



### Summary

- Inflation numbers continued showing good progress. Despite challenges from rising shipping costs, core goods prices are falling. However, there are risks that inflation heats up in Q1
- The US continues to import Chinese deflation, and a reversal doesn't seem imminent. General import prices set to stay low with renewed dollar strength
- Recent wage data from the ECI confirms the slowing trend we've seen in underlying wage pressures
- Commodity prices eased late last year, led by falling oil and agricultural prices. Industrial metals found some support thanks to improved manufacturing data out of China
- November to December saw a significant rise in the monetary base, driven by soaring bank reserves due to the accelerated drawdown in the RRP facility
- US consumer borrowing slowed, and credit delinquencies rose in Q4. NY Fed report revealed some concerns, but easing credit conditions suggest an economic boost ahead

### About this document

US Inflation Watch presents 18 charts comprising key inflation indicators grouped into five categories including consumer/producer price inflation, commodity prices, wage inflation, inflation expectations and monetary indicators.

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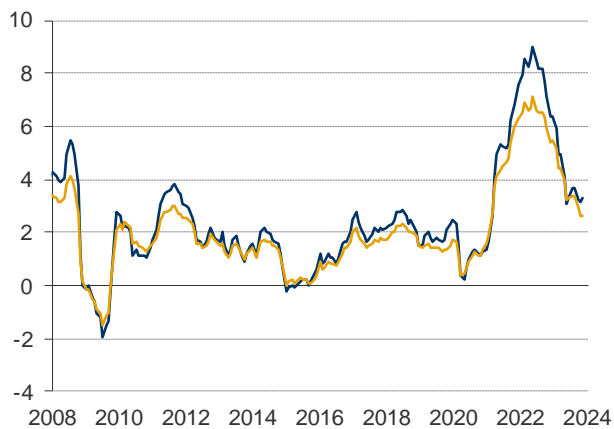
### The Importance of Inflation

Inflation is the single most important indicator when measuring real wealth as it determines what wealth can buy i.e. purchasing power. If 'nominal' wealth doubles over 25 years but the level of prices also doubles, there is no net gain in 'real' wealth. It only takes annual inflation of 2.8% to cause a doubling in prices over 25 years.

#### About Altana Wealth

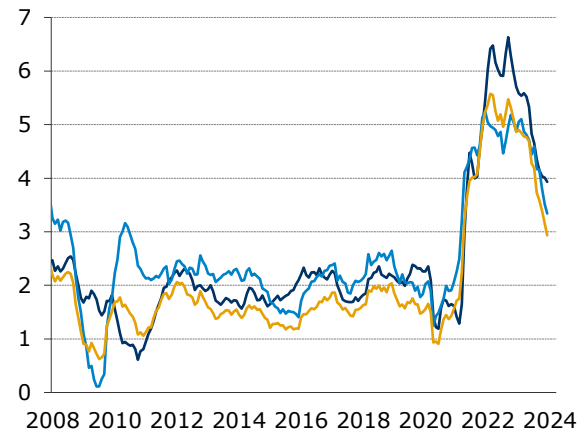
Altana Wealth is a specialist fund manager focused on delivering alpha where we have a competitive edge from niche strategies. As co-investors in all our funds, our interests are aligned with those of our investors. Altana was set-up by Lee Robinson, co-founder of highly successful Trafalgar Asset Managers in 2010. Our funds have won multiple performance awards over the last few years.

### Total Consumer Prices (% y/y)



— Total CPI  
 — Total PCE price index

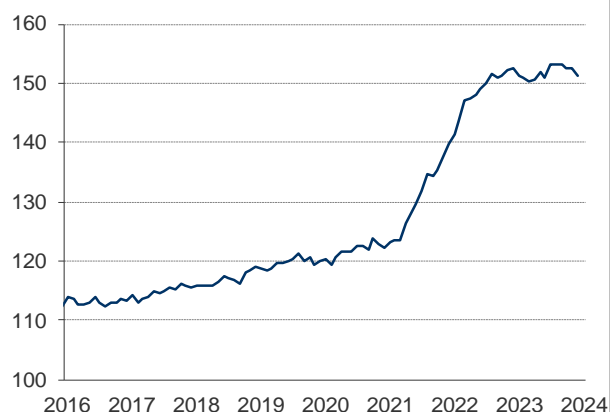
### Core Consumer Prices (% y/y)



— Core CPI — Core PCE price index  
 — Core PCE Services (ex-housing)

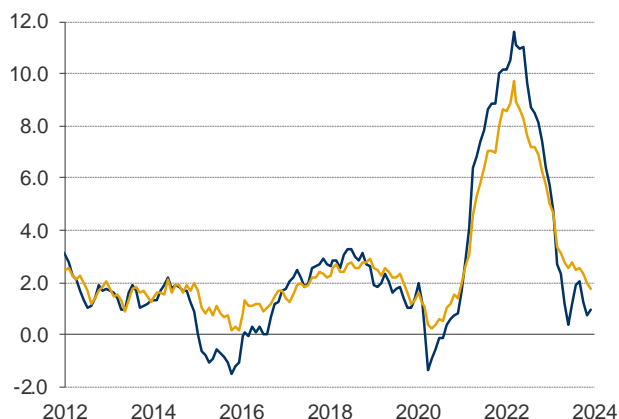
**Current status:** Inflation numbers in recent months have continued to move in the right direction, which have led to market participants growing more confident that the inflation battle has been won. The Fed's preferred measure of inflation, core PCE, is currently running at an annualized pace of 2.9%, with the 6-month annualized rate now below the Fed's 2% target. We're also seeing a slowdown in core PCE services ex-housing inflation, which has proved very sticky over the last 12 months given the strength in the services sector. Across the board, we see very constructive numbers, and the second panel above illustrates the great progress made thus far in bringing inflation down. Nevertheless, the annualized rates are still running above target, and there are several developments which could make the return to target from here a little more challenging. As a result of improved supply chains and the importing of Chinese deflation, falling goods prices have proved a huge disinflationary impulse to the overall inflation picture. However, the pass-through from rising shipping costs caused by the Red Sea disruption are yet to be fully reflected in some of the numbers. This presents upside risks to goods inflation, although the impact may prove marginal. Going off the November and December readings, core goods inflation looks to have bottomed, emphasizing the need for a more aggressive slowing in core services inflation to bring the overall reading down. Looking ahead, Q1 inflation readings have run notably hotter in the last two years. Core monthly gains of +0.3% would be favourable and should provide sufficient evidence for the Fed to consider an initial rate cut by May. However, consecutive gains closer to +0.4% could prove problematic as they would keep the annual rate elevated.

### Producer prices (index)



— **PPI Trade Services**  
(the margins of retailers & wholesalers)

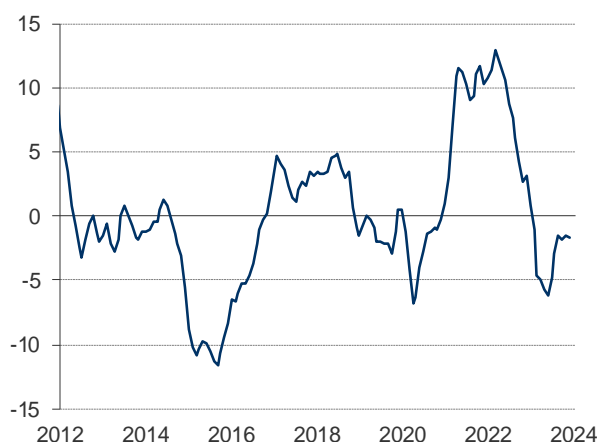
### Producer prices (% y/y)



— **PPI final demand**  
— **Core PPI final demand (ex-food and energy)**

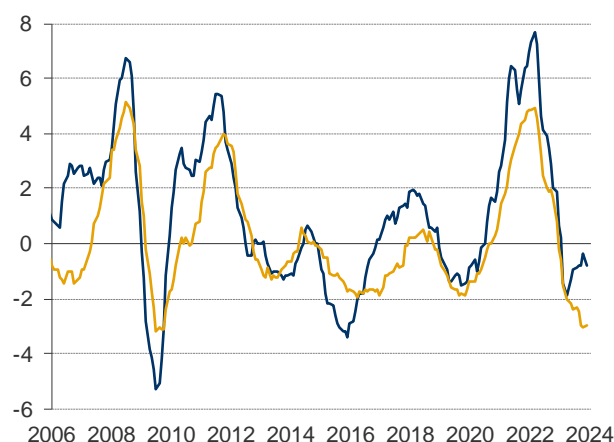
**Current status:** Core producer prices resumed their downtrend, and we are now at pre-COVID levels on an annualized basis. For December, core PPI printed +1.8% y/y below the +2% forecast. Food and energy prices continue to be negative contributors, with the latter declining 1.2% in December after a 2.4% fall in November. Food prices also fell by 0.9% in December.

### Import Prices (% y/y)



— **Import prices**

### Import Prices – core and China (% y/y)



— **Core import prices (ex-fuels)**  
— **Import prices of Chinese goods**

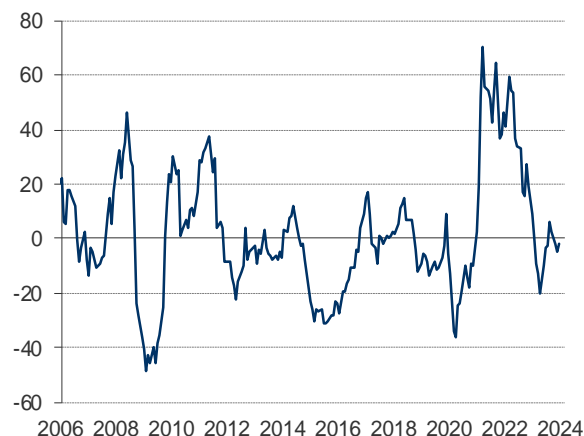
**What is this data?** Producer price indices refer to prices set by domestic producers only, so Import Prices are also monitored to gauge price pressures entering the system from abroad. Import price data excludes tariffs.

**Current status:** The US continues to import Chinese deflation, with import prices of Chinese goods now down to -3% y/y, the lowest reading since the GFC period. We should expect this to reverse at some point, but the inflation numbers in China aren't suggesting this is imminent. In the short-term however, disinflation in import prices of Chinese goods appear to be slowing, as import prices from China fell 1.6% on a 3-month annualized basis, a slower decline compared with the previous print of -2%. Import prices in general will likely remain depressed due to renewed strength in the US dollar coming from the recent repricing in rate expectations.

### CRB-TR/J Commodity Price Index

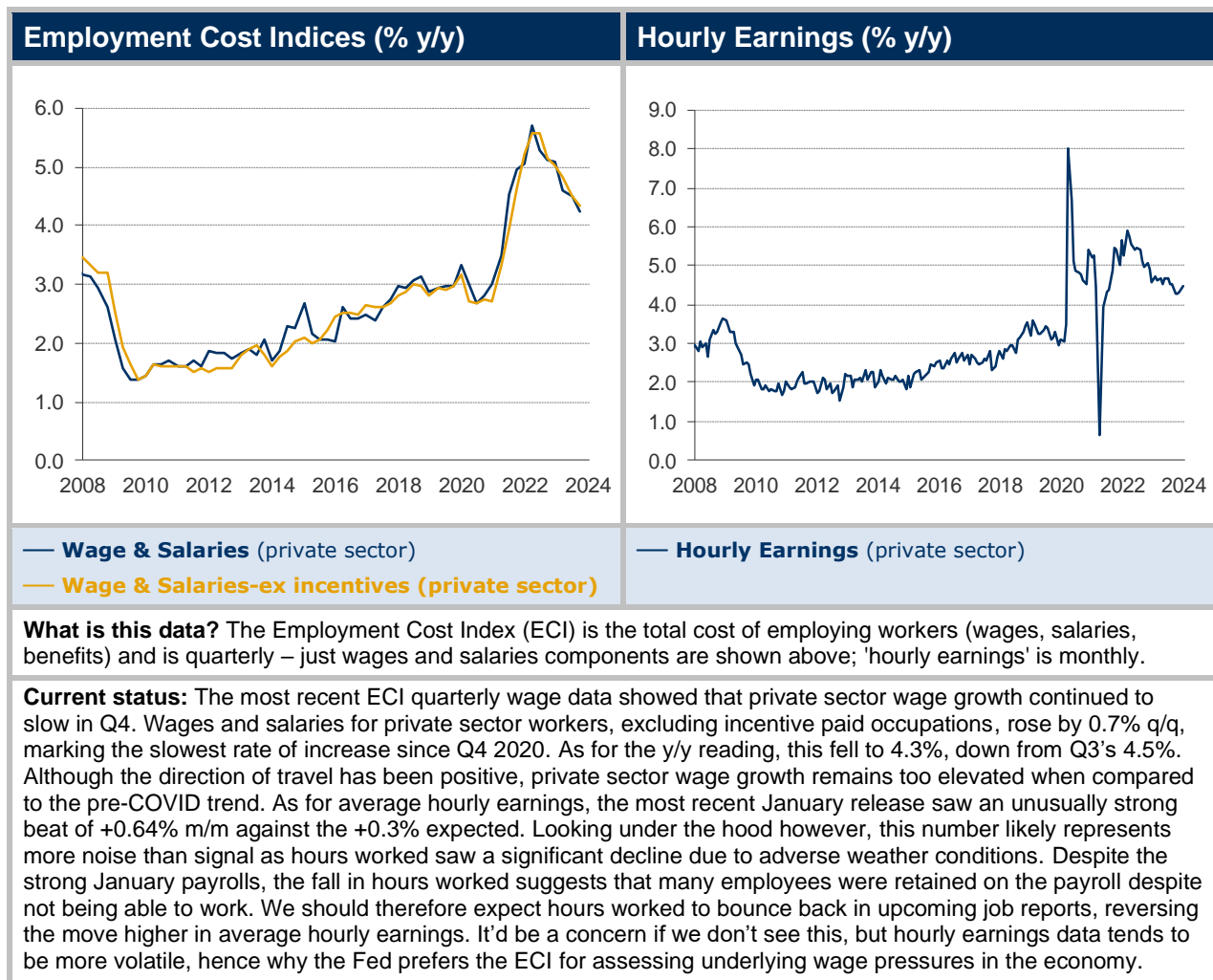


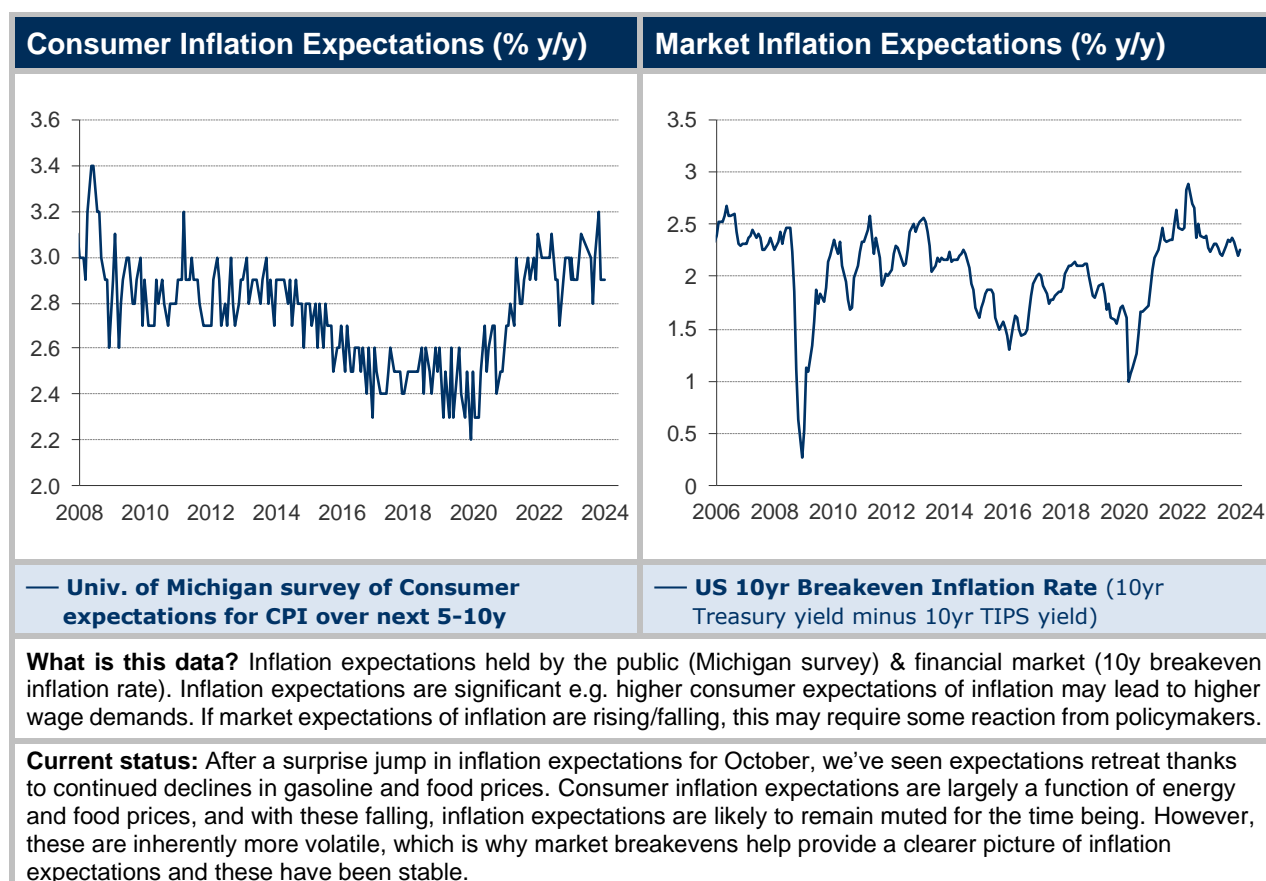
### CRB-TR/J Commodity Prices (% y/y)



**What is this data?** CRB Index is a basket of commodity prices - a timelier indication of Crude PPI.

**Current status:** We saw commodity prices ease towards the end of 2023, with oil prices falling 7% in December after a 5% decline in November. Much of the decline in oil can be attributed to looser supply conditions as we've seen record amounts of US shale production coincide with disagreement amongst OPEC+ members in November around cutting output levels. However, prices saw a bounce in January thanks to strong economic data out of the US. As for metals, gold traded at new highs in early December but failed to make a conclusive break. Industrial metals such as iron ore and copper had strong finishes to the year as Chinese manufacturing numbers improved slightly throughout November and December. Copper prices were also aided by a weaker dollar. We've also seen agricultural commodity prices decline in recent months, which should feed into lower food at home prices.



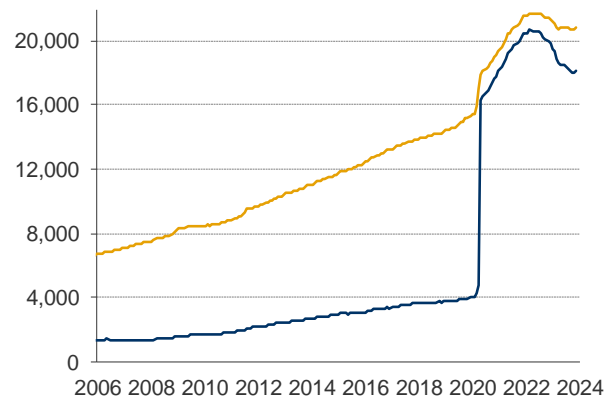


## Monetary Base



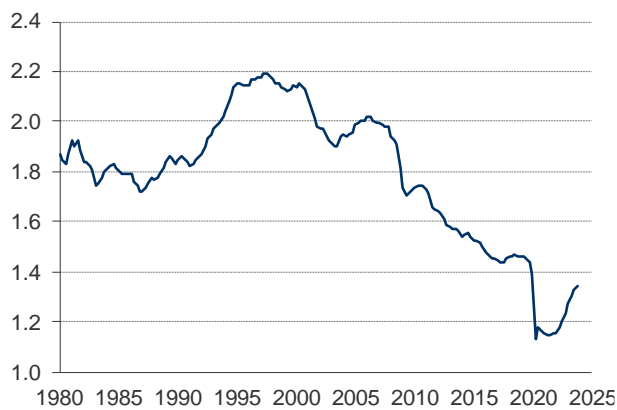
— Monetary Base (level outstanding \$bns)

## M1 & M2



— M1 (level outstanding \$bns)  
— M2 (level outstanding \$bns)

## M2 Velocity



## M2 (% y/y)



### About the data

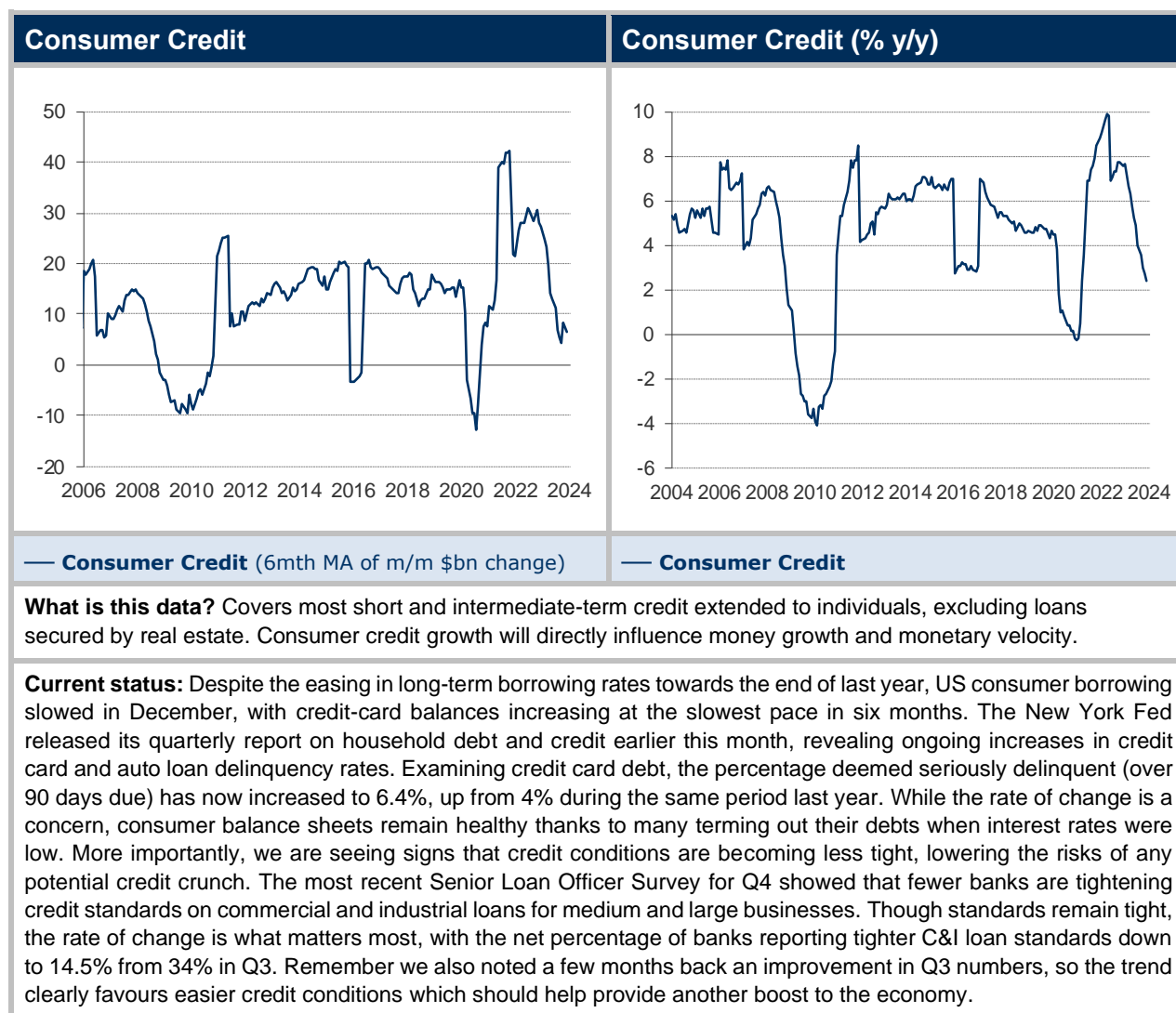
**Monetary base** = M0 (or notes & coins in circulation) + notes & coins held by banks and the central bank + bank reserves held by the banking system at the central bank. **Note:** the last two items are *not in circulation*

**M1** = M0 + demand deposits + other checkable deposits (inc savings deposits previously in M2 – recently revised)

**M2** = M1 + time deposits < \$100k + retail money funds.

**M2 Velocity** = Nominal GDP/M2 shows how often the money stock is used for spending on goods & services and is inversely related to the 'demand for money' i.e. holding that money rather than exchanging it for goods and services.

**Current status:** We saw a significant rise in the monetary base in November and December, largely attributed to the rise in bank reserves. Bank reserves surged by over \$200bn during this period, representing close to a 10% increase compared to October balances. The drawdown in the RRP facility accelerated towards the end of last year as money market funds (MMFs) continued to switch from the RRP towards bills, due to the latter offering a more attractive yield. The reason this is stimulative to the economy is because when a MMF uses funds parked at the RRP to buy Treasury bills, the government spends this money, which shows up in rising bank deposits. If these reserve balances are increasing, it means new money is being introduced into the private market, providing more buying power for assets and greater lending capacity for banks. Separately, rising deposits into money market funds continues to support M2, with November seeing a 3.6% m/m increase in deposits, the largest monthly increase since the regional banking crisis last March. We've also seen the pace of decline in M1 slow, as banks are becoming less restrictive in extending credit.





## Appendix A – Monetary Indicators

The monetary backdrop is somewhat profound in terms of its potential influence on inflation and is the subject of considerable debate. Below is a simple monetary framework that helps to explain the role of Money in the economy and how it can affect inflation.

### A Monetary Framework

The amount of money circulating in the economy will have implications for inflation in the medium-long term. This is best expressed via the **Quantity Theory Identity**

$$M.V \equiv P.Y$$

Where M is the amount of money in the economy, V is the velocity of money (how many times the amount of money is used), P is prices and Y is real output (GDP). Together, P.Y is money or nominal GDP.

As a basic identity this is not controversial. If M (\$500) is used 5 times (V) then \$2,500 will have been spent and will be equal to the value (P.Y) of all goods sold in the economy - e.g. 2,500 items of real output (Y) at \$1 each (P) or 1,000 of (Y) at \$2.50 each (P) etc.

Where the identity becomes more interesting is in the assumptions made about its components. Traditional Monetarists contend that V is fairly stable and predictable, and Y is constrained by the capacity of the economy. So, Monetarists argue that if M is rising faster than Y and V is stable, it follows that P will also rise. In other words, money growth creates inflation.

Others contend that V is not stable and that Y can occasionally deviate substantially away from full capacity, so the relationship between M and P is less obvious. For example, since the Global Financial Crisis the Federal Reserve has made great efforts to increase the supply of money (M), but this has not led to proportionate increases in P.Y. This is due to two things. First, a reduction in velocity - any extra money balances are merely accumulating in the system (higher demand for money) rather than being spent and second, a lower money-multiplier. The money-multiplier represents the rate at which central bank created money (the monetary base) generates additional increases in the total money stock, primarily via the lending of commercial banks – more on money creation below.

In sum, this basic Quantity Theory Identity is a useful framework for analysing the potential interaction between the monetary and real sectors of the economy and the data followed in this document will seek to shed light on what is happening to the various components of this identity.

### What is Money?

Another issue is how 'money' or M is defined. Definitions of money include M0, MB (the Monetary Base), M1, M2, M3 and MZM (maturity zero money) and the basic difference between them is primarily related to liquidity. The further we move along the spectrum towards M3 the less liquid 'money' becomes. For example, a large time deposit cannot be spent immediately whereas a checking deposit can. Note that M3 and MZM are no longer used in the US by the Fed.

### Definitions

**M0** = notes and coins *in circulation* with the non-bank public.

**Monetary base** = M0 + notes and coins held by banks and the central bank + bank reserves held by the banking system at the central bank (bank reserves) **Note:** the last two items are *not in circulation*.

**M1** = M0 + demand deposits and other checkable deposits (including savings deposits after Fed methodological revision – they were previously in M2). **Note:** bank reserves are not included in M1 – important when looking at how Fed QE affects M1 and M2 etc.

**M2** = M1 + time deposits less than \$100k + retail money funds. **Note:** institutional money market funds are not included in M2.

**M3** = M2 + large time deposits + institutional money market funds + short-term repos and other large liquid assets.

**MZM** (Money Zero Maturity) = M2 + all money market funds less time deposits **Note:** MZM aimed to identify all forms of 'liquid' money and was a hybrid of M2 and M3.

### Who creates Money?

A useful way to think about money – again relevant when considering Fed QE – is who creates it? The short answer is that both the central bank and the commercial banking system create money.

The Monetary Base is created and influenced by the Central Bank and is so-called because it is the base from which all other forms of money (non-M0, M1, M2 etc.) are created by the commercial banking system via bank lending.

For example, using QE as an example, the Fed buys T-Bonds from a bank and credits that bank's account at the Fed with the proceeds. These funds are now reserves. At this point, no money has entered circulation, so no other measure of money apart from the Monetary Base has been affected.

As the Monetary Base has increased, commercial banks are more *able* to create other money by issuing new loans and if they were to do this it would lead to a corresponding rise in deposits. Bank lending is the main driver of 'money creation'. This is because a loan, when advanced to the borrower, will be deposited in the borrowers account i.e. an immediate rise in deposits (higher M1). Or, if the 'loan' is via a credit card, the borrowers account will not be affected, but the recipient of the credit card spending will deposit the revenue in their own bank account, so deposits somewhere in the system will have increased because of the 'loan' (higher M1).

In sum, boosting the Monetary Base (via e.g. Fed QE) increases the ability of banks to create other money such as M1. But the rate at which this happens (the money-multiplier) will come down to a commercial judgement by the banks as to whether or not they would like to advance extra loans.

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