



Summary

- Inflation news at the consumer level has been mixed. Prospects for further weakening are good with wage growth and rents slowing and margins inflated, but progress has been sticky.
- Producer, import and commodity prices have continued to soften, but the Fed would like to see weakness in the core-service consumer price categories that are more affected by wages.
- A weaker labour market would be a constructive development in this regard, but wages are starting to slow anyway.
- Recent banking failures have shifted attention to a possible tightening in credit conditions.
- The Fed acknowledges this could be equivalent to an as yet unknown number of Fed rate hikes.
- Most measures of credit and credit standards had already started to slow/tighten ahead of the bank failures.
- The customers of the banks afflicted are more likely to be smaller businesses who are wholly dependent on 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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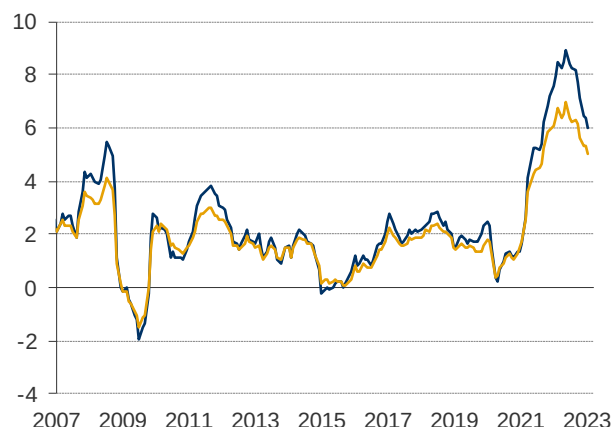
The Importance of Inflation

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

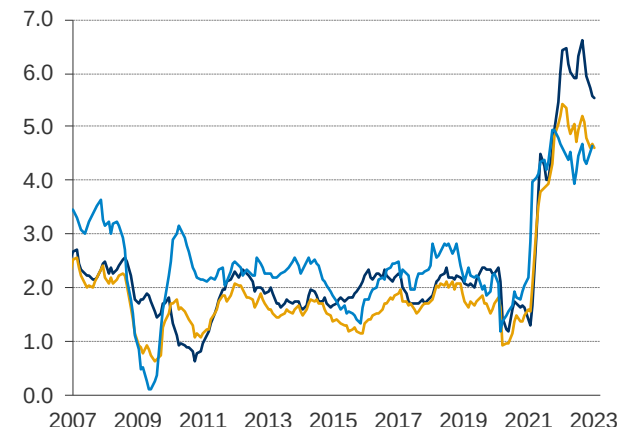
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Total Consumer Prices (% y/y)



— Total CPI
— Total PCE price index

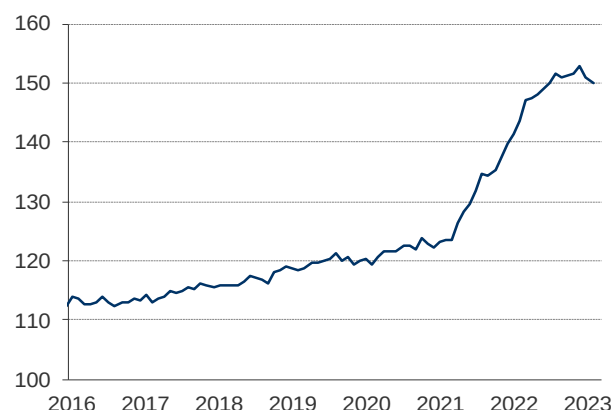
Core Consumer Prices (% y/y)



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

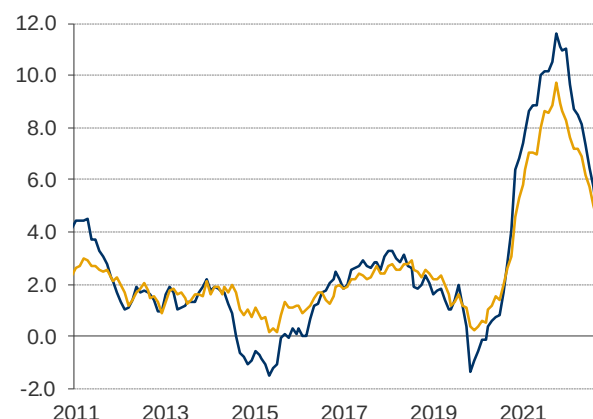
Current status: After the weak numbers reported for Nov and Dec, progress to a slower inflation path stalled in Jan and Feb. Part of this was the 'sticker price' effect of a new calendar year, which we alluded to in the last edition, where many prices undergo annual changes. This seemed to inflate a number of items in Jan while there were also upward revisions to prior CPI and PCE numbers. CPI revisions were related to seasonals, with an upward adjustment to the m/m pace of CPI in Nov and Dec being offset by downward revisions earlier in 2022. The core PCE revisions were more significant at +0.17% points for Q4. For CPI, the Feb data was also strong in the areas that are of most concern to the Fed – core services ex-housing – but by contrast the core PCE ex-housing was softer for Feb and also included a downward revision to Jan. While the latest core PCE will be of more comfort to the Fed, before that the run of stronger numbers and back revisions had seemingly undermined some of the rationale for the slower pace of Fed rate hikes in Dec and early Feb. For sure, the m/m run rate needs to slow on a more consistent basis before the Fed is satisfied. The good news is that rent inflation will continue to slow and the recent slowdown in wage growth may also feed softer service sector pricing at some point. Margins also look excessive and prone to correction (see PPI below).

Producer prices (index)



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

Producer prices (% y/y)



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

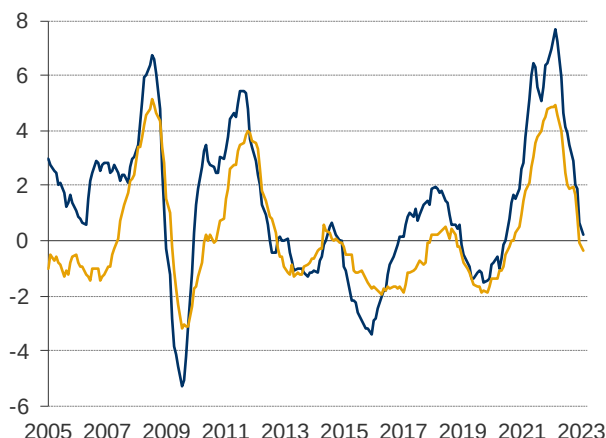
Current status: Core PPI has been mixed over the past two months. Initially strong for Jan but then a weak Feb plus a downward revision to initial Jan strength. The net result is that pressures are still in evidence to the downside, especially if previously inflated margins start to normalise, which will also bode well for consumer prices.

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 in or close to negative territory. This is despite the broad weakness in the USD since mid-Nov. Core industrial supplies & materials fell 5.1% y/y in Feb compared to 20% plus levels in Jan-Apr last year, while capital goods and consumer goods ex-autos were also softer at +2.5% and +0.3% y/y respectively. For now the external pressure on prices continues to soften but this may start to abate at some point if USD weakness persists.

CRB-TR/J Commodity Price Index



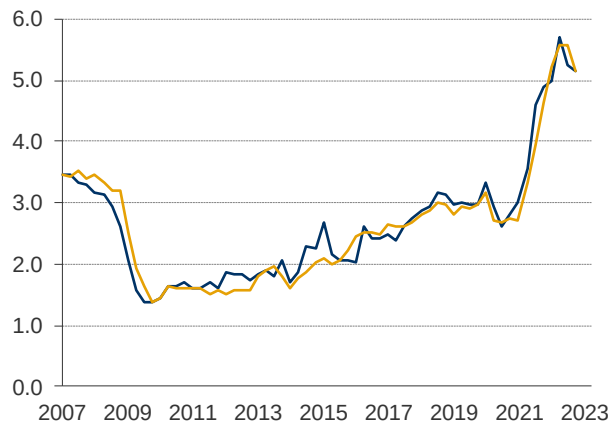
CRB-TR/J Commodity Prices (% y/y)



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 Jan. Prior gains related to optimism about Chinese reopening have been checked, with weakness concentrated in energy and metals. This is in sharp contrast to what was happening at the same time last year (especially regarding food and energy) when Russia invaded Ukraine in Feb, so the base affects are having a very negative effect on y/y rates.

Employment Cost Indices (% y/y)



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

Hourly Earnings (% y/y)

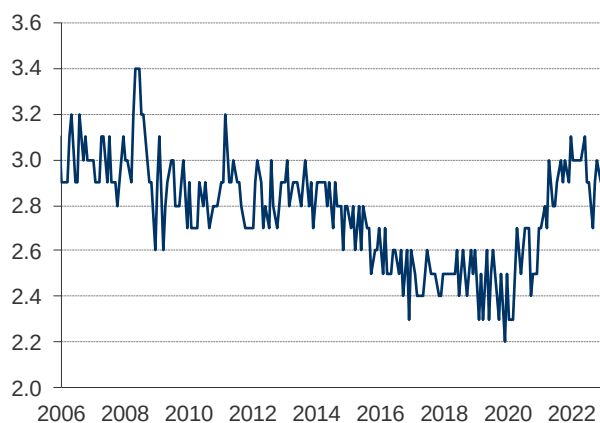


— **Hourly Earnings** (private sector)

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, with y/y rates on hourly earnings falling further and 3m/3m annualised rates the lowest since H121. As noted last time, the Q1 data will be interesting as this is the occasion when many wages go through annual reset, but thus far the hourly earnings data suggest that there are no upside surprises. Of course, hourly earnings are often subject to revision so we should wait for the Q1 ECI data on Apr 28 for a more definitive steer. As it stands it looks encouraging, especially as the labour market has not even started weakening yet.

Consumer Inflation Expectations (% y/y)



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

Market Inflation Expectations (% y/y)

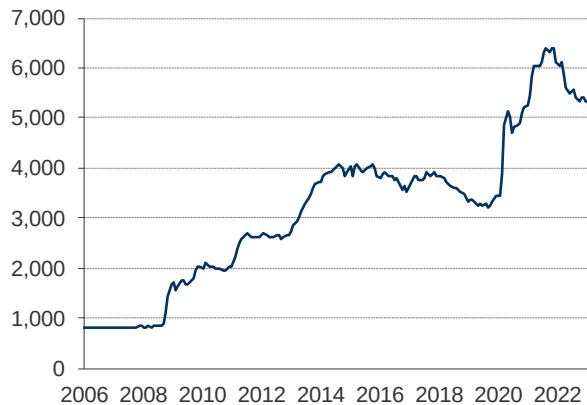


— **US 10yr Breakeven Inflation Rate** (10yr Treasury yield minus 10yr TIPS yield)

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.

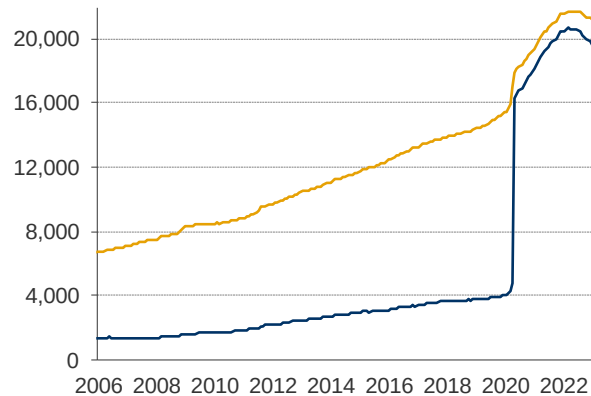
Current status: Market expectations have continued to settle at lower levels amidst expectations of slower growth, while 5-10 yr consumer expectations seem to be consolidating just below 3%. On the basis of these numbers, inflation expectations remain well anchored.

Monetary Base



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

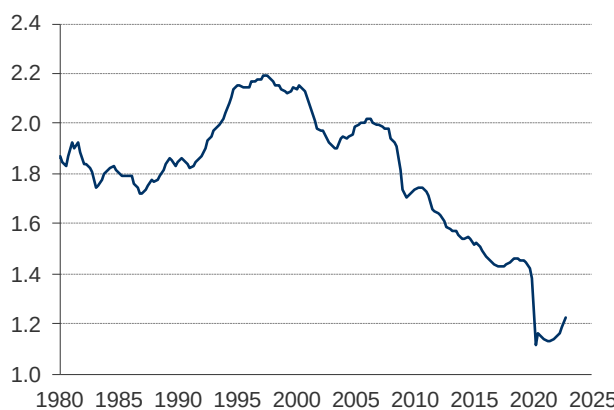
M1 & M2



— **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*

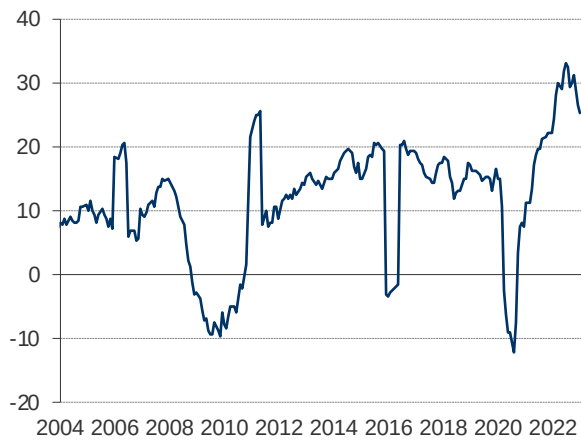
M1 = M0 + demand deposits + other checkable deposits (inc savings deposits previously in M2 – recently revised)

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.

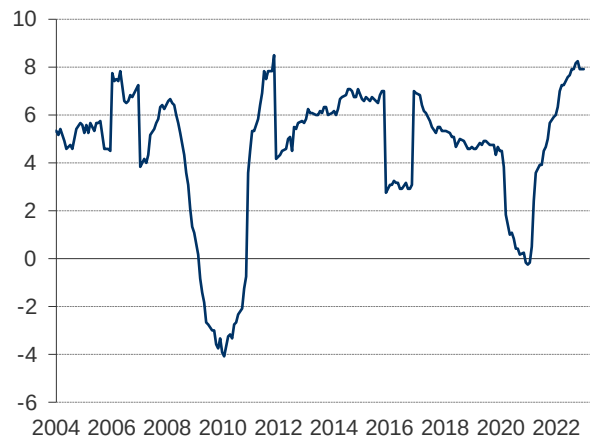
Current status: Monetary conditions will be firmly in the spotlight after the two bank failures in March. Banks will be under more pressure to retain deposits, meaning higher rates being paid or more expensive funding being used from the wholesale market. Either way the cost of funding will rise and spreads over prime will increase for business borrowers. The availability of credit may also fall if funding becomes too onerous and banks seek to minimise the risk of loans in a potential downturn. Business customers of the smaller banks tend to be small or medium sized and primarily dependent on bank finance so it raises much uncertainty about how growth will develop in such an environment. Fed Chair Powell acknowledged at the Mar FOMC meeting that the tightening in conditions would be equivalent to Fed tightening – how much Fed tightening is not yet clear. Watching and waiting is the situation from here. Going into this event there were already signs that bank lending was starting to fall for corporates and lending conditions were already tightening according to the Fed's Feb Senior Loan Officer Survey. Money aggregates are also continuing to decline as cash moves into higher yielding vehicles such as Money Market Funds (up \$690bn since Apr last year and \$368bn over the past month). A key focal point will be the next Senior Loan Officer Survey which will be due in early May.

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 slowed further over the past couple of months. Credit card borrowing seems to be holding up relatively well, with y/y rates above 15% and m/m growth also decent but off the highs of Q4. However, non-revolving credit has slowed sharply, with the cumulative 0.2% rise over the past two months being the slowest since 2011 if the immediate Covid months of Apr and May 2020 are excluded.

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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