



Summary

- CPI was weak in October – an initial sign that the turn in many categories is now beginning.
- The Fed will need a lot more than this to sound the all-clear on inflation, but prospects are encouraging. Fed officials have also started to talk more optimistically about what should happen in 2023.
- PPI and import prices continue to slow, which along with easing supply chain pressures and falling order backlogs suggest softer margins and end-price pressures.
- The labour market will play an important role in fashioning Fed confidence about them achieving their 2% inflation target on a sustainable basis.
- Wages are yet to show any sign of significant slowdown, but there are encouraging signs that labour demand is beginning to soften.
- Credit growth remains solid. Money data suggests that some cash is being moved into interest bearing balances.

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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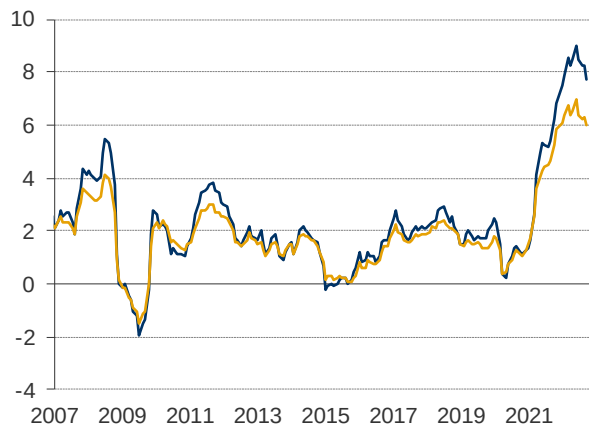
The Importance of Inflation

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 seven performance awards over the past three years.

Total Consumer Prices (% y/y)



— Total CPI
— Total PCE price index

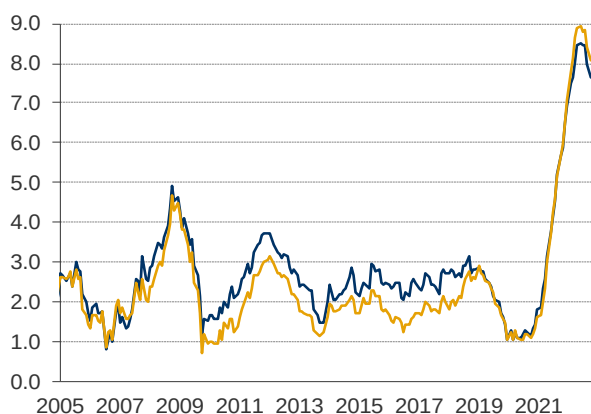
Core Consumer Prices (% y/y)



— Core CPI (ex-food and energy)
— Core PCE price index (ex-food and energy)

Current status: Core CPI softened in October as several categories displayed weaker profiles - developments that many observers had expected to occur at some point. Even the Fed has been talking more optimistically on this issue over the past couple of months. Used car prices fell m/m, new car prices rose less than in prior months and other supply-chain related items were weak, while the pace of rent increases also softened. In addition, the annual review of health insurance costs, which determines the m/m change for the coming 12-mths also shifted lower to -4.0% m/m from +2.0% m/m previously. This should take around 0.08% off the core y/y rate per month over the coming year, so is significant. One decent CPI reading is not enough for the Fed to sound the all-clear, but it is consistent with other developments – lower car prices at auctions, supply chain issue resolution bearing down on margins that have grown exorbitantly over the past 18 months and a slowdown in rents in the economy - that make it more plausible. On the flip side, as with any data, there are risks of mishaps along the way. Rents are a potential issue as it was thought that it would take much longer for slowing rents to make it through to the CPI calculation. However, recent Fed commentary is placing more emphasis on observed rents, suggesting a willingness to look through residual rent strength in CPI. Overall, the prospects for a meaningful slowdown in core CPI over the coming 6-9 months remains promising.

Producer prices (% y/y)



— Core PPI (finished consumer goods)
— Core PPI (all finished goods)

Producer prices (% y/y)



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

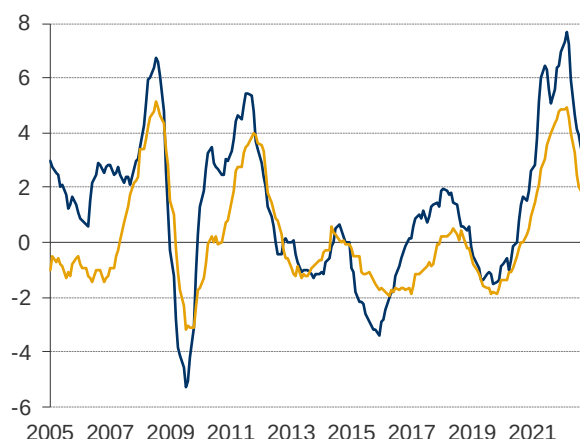
Current status: Core PPI was weaker than expected with trade services (margins) falling m/m. These likely have much further to go on the downside, which bodes well for CPI as well as PPI going forward. Core goods prices were also soft.

Import Prices (% y/y)



— Import prices

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



— Core import prices (ex-fuels)

— Import prices of Chinese goods

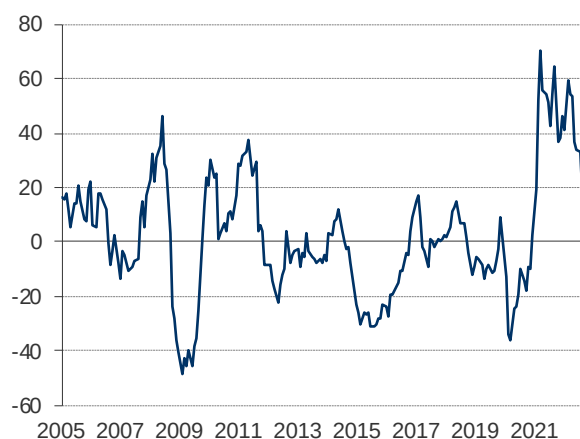
What is this data? Producer price indices refer to prices set by domestic producers only, so Import Prices are also monitored to gauge price pressures entering the system from abroad. Import price data excludes tariffs.

Current status: All import price measures continue to decelerate in terms of y/y growth. The strength in the USD and prior weakness in commodity prices are no doubt aiding these developments. Core industrial supplies & materials were down to +5.9% y/y from 20% plus levels in Jan-Apr, while capital goods and consumer goods ex-autos were also softer at +3.0% and +1.1% y/y respectively, both down from the 4% area earlier in the year. The external upward pressure on prices seems to be softening somewhat.

CRB-TR/J Commodity Price Index



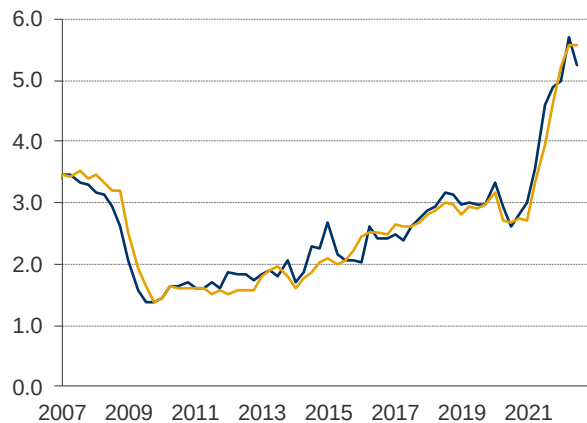
CRB-TR/J Commodity Prices (% y/y)



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

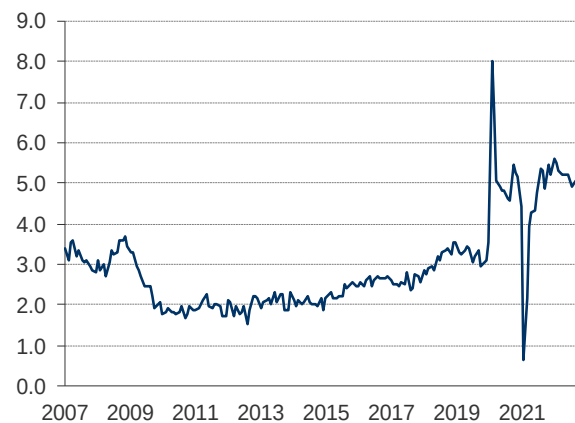
Current status: Commodity prices have remained subdued over the past few months, although base metals have moved off the lows amidst improved hopes about an eventual relaxation of Covid controls in China in 2023. Energy prices have been the main source of weakness, which is helpful in terms of suppressing perceived stagflation risk.

Employment Cost Indices (% y/y)



— **Wage & Salaries** (private sector)
— **Wage & Salaries-ex incentives** (private sector)

Hourly Earnings (% y/y)

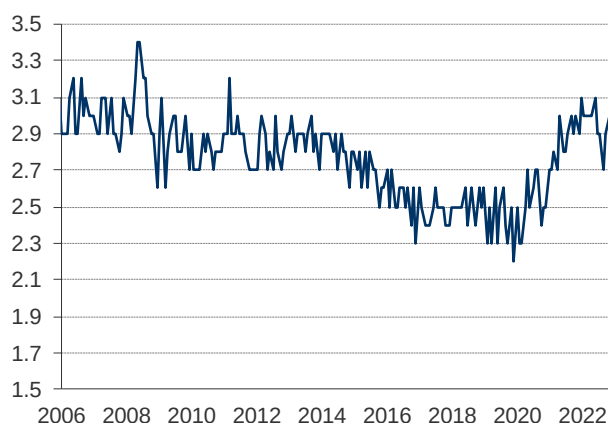


— **Hourly Earnings** (private sector)

What is this data? The Employment Cost Index (ECI) is the total cost of employing workers (wages, salaries, benefits) and is quarterly – just wages and salaries components are shown above; 'hourly earnings' is monthly.

Current status: Wage growth has yet to show any significant sign of easing. Hourly earnings had been showing weakness but the latest print revised this away and evidence from the more reliable ECI is mixed. In terms of y/y rates, the wages and salaries component is slowing, but once incentives are excluded (underlying wage growth) y/y rates remain high. Fed officials are making it clear that unless the labour market and wages slow there will be some risk in achieving the longer-term inflation target, although several officials have recently downplayed the extent to which wages have contributed to inflation so far. Their favoured measures of labour market strength - vacancies, employment, unemployment and participation rates - will need to move much further in the right direction before they become comfortable with the situation, but there have been some promising signs on slowing labour demand.

Consumer Inflation Expectations (% y/y)



— **Univ. of Michigan survey of Consumer expectations for CPI over next 5-10y**

Market Inflation Expectations (% y/y)



— **US 10yr Breakeven Inflation Rate** (10yr Treasury yield minus 10yr TIPS yield)

What is this data? Inflation expectations held by the public (Michigan survey) & financial market (10y breakeven inflation rate). Inflation expectations are significant e.g. higher consumer expectations of inflation may lead to higher wage demands. If market expectations of inflation are rising/falling, this may require some reaction from policymakers.

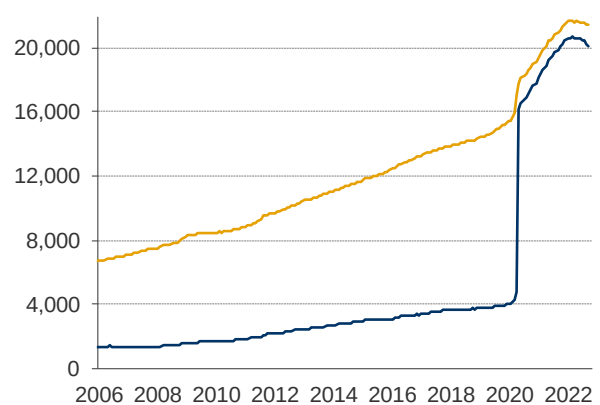
Current status: Market expectations remain well off the highs due to slowing growth expectations and recent softer CPI data. 5-10 yr consumer expectations have not moved back above 3%, in part related to the ongoing softness of fuel prices, but this will be a source of comfort for the Fed.

Monetary Base



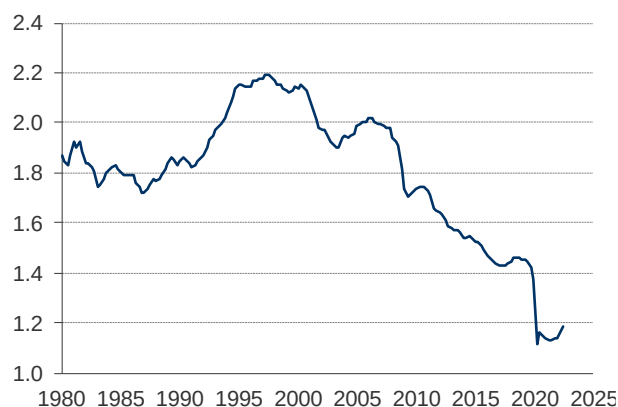
— **Monetary Base** (level outstanding \$bns)

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*

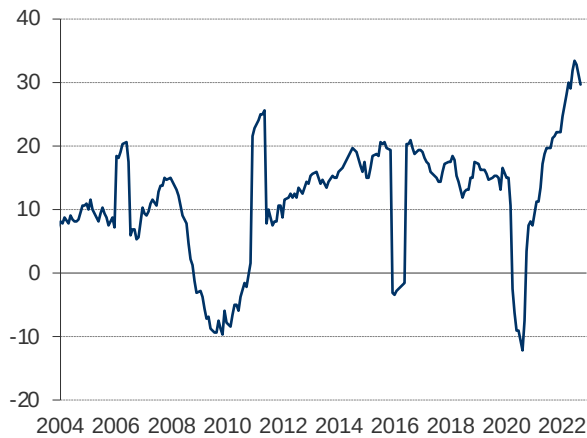
M1 = M0 + demand deposits + other checkable deposits (inc savings deposits previously in M2 – recently revised)

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.

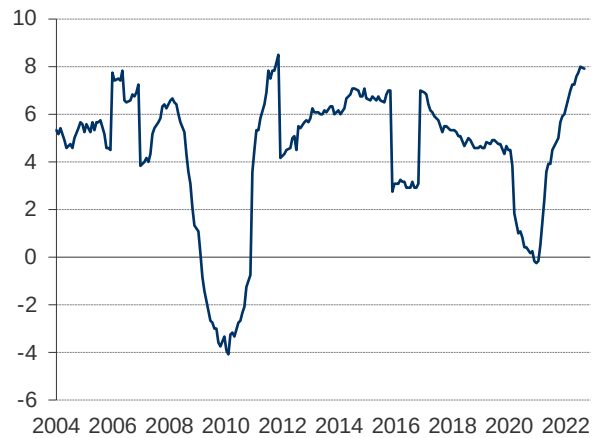
Current status: Growth in bank lending remained solid in Sep-Oct, but there was a slightly softer profile in some categories like real-estate commercial. Credit card lending remained firm through the period. Of course, all of these numbers are nominal rather than real, so over time, the growth is probably slowing slightly in real terms. Money aggregates continue to fall (as of Oct), led by the M1 component of M2, with holders of narrow money being more tempted into interest earning vehicles such as money market funds, which rose strongly in Nov (also, M1 continues to fall faster than M2, suggesting moves into such vehicles). This is consistent with the higher interest rate regime the Fed has been putting in place, but one has to bear in mind that going into this period M1 deposits were unusually high (the so-called excess savings built up over the pandemic). While some of these have been run down to support spending – which should not affect total M1 as money spent will merely end up in someone else's bank account – some funds will naturally find their way into less liquid areas given the higher interest rates on offer. There is certainly no sign as yet of any impending crunch in credit.

Consumer Credit



— Consumer Credit (6mth MA of m/m \$bn change)

Consumer Credit (% y/y)



— Consumer Credit

What is this data? Covers most short and intermediate-term credit extended to individuals, excluding loans secured by real estate. Consumer credit growth will directly influence money growth and monetary velocity.

Current status: Consumer credit growth has remained strong in Aug-Sep, with strength spread broadly across revolving and non-revolving categories. Revolving was down in Sep but that was after a very large rise in Aug and the banking credit card data suggests that this remained resilient in October. Quite simply there doesn't seem to have been any impact of higher rates on credit appetite or availability just yet, although a truer test of this may appear as the economy and particularly the labour market begins to respond to ongoing Fed rate hikes. If job scarcity suddenly turns to job insecurity against the backdrop of a much higher level of interest rates, then credit may start to squeeze, but household balance sheets look in pretty good shape going into this potential event.

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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