Inflation Series Part 1: Assessing inflation

Introduction

As the 10th anniversary of the Global Financial Crisis (GFC) approaches, there will be much re-evaluating of that episode and its aftermath, especially since pre-crisis prosperity (what investors used to consider ‘normal’) remains elusive. One area of interest will be the GFC’s ongoing impact on inflation[1]. Much lower inflation since the GFC than has been experienced in past recoveries is one of the more visible pieces of evidence that ‘normality’ has not yet returned. For example, in the 10 years prior to the credit crisis, US inflation averaged about 5.2% while the 10 year average today is still below 2%[2].

However, analysing inflation might not be as straightforward as just devising adjustments to forecasts. Because if structural changes have occurred as a result of the GFC, then this warrants a careful reassessment of the nature and causes of inflation. This means rethinking how we, as investors, look at inflation - what has become more significant since the crisis, and what has become less so; and more importantly, why? These are important questions that need to be addressed in order to maintain and improve investment processes.

The structure of the investigation

This note is the first of a 6 part series that will explore and assess inflation in the post-GFC environment that seems here to stay. We begin by examining what really causes inflation. Gaining a fundamental understanding of this will underpin further analysis of inflation, and will help guide investors to ask the right questions in order to design more effective investment strategies. Further instalments of our series will develop this theme in detail. We will also introduce a useful approach to understanding inflation. In doing this, some common misperceptions will be dispelled. We conclude our series by practically demonstrating how to assess inflation utilising the suggested framework to present our views on inflation trends in the near to medium term.

What causes inflation: a hint from history

The conventional definition of inflation is that it is *a sustained rise in the general price level of goods and services*[3]. A very widely accepted measure of inflation is the Consumer Price Index (CPI) which is compiled to replicate as closely as possible the basket of goods and services consumed by the average household, and therefore we will adopt it for our purposes. The focus will be on the US economy but the findings can apply to similarly developed economies.

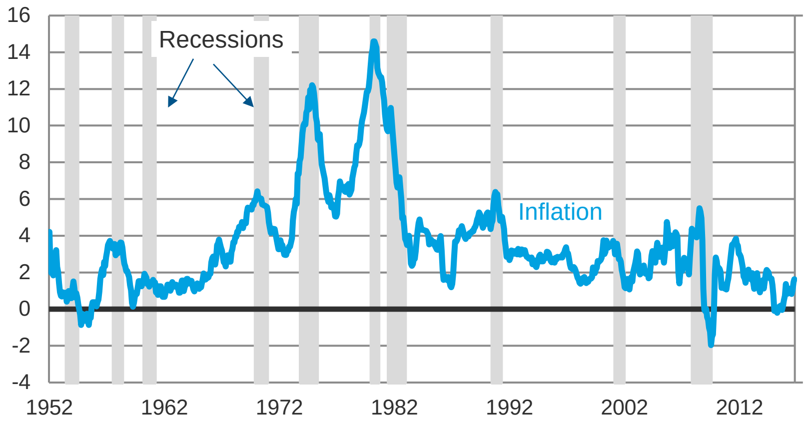
A visual evaluation of post war US inflation gives a hint of what fundamentally causes inflation. Notice in Chart 1a, the inflation trend always peaks around the start of a recession, when demand is high relative to supply. During a recession, demand falls relative to supply and inflation then declines towards the end of a recession, and continues falling even after growth recovers. This demonstrates that **demand for goods and services in excess of the capability to supply them is a natural cause of inflation.**

1 Notice we have made the presumption that investors care about inflation, and its associated trends and patterns.

2 Source: Macquarie and Thomson Reuters June 2017

3 This is the definition adopted by major central banks and policymakers whose decisions ultimately affect investors’ assets.

Chart 1a. Inflation tends to rise just before recessions



Source: Thomson Reuters, Federal Reserve June 2017

The fundamental economic rationale behind inflation

While developing a more rigorous analytical framework to definitively prove that inflation is caused by demand for goods and services in excess of supply is beyond the scope of this note, it intuitively makes sense. When overall demand rises significantly for whatever reason, if supply cannot keep up then general price levels will rise until an adjustment in the quantity demanded or supplied occurs. Fundamentally, the cause of inflation originates from the point that we can only consume what we produce. Expressed as an identity:

Expenditure = Output

The fundamental rationale is, that in any given period, actual expenditure always equals the actual output that is available[4]. If any of the identity's components misaligns, prices will adjust to re-equilibrate. This is because when imbalances between intended spending and intended production arise, millions of transactions occur that involve changes in sales margins, amendments in mark-ups and renegotiation of wage rates. Eventually this culminates in the actual sales and purchase of goods or services.

The adjustment process described above is reflected in the many relative *price changes* that take place in that period. Finally the inflation rate is calculated based on the average price changes. Therefore, inflation can be summarised in one simple phrase: "*Inflation is always and everywhere the result of* ***demand in excess of the capacity to supply that demand***".

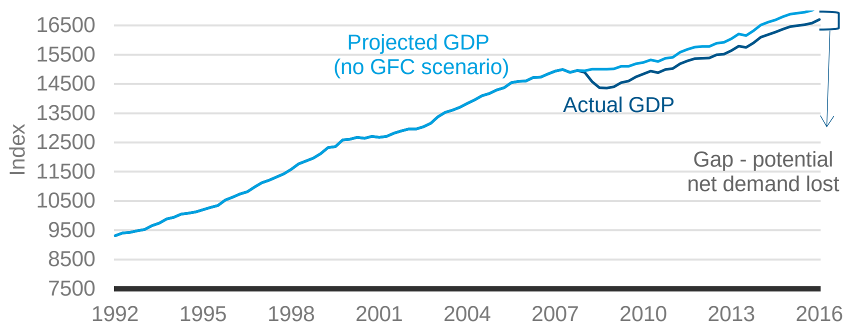
While the identity we present might seem blindingly obvious, investors are often misled when assessing inflation by ignoring this simple idea. If the impact of net demand is not clearly determined when using a theory to explain changes in inflation, the outcome will be ambiguous at best. Therefore the starting point for assessing inflation should be to ascertain the prevailing conditions of demand and supply; that is, the extent of excess demand in the economy.

Excess or net demand as an indicator of inflation: the evidence

Imagine if there had not been a GFC or if its effects were not so serious, perhaps causing only a slowing of growth. Then demand would have been much greater and there would have been less retrenching of resources. This idea forms the basis of one of the most popular measures of net demand; the output gap. In practice, this gap is calculated as the difference between the actual and the potential expenditure that could have been undertaken, with the latter assumed to measure the economy's capacity to produce. So if labour force growth continued at a rate reflecting demographic trends, and without the disruptive effects of the GFC, then GDP today would likely be much higher (see Chart 1b).

4 Even if no one buys your output, the identity holds because it is as if you bought from yourself. Note also that expenditure equals income i.e. someone's spending is another's income.

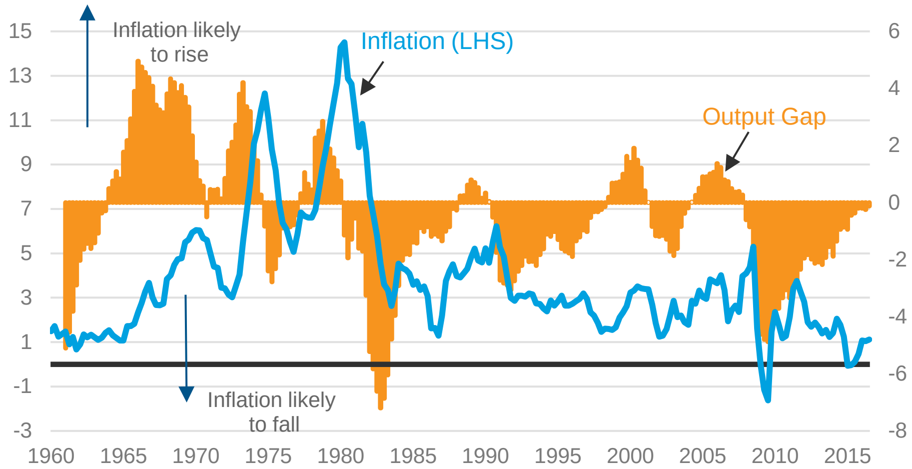
Chart 1b. The basis of net demand: the extent of 'lost' GDP



Source: Thomson Reuters, Federal Reserve and Macquarie estimates, December 2016

Chart 1c below displays a composite of official US output gap measures where estimates above zero indicate conditions of positive net demand and therefore indicate emerging inflation. Since the GFC, official estimates of the output gap have been negative for some time. It is currently hovering at levels that historically constrain inflationary pressures though the extent of restraint has dissipated of late.

Chart 1c. Output gap is holding back inflationary pressures



Source: Thomson Reuters, Federal Reserve and Macquarie estimates, June 2017

Conclusion

Inflation is fundamentally caused by demand greater than the capacity to supply that demand i.e. net or excess demand. Whichever theory is applied to justify the indicator used to signal inflation, careful reflection will nearly always reveal that the core fundamental logic underpinning that indicator will be net demand – if a factor causes inflation to rise, it is because it has unsettled the balance between demand and supply. In short, to see how inflation will behave, it is safe to ask: "*How is this affecting net demand*?"

It is therefore unsurprising that in the nearly 10 years since the GFC ended, inflation has remained low, by historical standards, and of course by standards that correspond to periods of prosperity; the 'normal' that markets crave. The low inflation we have witnessed is simply because of historically low net demand. How can this aid in the development of effective methods of assessing inflation, and thus guide the view on inflation going forward? We will examine this in more detail in the upcoming segments of this series on assessing inflation.

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January 2018

ID# 302946