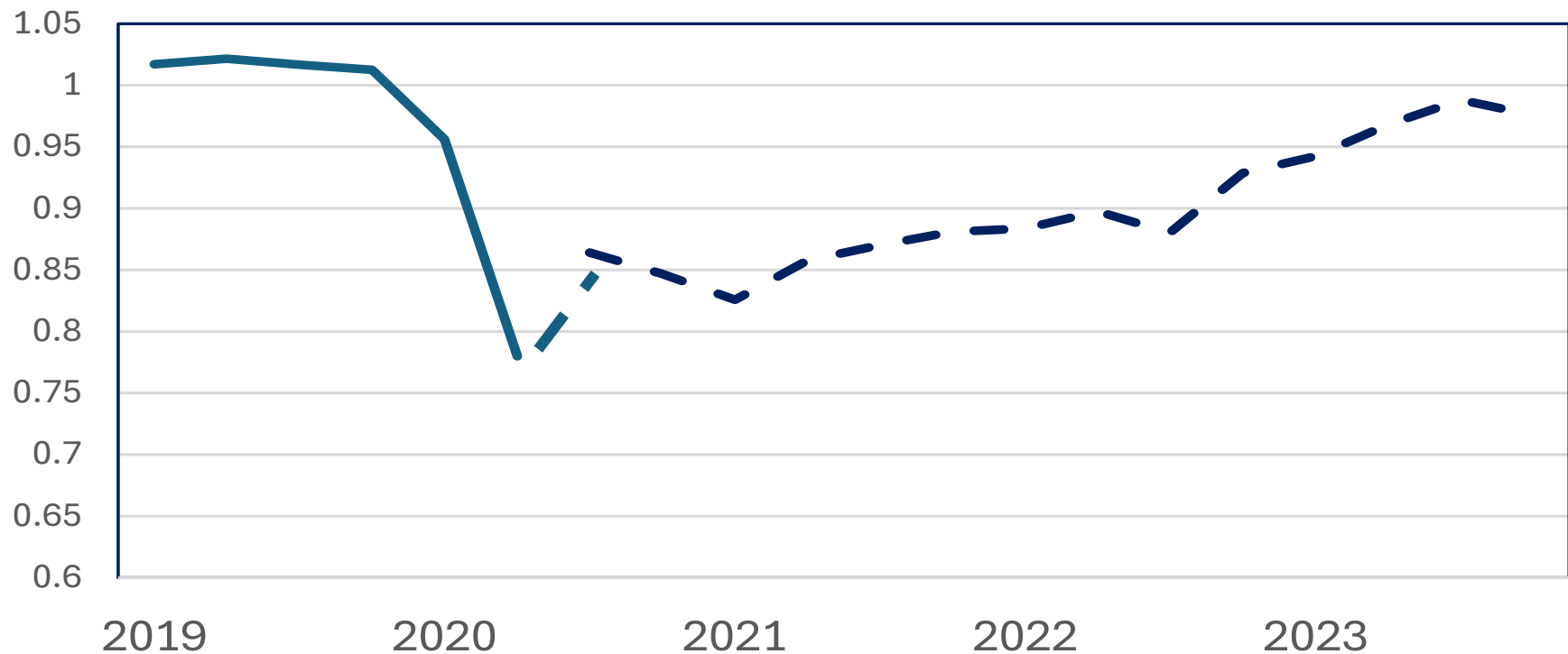


## The mean reversion of velocity: the Eurozone



— Income velocity up to Covid    - - Income velocity during and after Covid

## The mean reversion of velocity: the UK



— Income velocity up to Covid

- - Income velocity during and after Covid

# Key ideas at work



- Key idea in the modern quantity theory of money is the underlying stability of money-holding behaviour by households, companies and non-bank financial institutions.
- So the *desired* ratio of money to income doesn't change very much, and neither does the *equilibrium* velocity of money.
- In practice the data show that the *change in velocity* (not the level) is a stationary series, with reversion to the mean, where the mean value of the change of velocity is low over most medium and long runs.
- This property of the economy is found universally, so that the quantity theory of money is **an always-and-everywhere theory**.