



Summary

- Most inflation indicators remain elevated, but y/y rates are away from the highs and there are tentative signs that conditions could start to improve over coming months.
- Weaker used car prices and the prospect of pandemic-boosted margins falling back across several goods sectors as demand wanes and inventories improve are downside risks to PPI and CPI.
- However, the timing on these developments is subject to uncertainty and high wage growth will be a general supporting factor for prices near-term.
- Even here though wage growth has fallen back from the highs seen last year and hourly earnings over recent months tentatively suggest a softer trend, consistent with the pick-up in labour market participation from Q4 last year.
- Commodity price backdrop of food and energy strength is contributing to stagflation fears.
- Credit growth has been strengthening, although some of this may be 'distressed'. Monetary aggregates are weaker as higher Treasury cash balances drain cash from M1 deposits.

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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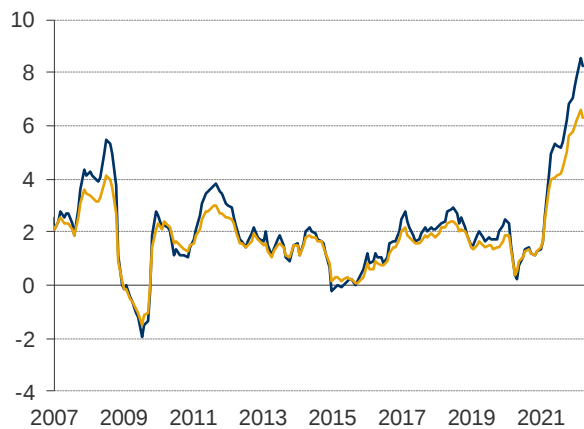
The Importance of Inflation

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

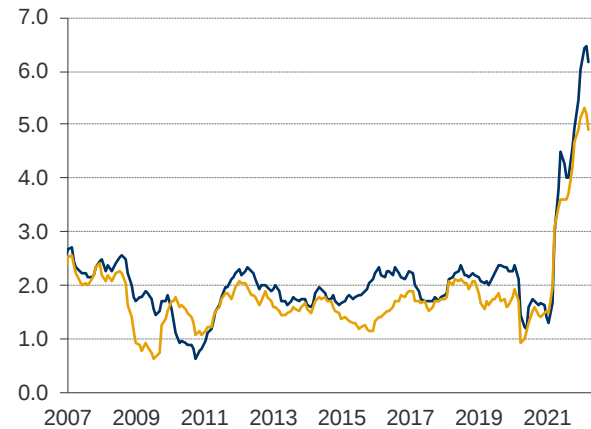
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Total Consumer Prices (% y/y)



— Total CPI
— Total PCE price index

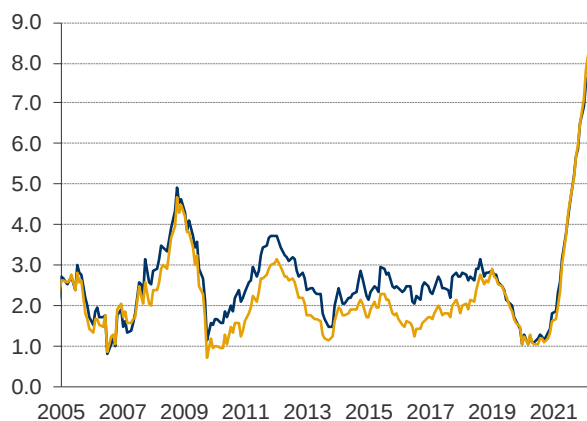
Core Consumer Prices (% y/y)



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

Current status: Consumer prices remain elevated but y/y rates have likely peaked and m/m changes in core PCE have settled at a lower +0.3% rate (Feb thru Apr). How quickly the y/y rate falls is unclear but there are better signs. Used cars are due large falls given soft auctions and a likely fall in highly inflated car dealer margins. Indeed, margins (as measured by PPI) are very high in several supply-affected goods sectors and should now fall given softer demand and strong inventory rebuilding. Furniture prices were strong in Apr, but clothing and household appliances were weak. Rents at around 5% y/y (40% weight equates to 2% contribution to core CPI y/y) should continue until weaker house price inflation exerts downward pressure, possibly as soon as Q4. Noise continues in re-opening categories - airfares +18.6% m/m in Apr added 0.13% to m/m core CPI. Note - PCE treats rents (lower 17% weight) and airfares (source) differently, so is softer than core CPI. Given the uncertainty, the Fed will respond to the data as it develops. Margin compression in goods, especially cars, presents downside risk, while the persistence of broader upside pressure due to wages provide upside risk. Wage rates are still higher but there are tentative signs that this is stalling - see page 4.

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)

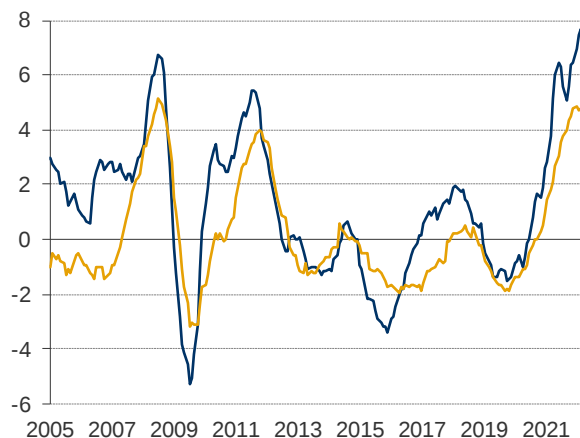
Current status: Core PPI y/y on goods is a high 10% but base effects and weakness in Chinese manufacturing PPI and import prices should see softer rates going forward. In services, trade services (margins of retailers and wholesalers) actually fell m/m in Apr. This is just one month of data but important (especially for CPI) if a genuine turn. So, price pressures remain high but there are signs of softer times going forward.

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: USD strength appears to be exerting some downward pressure as core y/y rates are now off the highs. Core industrial supplies & materials were +21.1% y/y with capital goods and consumer goods ex-autos at +3.8% and +2.1% respectively. The prices of imported Chinese goods were fairly steady at higher growth rates, but also off the highs – again USD strength probably helping. Overall, the external influence on prices remains firm but at the margin is softening slightly.

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 price strength has been driven further by energy and food, with falls in base metal prices (China related) an offsetting factor. These developments will remain a big concern for growth in general given the weight of food and energy in consumer baskets and the hit to real incomes that generates, which means less money to spend on other items. Food and energy prices will continue to be a key factor for stagflation expectations going forward.

Employment Cost Indices (% y/y)



— **Total Employment Cost** (private sector)
— **Wage & Salaries component** (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; 'hourly earnings' is monthly.

Current status: Wage growth remains high, especially when viewing y/y rates, although looking at sequential rises (hourly earnings and ECI) there seems to have been a peak around Q3 last year, just before labour participation began to improve, so if things continue as they currently are base effects should soon weigh on y/y rates. Latest ECI data (Q1) was fairly strong, although due primarily to a huge leap in non-wage costs (benefits). Wages (+1.3% q/q) were higher than a downward revised Q4 (+1.1%), but they were still off the +1.6% peak of Q3. In sum, it is a similar story to other price indicators. There are some encouraging signs, especially if ongoing re-opening and weakness in real incomes spurs extra labour market participation, which in turn would help to alleviate labour market shortages. However, there is a way to go before the Fed starts to view the labour market with more comfort.

Consumer Inflation Expectations (% y/y)



— **Univ. of Michigan survey of Consumer expectations for CPI over 1-y**

Market Inflation Expectations (% y/y)

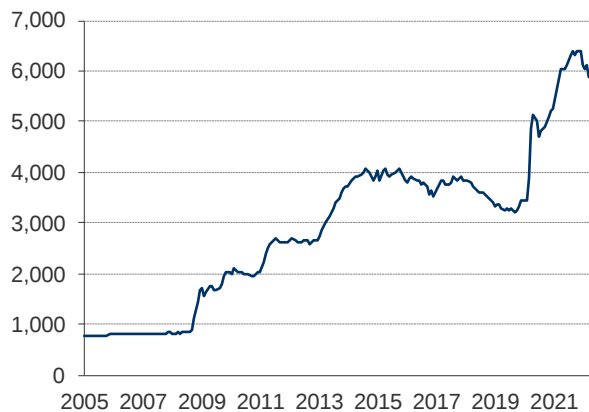


— **US 10yr Breakeven Inflation Rate** (10yr Treasury yield minus 10yr TIPS yield)

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.

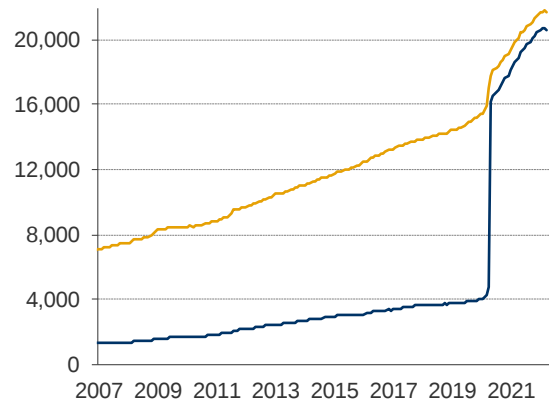
Current status: Market inflation expectations are off the highs as the reality of forthcoming Fed tightening kicks in. This is something the Fed will welcome. Consumer expectations remain elevated at the 1-yr level due to ongoing strength in gasoline prices, but expectations further out (5y-10y) have steadied in the 3% area.

Monetary Base



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

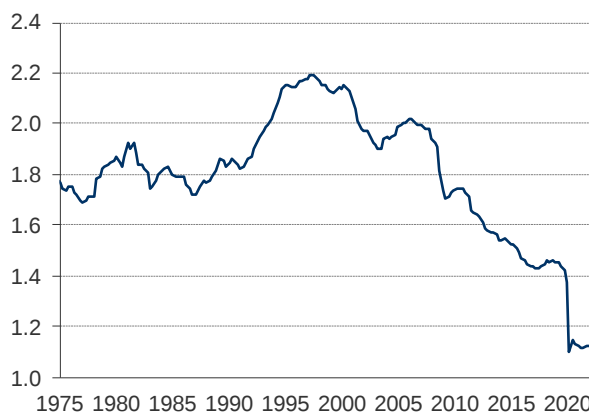
M1 & M2



— **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*

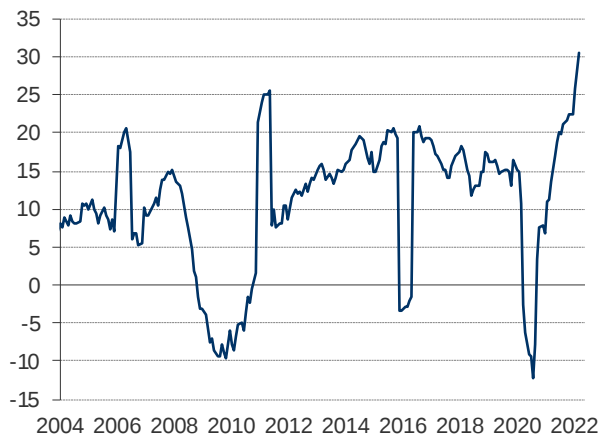
M1 = M0 + demand deposits + other checkable deposits (inc savings deposits previously in M2 – recently revised)

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.

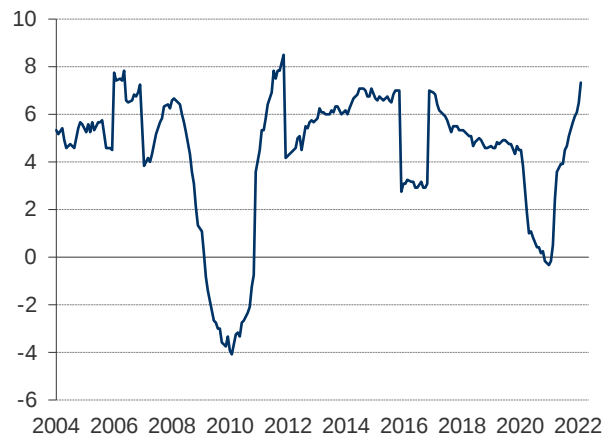
Current status: Growth in bank lending remained strong thru Mar-Apr with gains being registered across all the main categories – corporate, consumer and real estate. In fact there was a significant pick up in lending growth, with annualised rates of around 15% in Mar-Apr compared to around 7% over prior months. Strength in bank lending is typically associated with higher economic activity, although some of it could now be 'distressed' i.e. consumers maintaining spending power via credit in the face of falling real incomes (credit cards were very strong – see page 6 for more). In theory the same could apply to companies via re-stocking low inventory levels if prices paid are suddenly higher. The other oddity is that while fresh bank lending would have led to a surge in freshly created deposits (M1), M1 actually fell m/m in Apr, which is unusual in itself (only the ninth m/m fall in the past five years). This is explained by the large \$369bln rise in Treasury balances at the Fed – cash diverted from private sector deposits counted in M1. This should reverse over the next several months. Bank reserves at the Fed also fell sharply due to the rise in Treasury cash balances and the rise in usage of the reverse repo. Reserves will recover as Treasury balances fall, but this will be offset by Fed QT when it begins in June. The reverse repo balance (currently \$2trln) will provide a liquidity cushion against this.

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 was very strong through Feb-Mar, with particular strength seen in credit card borrowing (revolving credit). Total credit rose by a cumulative 2% over the two-month period and within that, revolving credit was up 4.3% and non-revolving up 1.3%. Data from banks suggest this credit card strength has continued through Apr and a sign that some consumers are resorting to credit cards to cover spending on some items. This might be related to higher spending on fuel, as higher fuel costs will translate to higher credit card bills in the near-term if that form of spending is used. From an overall perspective, consumers on aggregate remain in a healthy state, both in terms of liabilities and debt ratios and outright savings, which for all but the very low-income groups remain plentiful following the pandemic.

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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