



Summary

- Inflation news at the consumer level remains mixed. The Fed has yet to see a consistent run of softer numbers in the key core service inflation categories.
- Growth in producer, import and commodity prices continues to weaken.
- Wages and the labour market are slowing, but not yet to the extent that the Fed would like to see.
- Monetary data suggest that some stress is emerging on the lending front (corporates and commercial real estate) - consumer lending resilient thus far.
- M1 deposit leakage is also continuing, suggesting possible funding issues for banks.
- Going forward this will continue to be a major focal point as the recent Loan Officer survey suggests that banks will tighten credit conditions even further during the rest of 2023.
- The small business sector is the most vulnerable to any squeeze in bank finance.

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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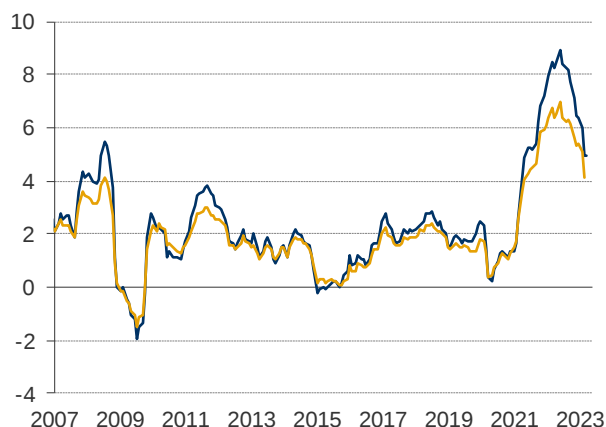
The Importance of Inflation

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

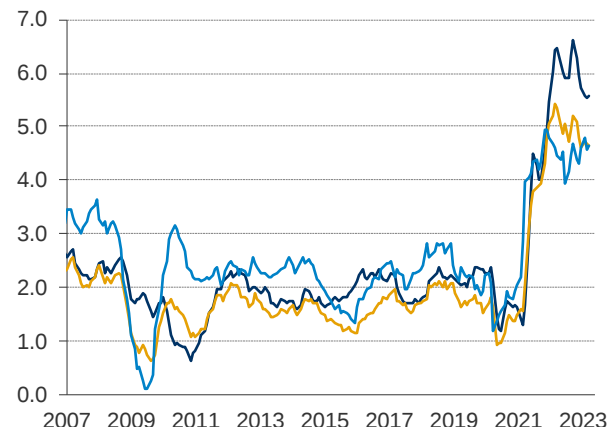
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Total Consumer Prices (% y/y)



— Total CPI
— Total PCE price index

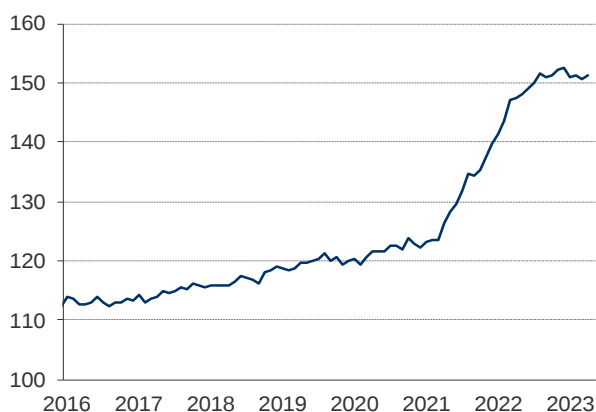
Core Consumer Prices (% y/y)



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

Current status: There have been some signs of progress in the consumer price data but it has been fairly slow and the Fed still has concerns about the stickiness of prices in some key areas. The good news is that the highly weighted rents category is now starting to reflect the much lower rises seen in actual market rents. The m/m rise in this category has been +0.5% over the past two months compared to +0.7% from Jun 22-Feb 23 and as a result is now contributing +0.2% to m/m core CPI as opposed to +0.3% previously. Of course, this had been well anticipated and the Fed has long since identified stickier service sector categories as the key focal point. This so-called super core measure, which additionally excludes rents or housing in general, was soft in Apr CPI (ex-rents +0.1%, ex-housing +0.2%) but firmer in the core PCE version (+0.4% on both) – so slowly moving in the right direction but nothing conclusive. Looking ahead, the latest set of data included a big rise in used car prices, which should be reversed given the steep falls in auction prices in Apr and May. Overall, the Fed would ideally like to see a run of three months or more of super core at +0.2% in order to start feeling more relaxed about underlying trends. It would also be good to have that corroborated by some slowing in the labour market.

Producer prices (index)



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

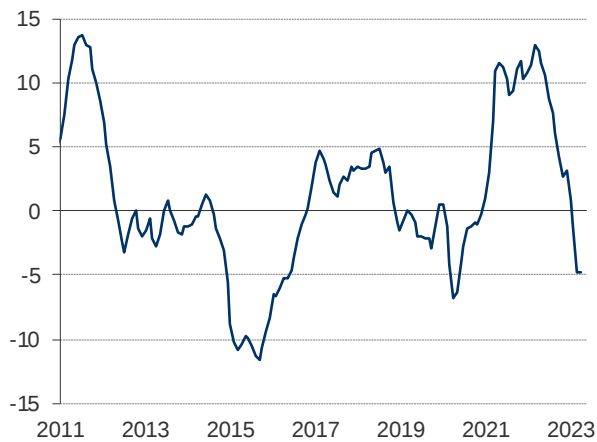
Producer prices (% y/y)



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

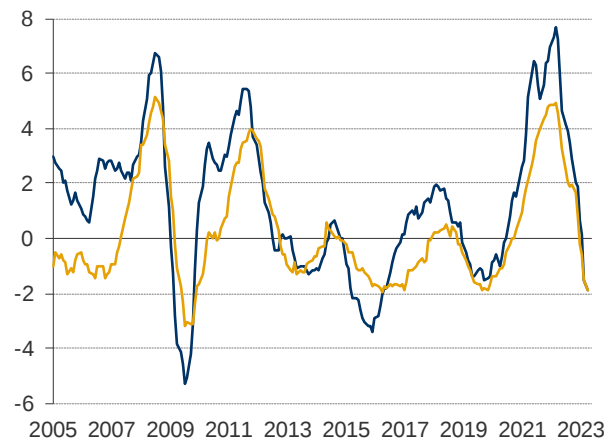
Current status: Core PPI has been soft over the past two months with weaker profiles being seen across most categories but primarily in goods. Trade services (i.e. margins) remain stubbornly high but there is clear downside risk to this going forward, which would also suggest lower CPI.

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 y/y terms and are now firmly in negative territory. This is despite what has been a generally weaker USD since mid-Nov. Core industrial supplies & materials fell 11.1% y/y in Apr, while capital goods and consumer goods ex-autos were also softer at +1.1% and -0.2% y/y respectively. The weakness in the price of goods imported from China has also probably been influenced by the soft inflation showings in China, with core measures of both Chinese PPI and CPI significantly undershooting expectations over the past two months.

CRB-TR/J Commodity Price Index



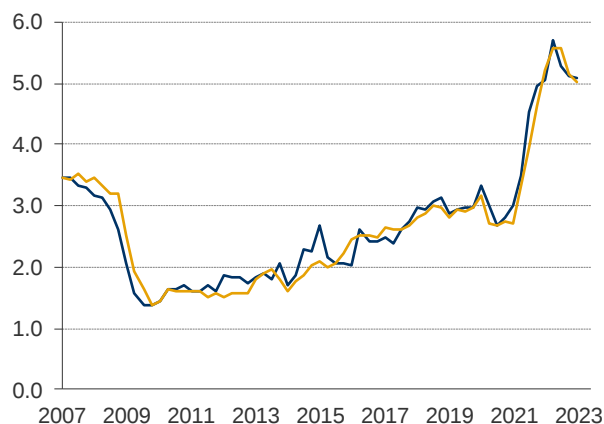
CRB-TR/J Commodity Prices (% y/y)



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

Current status: Commodity prices overall have softened since the end of Mar primarily due to weakness in metals (fading optimism about the Chinese reopening effect), although some parts of the energy complex are also slightly lower. Other categories have been broadly steady. The impact on y/y rates has been quite pronounced given the base effects in play. Around this time last year there were sharp rises in food and energy items due to the Russian invasion of Ukraine in Feb. This should start to reverse from June.

Employment Cost Indices (% y/y)



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

Hourly Earnings (% y/y)

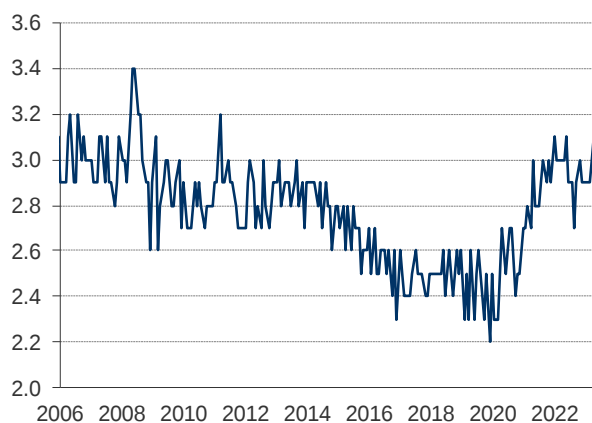


— **Hourly Earnings** (private sector)

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 continues to show signs of easing but it is fairly slow progress and not currently enough to satisfy the FOMC. Hourly earnings had initially been showing up weaker, but once again stronger Apr data and some upward revisions modified this slightly. The more reliable ECI was also solid in Q1 but here too there was a weaker profile compared to what has gone before. With some labour market weakening likely in the pipeline, further downward pressure on wages should be seen, but for the Fed it is a question of 'degree' and this is why they are now fully data dependent.

Consumer Inflation Expectations (% y/y)



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

Market Inflation Expectations (% y/y)

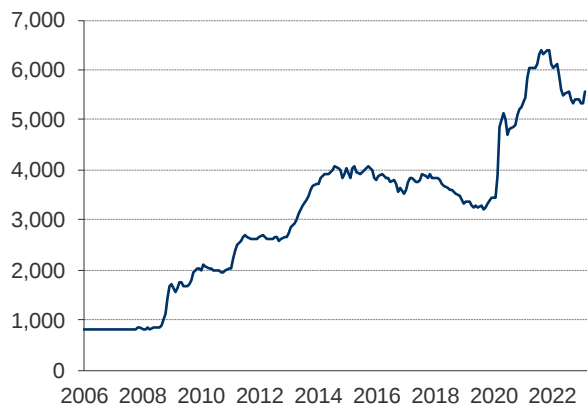


— **US 10yr Breakeven Inflation Rate** (10yr Treasury yield minus 10yr TIPS yield)

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.

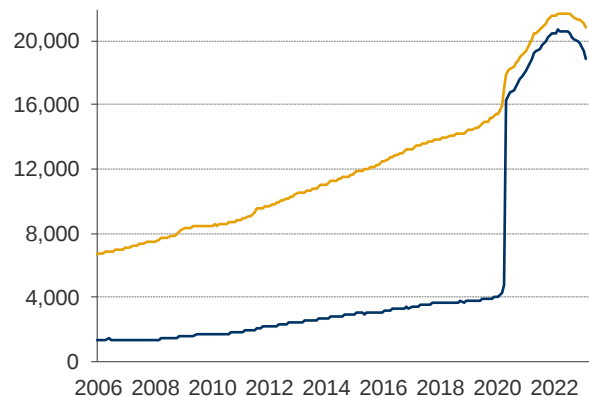
Current status: Market expectations have continued to settle at lower levels amidst expectations of slower growth, but the latest reading for 5-10 yr consumer expectations unexpectedly rose to new cycle highs. Let us see if this is maintained, but as it stands it will be of some concern to the Fed.

Monetary Base



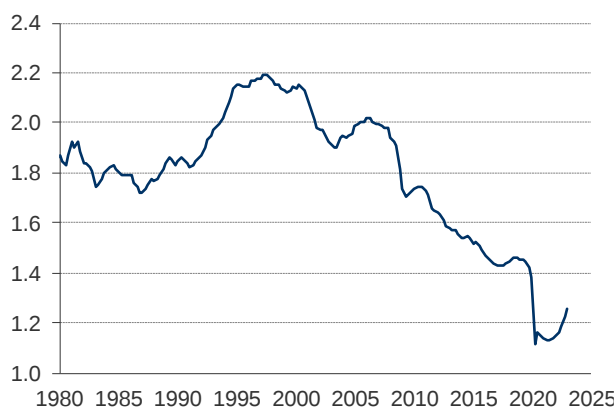
— **Monetary Base** (level outstanding \$bns)

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*

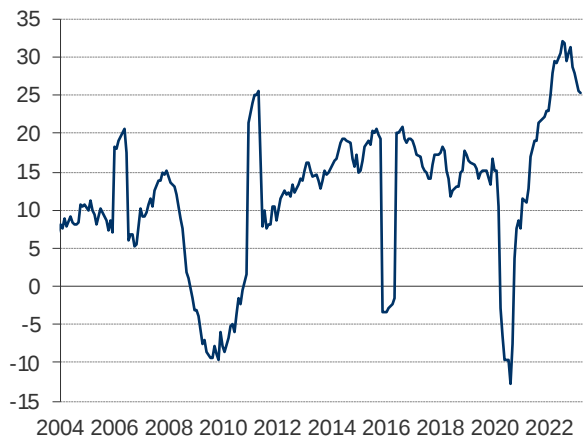
M1 = M0 + demand deposits + other checkable deposits (inc savings deposits previously in M2 – recently revised)

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.

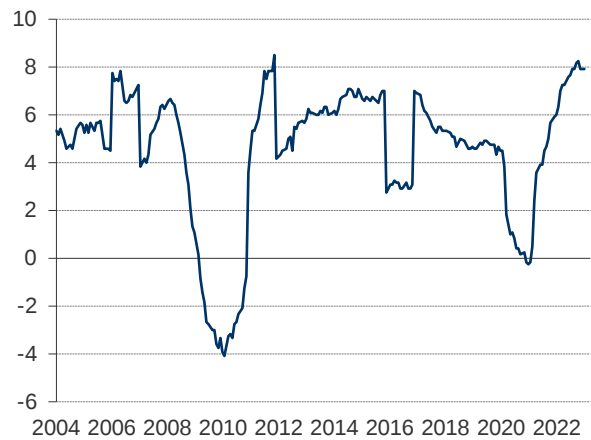
Current status: Total outstanding bank loans fell m/m in Mar - the first sequential fall in recent times that is not related to either GFC or pandemic noise. Weakness was in loans to corporates and commercial real estate, with residential real estate and consumer loans growing steadily. Monetary aggregates continue to contract nominally, even more so in real terms. There is a clear pattern in this data and one that is not surprising in an environment of rising interest rates. M1 demand deposits have fallen every month since Apr last year as cash seeks higher returns, partly via a shift into the non-M1 parts of M2 with the remainder into MMFs. M/m declines accelerated in Mar and Apr, no doubt reflecting the leakage from deposits due to the regional banking problems. This will negatively affect the funding situation for some lenders and make them less likely to advance loans. How much so remains unclear, but the latest Senior Loan Officer survey noted a further tightening in credit conditions in Q1 on top of that already seen in Q4 and the outlook is for further tightening in the rest of 2023. Those that depend on bank finance - notably small businesses - will potentially suffer the most and they account for over half of all employment, so there are reasons for the Fed to be nervous, despite what otherwise looks like fairly healthy balance sheets for most consumers and larger corporates. The commercial real estate sector could also be a flashpoint area going forward.

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 continues to show resilience on the surface with credit card borrowing in particular holding up well. Non-revolving credit, which tends to be related to autos and student loans, has slowed in recent months. In summary, this broader credit data as well as the bank lending data suggest that the consumer is not yet being compromised, although the resilience of credit card borrowing could also be a sign of stress-related borrowing for some households. This could become more punitive for consumers at some point via the weight of financing costs, especially if the labour market weakens and lenders become more stringent in advancing 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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