



Summary

- The overriding message from all indicators is one of low inflation.
- Some CPI categories are off the lows – but soft rents could weigh on CPI going forward.
- Producer prices are conveying a deflationary impulse; core import prices have recovered slightly due to a weaker USD.
- The more reliable surveys suggest lower wage growth, in line with softer labour demand.
- Monetary growth remains strong, but the lending upturn has stalled, which needs monitoring. Velocity has collapsed.

About this document

US Inflation Watch presents 20 charts comprising 23 key inflation indicators grouped into five categories of economic data including consumer/producer price inflation, commodity prices, wage inflation, inflation expectations and broad monetary indicators. All data are sourced from official sources including the Bureau of Labor Statistics, the Federal Reserve, University of Michigan and Commodities Research Bureau. The objective of this report is to provide a comprehensive summary of inflation and future indicators of inflation according to the latest data out of the US.

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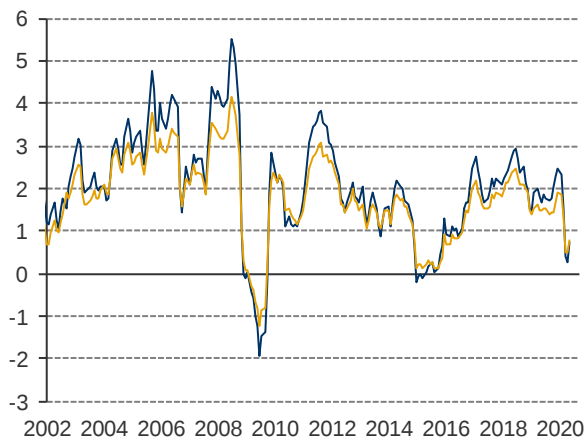
The Importance of Inflation

Inflation is the single most important indicator when measuring real wealth as it will determine how much wealth is worth in terms of what it can actually 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

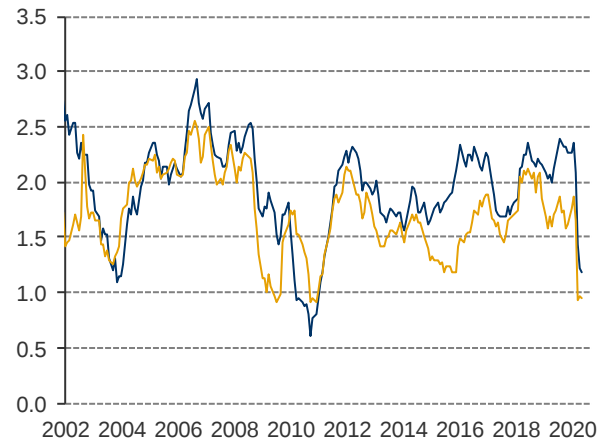
Altana Wealth is a specialist fund manager focused on delivering alpha where we have a competitive edge from niche strategies. As co-investors in all of our funds, our interests are aligned with those of our investors. Altana was set-up by Lee Robinson, co-founder of highly successful Trafalgar Asset 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)

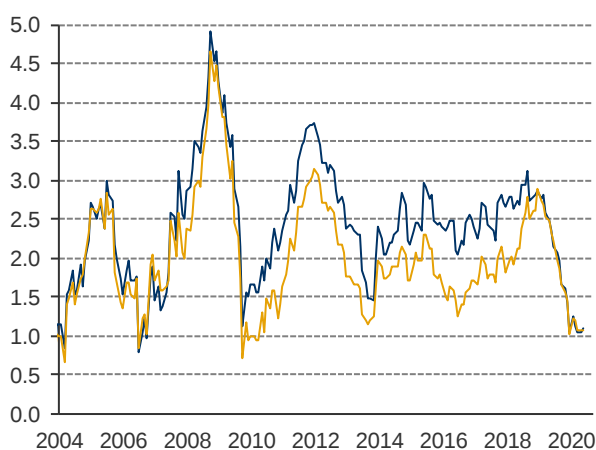


— Core CPI (ex-food and energy)
— Core PCE price index (ex-food and energy)

What is this data? Consumer Price Inflation is 'end-inflation' and what ultimately matters for consumers and central banks. There are two types shown here - the Consumer Price Index (CPI) and the PCE (personal consumption expenditure) deflator. The latter forms the basis of the US Federal Reserve's 2% inflation target.

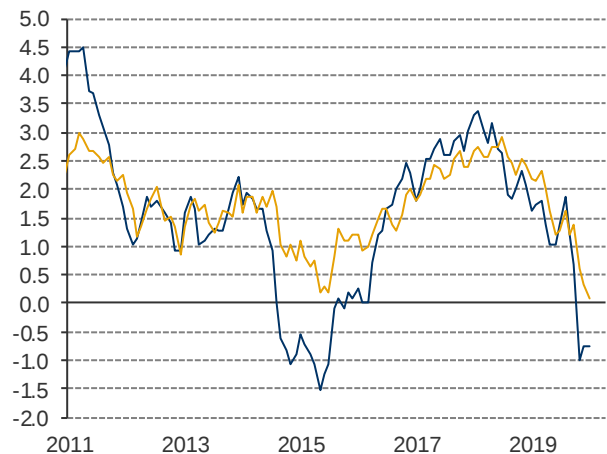
Current status? Jun CPI showed a rebound in many Covid affected categories such as airlines, hotels, clothing and car insurance, but the index was held back by a fairly muted showing in the highly weighted (40% of core) shelter category, with the income hit to the labour force affecting renter's ability to pay. CPI data will likely remain volatile going forward, but rents could continue to drag it lower unless the labour market and incomes improve more substantially. Note also that Fed-speak is suggesting there will be a tolerance of above target CPI as and when necessary.

Producer prices (% y/y)



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

Producer prices (% y/y)

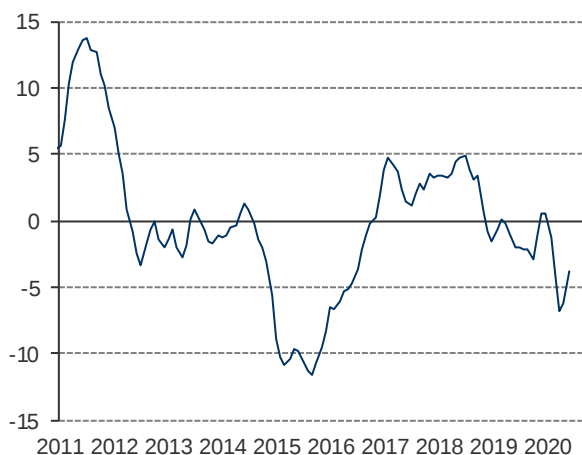


— PPI final demand
— Core PPI final demand (ex-food and energy)

What is this data? Producer Price Indices show pipeline price pressures that can influence future CPI & PCE. The new PPI final demand measure introduced in 2014 was broadened to include services, construction & government sectors as well as manufacturing goods. Measures relating to just goods are also shown in the left hand chart above.

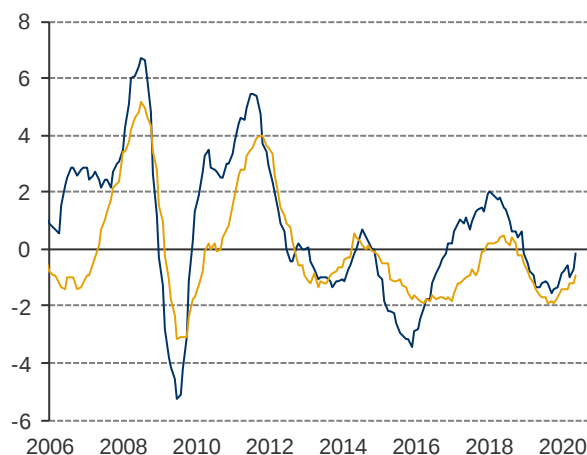
Current status? Core PPI (-0.3% m/m) was hit primarily by lower margins in machinery and vehicle wholesalers, which are in the trade services component. Ex-trade services core PPI was +0.3% m/m. Amidst all of the noise y/y rates in most categories remain depressed and a continuing deflationary impulse is the main take-away from the data.

Import Prices (% y/y)



— Import prices

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



— Core import prices (ex-fuels)

— Import prices of Chinese goods

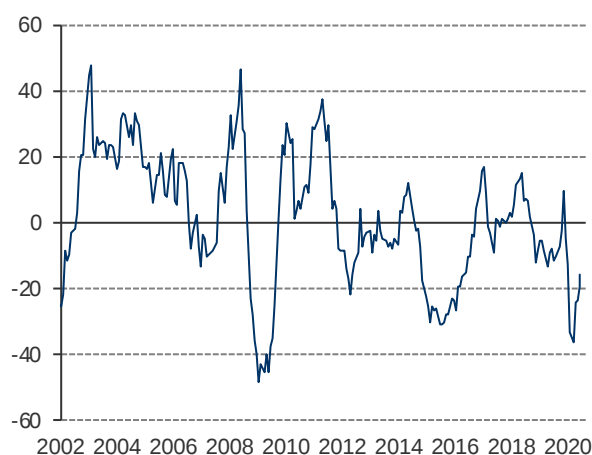
What is this data? Producer price indices refer to prices set by domestic producers only, so Import Prices are also monitored to gauge the price pressures entering the system from abroad. This includes total and core Import Prices and also the price of imports from China, as this is such a major origin of US imports.

Current status? June import prices bounced back due to higher energy prices and core prices also advanced with gains across most categories, although y/y rates in core remain in negative territory. The USD weakness experienced in June was a likely contributor to the pick-up in core prices as well as strength in a number of non-energy commodity markets.

CRB-TR/J Commodity Price Index



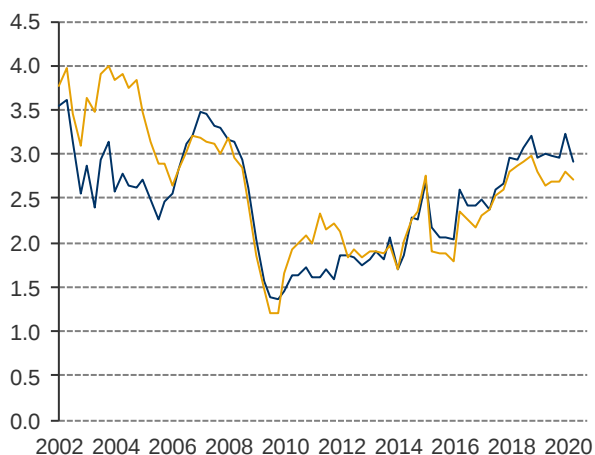
CRB-TR/J Commodity Prices (% y/y)



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

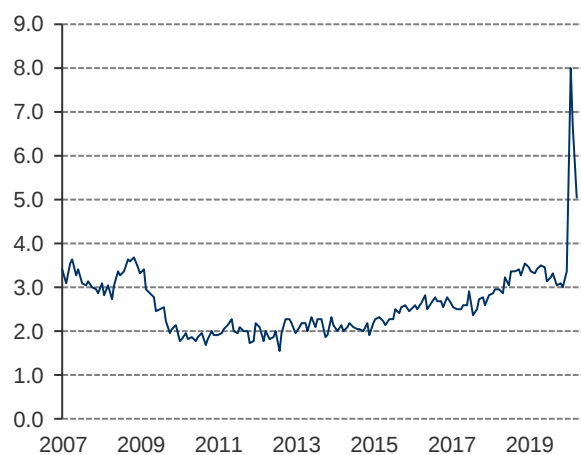
Current status? In Jun and Jul commodity prices continued to claw back some of the very sharp losses experienced since year-end, but y/y rates remain in negative territory. Much of the Jun/Jul improvement has been in non-energy categories. Overall, there is as yet no obvious inflationary pressure from this area.

Employment Cost Indices (% y/y)



— **Total Employment Cost** (private sector)
— **Wage & Salaries component** (private sector)

Hourly Earnings (% y/y)

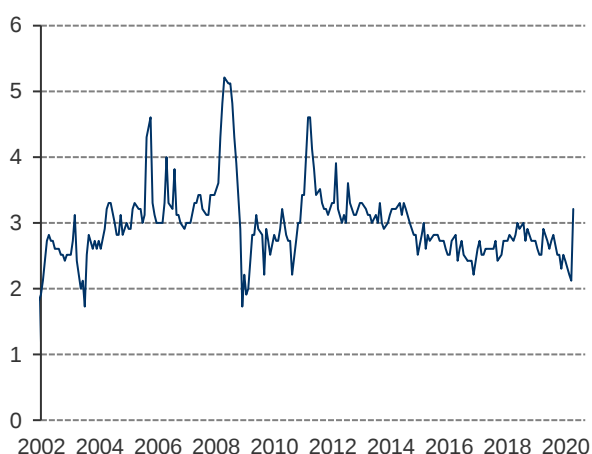


— **Hourly Earnings** (private sector)

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. These measures are significant for inflation from a cost perspective (cost pressures on corporates) and a demand perspective (the income-based spending power of consumers).

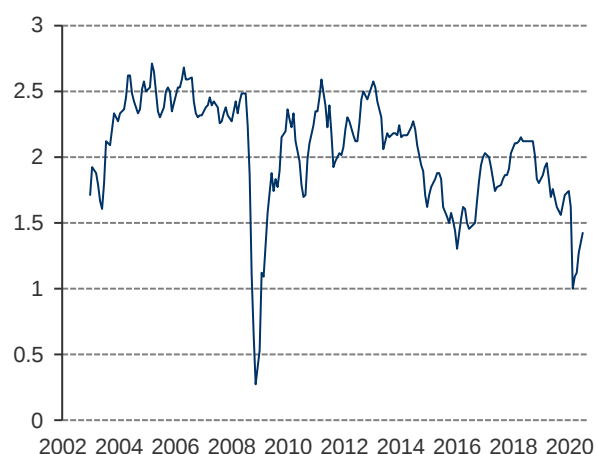
Current status? The sharp swings in employment and the effect this has on the composition of the hourly earnings group means the hourly earnings data has become an unreliable indicator of underlying wage growth. For example, sharp job losses are typically focused on low income groups (raising the average hourly wage of those who remain employed), while job rises have the reverse effect. The data does not adjust for this composition effect but the quarterly ECI does make such an adjustment and latest data released on Jul 31 shows a softer profile for wages and salaries, which is what one would expect given the reduction in labour demand. This should persist for some time.

Consumer Inflation Expectations (% y/y)



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

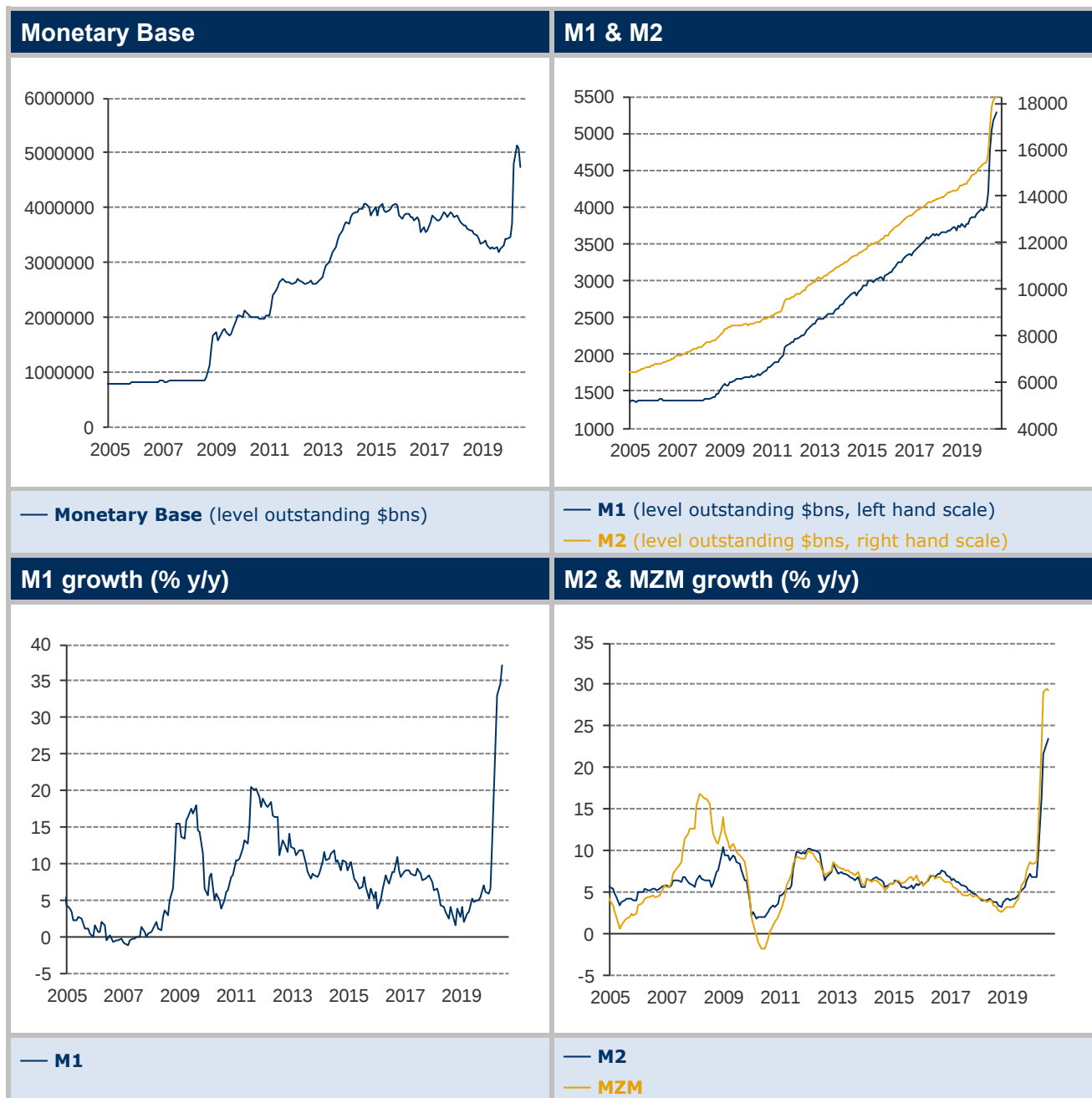
Market Inflation Expectations (% y/y)



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

What is this data? Inflation expectations held by the public (Michigan survey) & by the 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? Consumer expectations have rebounded due to higher fuel prices. Market expectations are also higher, which alongside falling nominal yields means real yields are at historic lows. The Fed will welcome this.



What is this data?

Monetary base = M0 (or notes and coins in circulation) + notes and 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*

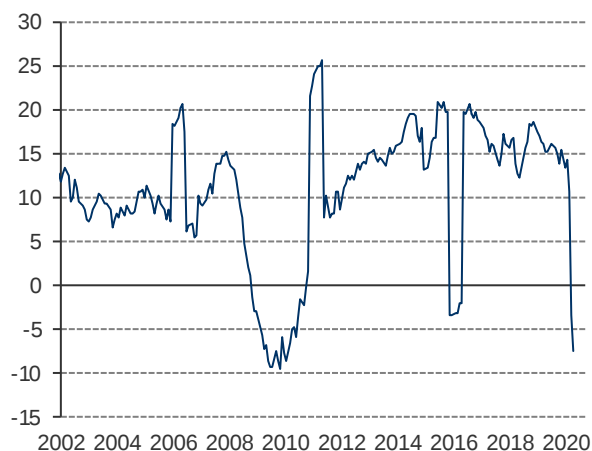
M1 = M0 + demand deposits and other checkable deposits. **Note:** bank reserves are not included in M1 – important when looking at how Fed QE affects M1 and M2 etc.

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

MZM (Money with Zero Maturity) = M2 + all money market funds less time deposits **Note:** MZM is a more recent construction which aims to identify all forms of 'liquid' money, so is a hybrid of M2 and M3.

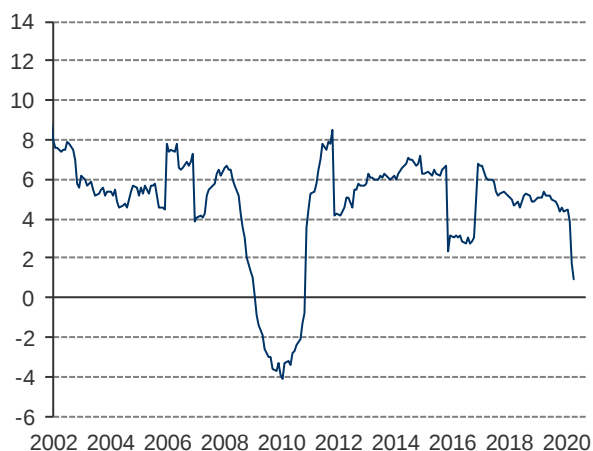
Current status? Monetary growth slowed slightly m/m compared to recent months, although y/y growth rates are still moving higher. Loan growth stalled in June after recent strong increases as lending to corporates fell back sharply, presumably with companies less in need of distressed lending i.e. overdrafts, credit facilities. Consumer lending was soft because of a fall in credit card lending, although the declines in the latter are less than that seen in recent months. Overall loan growth is one area that the Fed will be paying attention to amidst concerns over a possible tightening in lending standards. Slower Fed security purchases also likely weighed on the main monetary aggregates.

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 fell a further \$18.2bn in May after the huge \$70.2bn drop in Apr. The weakness is being primarily driven by revolving credit (credit cards), which fell a further \$24.3bn in May after the Apr decline of \$58.2bn. Preliminary bank data suggests that this rate of weakness slowed significantly during Jun and the series seems to have stabilised somewhat in Jul.

M2 Velocity



MZM Velocity



What is this data? The velocity of money (Velocity equals Nominal GDP divided by a given measure of Money (M1, M2 etc.)) shows how much the money stock is actually used for transactions in goods and services and is inversely related to the demand for 'money' as opposed to the demand to 'exchange this money' for goods and services i.e. spending – see Appendix for a more detailed explanation.

Current status? The sudden acceleration in monetary growth alongside the crushing blow to Q2 GDP has not surprisingly prompted a sharp fall in money velocity. This data will likely remain highly volatile, being the product of two series that will be volatile in their own right. As GDP should rebound going forward the low in velocity has likely been seen. From a policy perspective the focus will remain on ensuring an environment where liquidity is plentiful for those who need it, to facilitate a recovery in activity and the avoidance of any unnecessary destruction in productive capacity.

Appendix A – Monetary Indicators

The monetary backdrop is somewhat profound in terms of its potential influence on inflation and has over the years been 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 statement this is not controversial. If M (\$500) is used 5 times (V) then \$2500 will have been spent and will be equal to the value 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 that various schools of thought make about its components. For example, traditional Monetarists contend that V is fairly stable and predictable and Y is constrained by the capacity of the economy. So, under the Monetarist argument 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 also that Y can occasionally deviate substantially away from full capacity, so the relationship between M and P is less obvious. For example, in the current context of the US the Federal Reserve has made great efforts to increase the supply of money (M) over the past few years, but this has not led to proportionate increases in P.Y. This is likely 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, including that money which is created by 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 monetary data we follow in this document will seek to shed light on what is happening to both M and V in this identity.

What is Money?

Another issue is how we define 'money' or M. There are many definitions and what we will seek to do here is to explain the differences between them and *why they are significant*, especially in the current context where the US Federal Reserve is aggressively flooding the banks with cash.

The definitions of money include M0, MB (the Monetary Base), M1, M2, M3 and MZM (maturity zero money) and the basic difference between them is related to the narrowness of the definition of 'money' (see below). 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.

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. **Note:** bank reserves are not included in M1 – important when looking at how Fed QE affects M1 and M2 etc.

M2 = M1 + savings deposits + 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 is a more recent construction which aims to identify all forms of 'liquid' money, so is 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.

For example, let us use 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. This is because a loan, when advanced to the borrower, will be deposited in an account from which the borrower can spend it from i.e. an immediate rise in deposits (higher M1). Or, if the money is spent 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 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 referred to earlier) 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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