



Summary

- Most inflation measures remain subdued and this should continue for now, although commodity prices are strengthening and the focus may increasingly switch to what will happen when the economy re-opens.
- The more reliable wage indicators suggest slower wage growth.
- Monetary growth remains strong, but private sector lending remains weak with restrictions in economic activity suppressing loan demand.
- The Fed has ensured a backdrop of plentiful liquidity if needed. The challenge for them will be managing policy expectations when the economy re-opens.

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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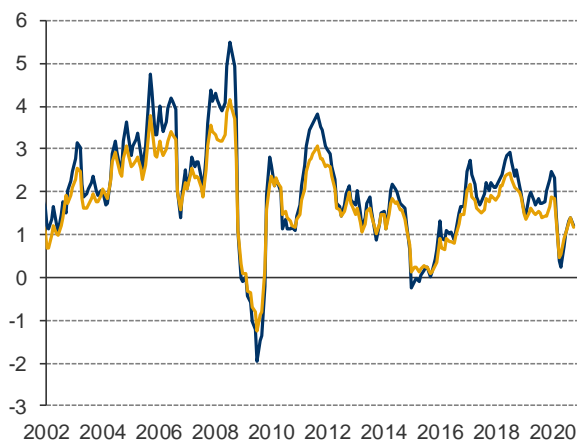
The Importance of Inflation

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 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

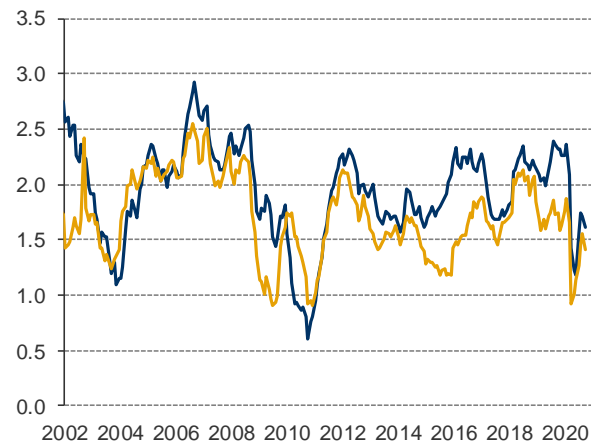
Altana Wealth is a specialist fund manager focused on delivering alpha where we have a competitive edge from niche strategies. As co-investors in all our funds, our interests are aligned with those of our investors. Altana was set-up by Lee Robinson, co-founder of highly successful Trafalgar Asset Managers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

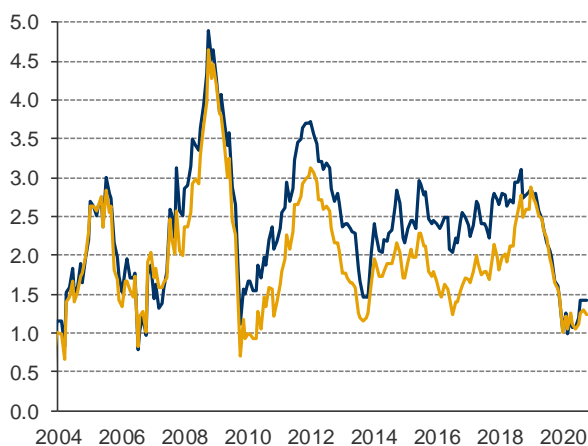


— Core CPI (ex-food and energy)
— Core PCE price index (ex-food and energy)

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.

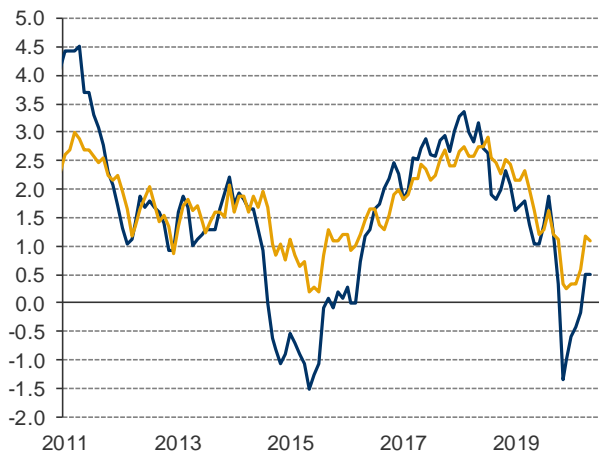
Current status? Core CPI is off earlier Covid-related lows but remains at subdued levels. However, large swings both ways in a variety of price components raises uncertainty about which way this goes in net terms in coming months. The bigger debate may soon be about what happens when the vaccine hits home, the service sector re-opens and some margin rebuilding is attempted. The Fed may explain it as temporary, but it could be a challenge for them.

Producer prices (% y/y)



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

Producer prices (% y/y)

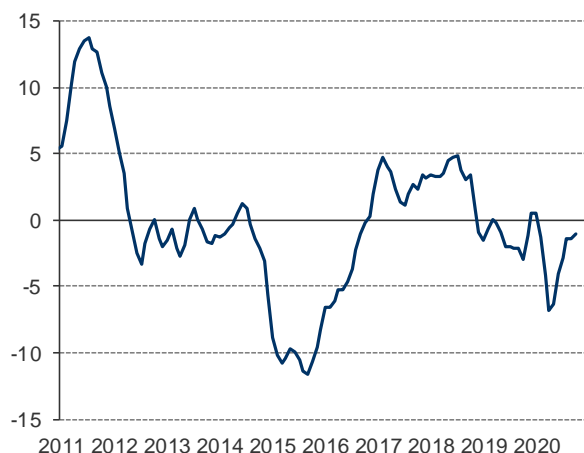


— PPI final demand
— Core PPI final demand (ex-food and energy)

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.

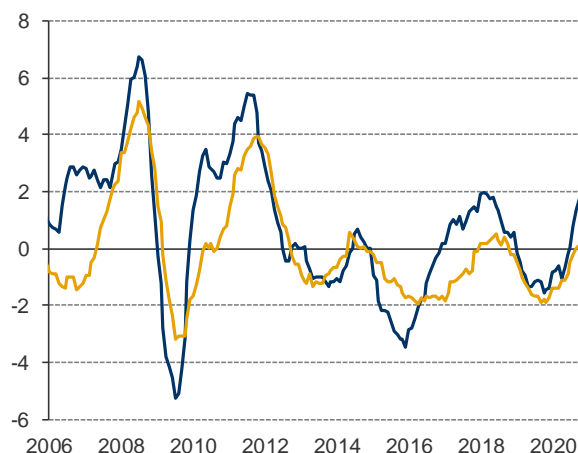
Current status? Core PPI remains subdued with Oct data supported by a steady rise in the services category but held back by flat goods prices (weak new cars/trucks). The latter should be temporary and a further recovery in overall core prices looks likely in the months ahead, but upside looks limited until activity becomes less restricted.

Import Prices (% y/y)



— Import prices

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



— Core import prices (ex-fuels)

— Import prices of Chinese goods

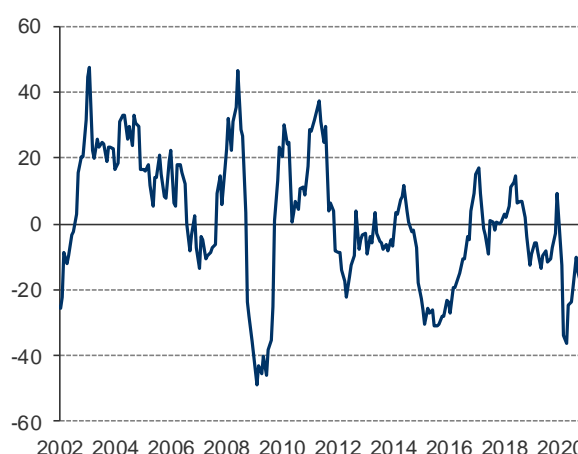
What is this data? Producer price indices refer to prices set by domestic producers only, so Import Prices are also monitored to gauge the price pressures entering the system from abroad. This includes total and core Import Prices and also the price of imports from China, as this is such a major origin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

Current status? Import prices continue to show strength at the core ex-fuels level, driven by gains in core industrial supplies & materials (individually +6.8% y/y). This no doubt reflects the recovery in a large number of commodity prices. Import prices from Chinese goods are also recovering modestly. This may be due to base effects related to last year's tariffs introduced in September. To offset the tariffs there may have been some cutting of 'raw' prices which is not being repeated this year. Note that the import price data only records 'raw' prices before the addition of any tariffs.

CRB-TR/J Commodity Price Index



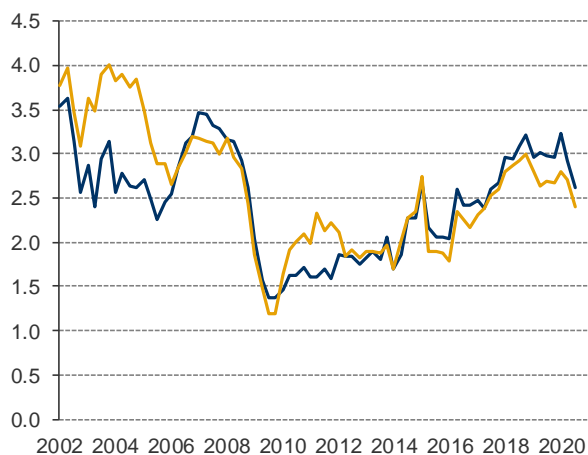
CRB-TR/J Commodity Prices (% y/y)



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

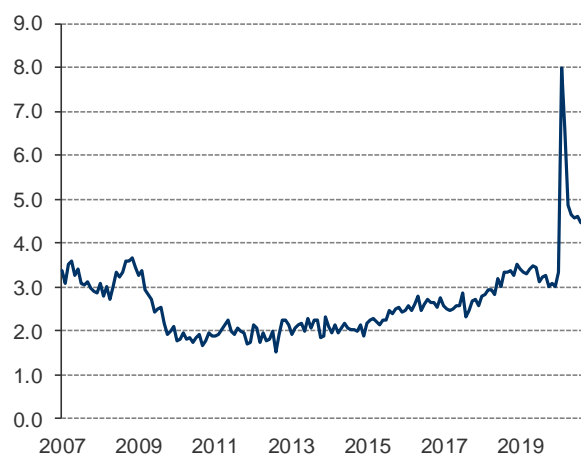
Current status? Commodity prices have continued to rise in recent months - oil bouncing back after October weakness and base metal prices strengthening further. This is not being seen as a major threat to inflation just yet, although as noted above (import prices) some impact is already creeping in and concerns would increase if consumer inflation measures rise in 2021. Note also, commodity price y/y rates will increase dramatically in Jan-Apr 2021 if the sequential falls experienced in Jan-Apr 2020 are not repeated (to +38% y/y, for example, if 'current levels' are still in place in Apr).

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).

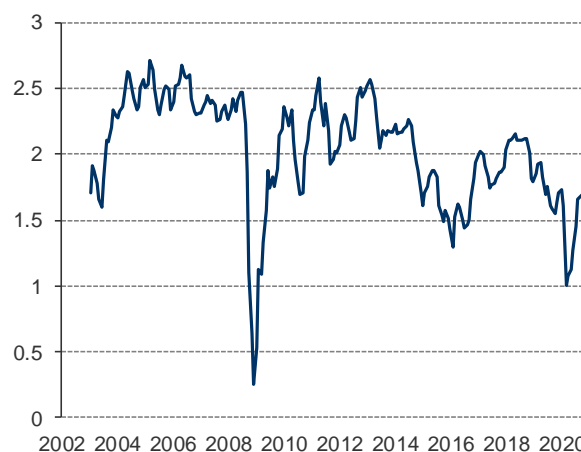
Current status? Hourly earnings remains an unreliable indicator of wage growth due to composition effects (sharp job losses during Covid focused on low income groups, raising the average hourly wage of those still employed). ECI data adjusts for these effects and Q3 was soft (see chart). The current q/q rate for the private sector wages component (+0.5% Q3, +0.4% Q2) is half of what it was pre-Covid, so wages do seem to be responding in the traditional manner. Of course, this could all change very quickly as and when the economy re-opens, so one to watch.

Consumer Inflation Expectations (% y/y)



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

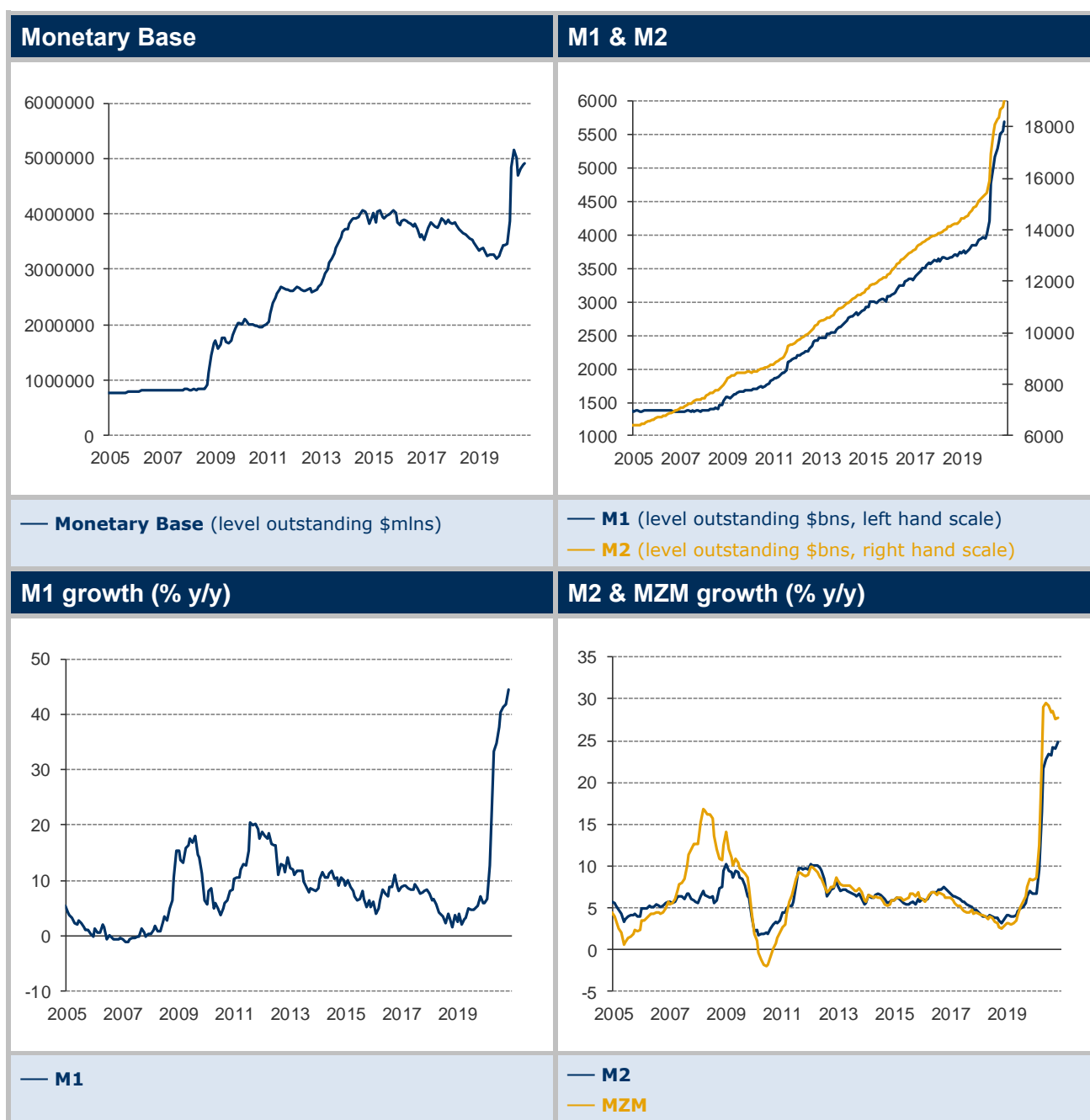
Market Inflation Expectations (% y/y)



— **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 remain volatile, while market expectations have stayed above +1.5% with real yields soft. The Fed will be keen to maintain this going forward.



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*

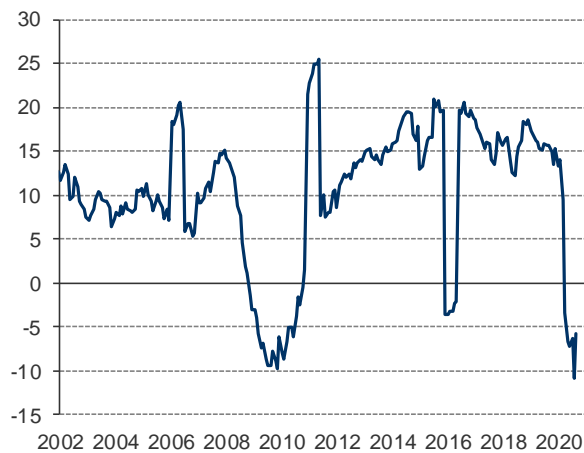
M1 = M0 + demand deposits and other checkable deposits. **Note:** bank reserves are not included in M1

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

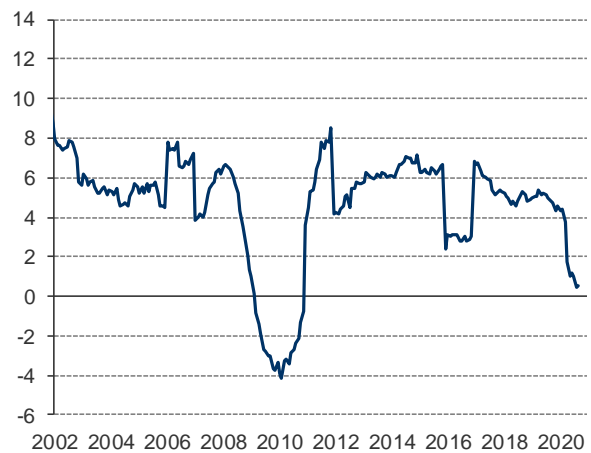
MZM (Money with Zero Maturity) = M2 + all money market funds less time deposits **Note:** MZM is a more recent construction which aims to identify all forms of 'liquid' money, so is a hybrid of M2 and M3.

Current status? Money growth is strong but private sector lending remains soft. Total bank credit (lending) is up 8% from end-2019, although almost two-thirds of that is related to increased bank holdings of Treasuries. Private sector credit is up just 4% and all of that is related to corporate sector lending. Even that has slumped since May, via a reduction in distressed facility use. Real estate and consumer lending both remain very subdued, although this is no surprise given the constraints on economic activity i.e. demand for credit low and bank loan officers also cautious of advancing cash in a weak economy. Liquidity is plentiful, but people are not currently keen or able to use it.

Consumer Credit



Consumer Credit (% y/y)



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

— 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 has been erratic over the past couple of months after the recovery seen in Jun-Jul. Total credit was down \$6.9bn in Aug and up \$16.2bn in Sep, with revolving credit (credit cards) weak in Aug (-\$9.7bn) before rebounding in Sep (+\$4.0bn). Preliminary bank data suggests that revolving credit remained subdued in Oct. Overall, credit remains in a delicate place, but largely driven by restrictions on economic activity in general.

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 acceleration in monetary growth alongside the big contraction in GDP during 2020 has equated to 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 e.g. the Q3 GDP rebound led to a modest rise in Q3 velocity. From a policy perspective the current focus will remain on ensuring an environment where liquidity is plentiful for those who need it. What happens to money and velocity when the economy recovers is currently seen as a question for another day.

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 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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