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For three decades global inflation was on a downward trend. But in recent months inflation has risen sharply. The question which many investors are asking is whether this higher inflation rate is transitory or not?

This article summarises our views on the inflation outlook and considers how investors can manage their inflation risk. We focus on an analysis of asset-class real returns over different historical inflationary environments and examine the implications for investment portfolios.

Executive summary

We expect inflationary pressures to be transitory

Inflation remains one of the most difficult economic variables to forecast. Nonetheless, we believe that the currently high inflation rates can be explained by temporary effects. We do not believe the structural factors are in place to drive sustained price increases over multiple years.

Understand your inflation sensitivity

Most investors have some level of sensitivity to inflation. But the types of inflation risk that investors face can be different, so the solution for hedging inflation risk may differ per investor.

For investors with long-term inflation linked liabilities

Sensitivity to long-term inflation breakeven rates can be hedged using inflation-linked bonds or inflation swaps, matched to the desired sensitivity profile.

In practice, there are some potential issues with inflation hedging, such as basis risk, inflation caps and floors and affordability, which investors need to account for when setting their hedging strategy.

Asset class real returns

Commodities have historically performed well over shorter periods when inflation has risen sharply. Over the longer term, most asset classes have produced real returns in different inflationary environments. However, given the current low yield environment it is unlikely that nominal government bond returns will keep pace with inflation.

Inflation and correlations

Although a full study of the impact of asset classes correlations and inflation is beyond the scope of this paper, historically the diversification benefits of a simple equity and bond portfolio has been reduced at times of higher inflation. We recommend that a full asset-liability study is carried out to investigate this further.

Inflation outlook

Global inflation was on a downward trend for three decades. This has often been explained by central banks adopting explicit inflation targets, leading to more predictable inflation expectations, the globalization of supply chains, with more products imported from lower-wage labour markets, technological advancements and demographics, among others. In the past months inflation has been very topical. This time not because of low inflation, but because of a sharp rise of inflation. Headline inflation rose in Q4 2021 to 7% in the U.S., 5% in the Eurozone and 5.4% in the U.K. In the U.S. headline inflation has hit the highest level since 1982. The question that many economists and investors have, is whether this higher inflation rate is transitory or not.

We believe, the current high inflation rate can mainly be explained by temporary effects. The low inflation rate in 2020 and beginning of 2021 was a consequence of the lockdown measures and fall in energy prices. Energy prices have now risen sharply, which have been responsible for a large part of the increase in current inflation rates. In addition, supply chain disruptions as a consequence of disruptions due to the Covid-19 pandemic has had an effect on inflation rates. That said, especially in the US, inflationary pressures have broadened. Central banks monitor these developments closely, and have also shifted from a dovish stance to an approach focused on controlling inflation. The Fed is expected to end its asset purchase program in March 2022, after it will start raising its policy rates. The ECB takes a more cautious approach and is not expected to increase its policy rates earlier than the end of 2022.

We expect that the monetary tightening, which is currently priced in by the market, is sufficient to keep inflation around central bank target. Wage growth would need to increase structurally to lift inflation, as wages are typically a large input cost for any service or good. In the US there are indications of increased wage growth, while there is no clear trend towards a higher wage growth in Europe. Rather, many of the current price pressures are associated with energy prices and items that are directly tied to supply-chain bottlenecks. We expect that as these disruptions ease as supply chains normalise, inflationary pressures will begin to subside and expect inflation rates to move lower at the end of 2022. The drag from a less accommodative fiscal policy in the US and the drag from high energy prices on growth in Europe will also limit the chance of an overheating economy. However, there are certain factors that could cause inflation to remain elevated for an extended period.

Demand and supply pressures	The reopening of the economy has resulted in higher inflation. In general, demand has been more resilient than initially feared. Companies have therefore been overly cautious with their production plans. This is currently leading to supply chain disruptions as demand outstrips available supply. Also, pandemic related restrictions have resulted in further disruptions. These disruptions can result in temporary shortages and higher prices.
Loose monetary policies	Central banks have followed loose monetary policies. It takes time for the liquidity to find a way into the economy. The magnitude of the monetary support has been large and when the liquidity finds a way into the real economy, this could result in (asset price) inflation.
Wage inflation	Wage inflation due to tightness and friction on the labour market. Workers could demand higher wages because of scarcity of qualified workers in certain sectors. Also, the higher spot inflation could result in higher wage demands in itself.
Reversal of offshoring	Reversal of outsourcing to low wage countries as the coronavirus pandemic revealed the weaknesses of complex and international supply chains. Although, it is not clear that this “onshoring” of production will take place in practice.
Investment plans	Higher demand for labour and materials due to large-scale investment plans to improve infrastructure and boost renewable energy.

Inflation remains one of the economic variables, which is probably most difficult to forecast. This is partly because the level of inflation can be largely dictated by expectations about future inflation. If people expect inflation to increase,

they would demand higher wages thus resulting in a self-fulfilling prophecy. In the current circumstances, where there is a sudden jump in inflation, this could possibly get more entrenched when it is viewed as being more permanent. Future inflation expectations are priced in by the market through break-even inflation rates on bonds. Currently, break-even inflation rates suggest the current higher inflation rates will not sustain and the market expects inflation rates to be more in line with central banks policies for the coming years.

Types of inflation sensitivity

Most investors have some degree of inflation sensitivity. However, the type of inflation risk investors face can be different. We make a distinction between two types of inflation risk below:

Long-term breakeven inflation risk	This is the risk that changes in long-term inflation expectations increase the value of liabilities implicitly or explicitly linked to inflation. This predominately affects Defined Benefit pension schemes and life insurance companies.
Realised inflation risk	This is the risk that high levels of inflation erode investors capital in real terms over time.

In the sections below, we explore each risk in more detail.

Long-term breakeven inflation risk

Defined Benefit schemes have long-dated liabilities, sometimes these are explicitly linked to inflation. For those investors with long-dated inflation linked liabilities, unhedged breakeven inflation risk, along with interest rate risk, is a key risk. If this risk is left unhedged then changes in breakeven inflation rates can lead to high levels of volatility or large falls in the scheme's funding position.

If investors wish to explicitly hedge this risk, they need to purchase inflation linked instruments, such as inflation linked bonds or inflation swaps, which match the inflation duration (profile) of the liabilities. However, in practice there are some potential issues with this.

Basis risk	Where the inflation linkage of the assets does not match the inflation indexation of the liabilities. For example, in the Netherlands schemes typically use Dutch CPI for indexation of pensions, however, no liquid instruments with a direct link to Dutch inflation exist. Euro inflation linked bonds and Euro inflation swaps generally are linked to Eurozone HCIP. In the UK, there are liquid instruments linked to UK Retail Price Index (RPI) however, many investors have at least some exposure to liabilities linked to UK CPI inflation ¹ .
Limited price indexation	In practice, inflation linked liabilities may be linked to inflation within a set ranges, i.e. between 0% to 2.5%. As such, the modelled inflation sensitivity of these cash flows changes as the inflation rate changes. Therefore the scheme's underlying inflation sensitivity changes over time.
Affordability	In some cases, investors may not have available capital to hedge the desired level of inflation exposure whilst simultaneously investing to meet their other investment objectives.

Careful consideration should be given to these risks when adopting an inflation hedging program. We would advise that investors undertake a detailed periodic review of their inflation hedging strategy to ensure it remains fit for purpose.

¹ Retail Prices Index (RPI) and consumer prices index (CPI) are two measures of inflation used in the UK. The key difference between the two measures is in methodology used in their calculation. However, there are also differences in the underlying basket of goods each index uses. The differences have historically led to RPI being around 1% p.a. higher than CPI. In 2020, the government announced that it should stop using RPI inflation in 2030.

Realised inflation risk

The key risk here is that high or volatile levels of realised inflation leads to lower real returns. The effect on different investors is dependent on their time horizon. For example, for investors with short-term cash flows linked to inflation, high inflation can lead to a higher cash flow burden in the short term. This can be a particular problem in the current low yield environment for investors who have capital allocated to short-term money market instruments to meet these payments.

However, in the case of longer-term investors, such as younger members of a Defined Contribution pension scheme, looking to grow their assets in excess of inflation, short-term inflation shocks can in most cases be absorbed. The longer term inflation and macroeconomic environment remains important and will impact the expected real returns and correlations of different asset classes, which will in turn can impact the setting of strategic asset allocations. However, the key objective is to generate returns in excess of inflation over time rather than hedge against short-term fluctuations in inflation rates.

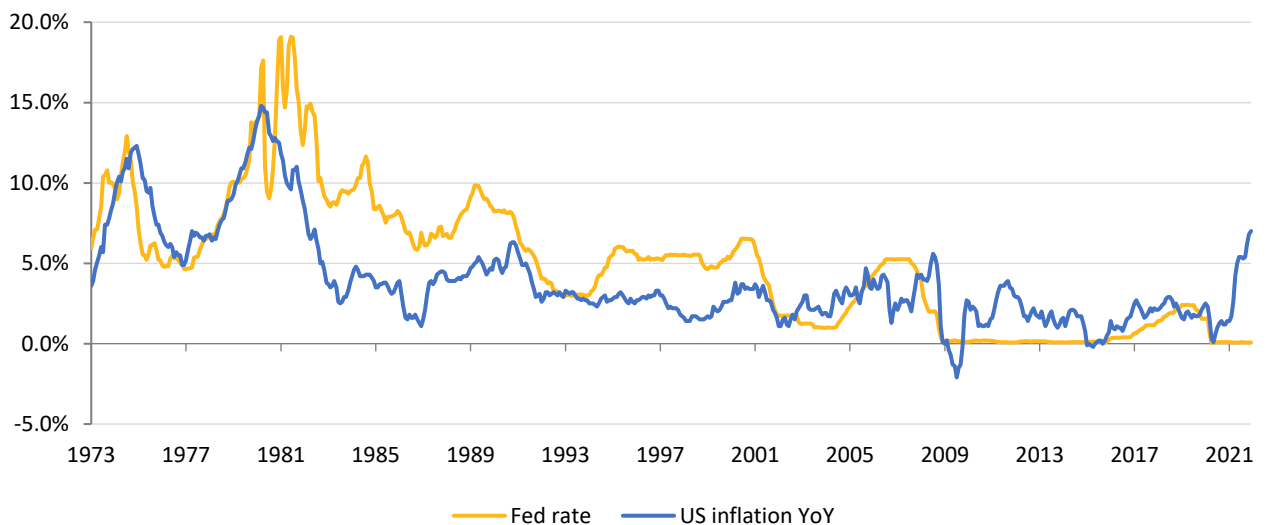
Therefore, in this section we focus on the historic real returns of asset classes. Firstly, over four shorter-term periods where inflation has increased. These periods are defined by an average year-on-year inflation rate of over 4% and an increase that is sustained for at least 18 months (highlighted in blue in Figure 1 below). And secondly, over long-term under different inflationary environments. In addition, we break the whole time period into three distinct time periods:

1973 to 1990:	Characterised by a high and volatile inflationary environment and macro-economic environment more generally. Real rates high for most of the period;
1990 to 2008:	More stable economic environment, with lower and more stable inflation. Real interest rates still positive.
2008 to present:	Post Great Financial Crisis, inflation still low and stable but sharp fall in rates in 2008 leads to negative real interest rates for most of the period.

Chart 1 below shows the year-on-year US CPI and Federal Fund rates from 1973 to 2021.

Chart 1: US inflation and the Federal Fund rate

Figure 1: US inflation and the Federal Fund rate



Source: Bloomberg. Aegon AM. Using monthly data from January 1973 to December 2021

Table 1 below shows the real returns of different asset classes over four shorter-term periods where inflation has increased. It shows that commodities have historically provided the strongest real returns in times of rising inflation. This is somewhat expected as the inflation shocks over the period analysed were generally driven by higher prices of raw materials; e.g. oil price shocks in the 1970s.

The real returns of other asset classes are more mixed. Listed property (US REITs) and Government bonds provided a positive real return over two of the sub-periods, US corporate bonds in one sub-period and global equities produced a negative real return in all sub-periods of rising inflation analysed. This suggests that global equities are particularly impacted by increasing inflation over a shorter time frame. This could be explained by the short-term effect of applying a higher discount rate to future earnings, as interest rate expectations rise. Over the longer term, companies are typically able to price through inflation and therefore earnings and valuations will recover.

Table 1: Real returns from asset-classes during short-term inflationary periods

Inflationary period	Average US inflation rate	Annualised real returns				
		Global equities	Commodities	US REITs	US government bonds	US credit
Jan 73 – Jan 75	10.6%	-25.6%	30.5%	-24.2%	-4.2%	-9.5%
Aug 76 – Oct 79	9.1%	-1.0%	8.0%	15.5%	-4.8%	-6.1%
Jul 87 – Mar 90	4.8%	-1.1%	19.6%	0.5%	3.6%	4.4%
Nov 06 – Aug 08	4.8%	-5.9%	21.2%	-11.5%	2.7%	-2.4%

Source: Bloomberg. Aegon Asset Management. The following market indices were used for the analysis: MSCI World Equity TR Index (global equities), S&P GSCI TR index (commodities), FTSE Nareit Equity REITs TR Index (US REITs), Bloomberg US Treasury TR Index (US government bonds), Bloomberg US Corporate TR index (US credit). Calculated using monthly returns in US dollar terms over time period from January 1973 to June 2021

Over the longer time periods analysed, with the exception of commodities from 2008 to 2021, all asset classes generated a positive real return. This suggests that we can expect most asset classes to generate positive real returns in different inflationary environments over the long term. However, as real interest rates are currently negative and nominal rates are very low, we have concerns around the ability of nominal government bond returns to keep pace with higher levels of inflation going forward.

Table 2: Long-term real returns from asset classes

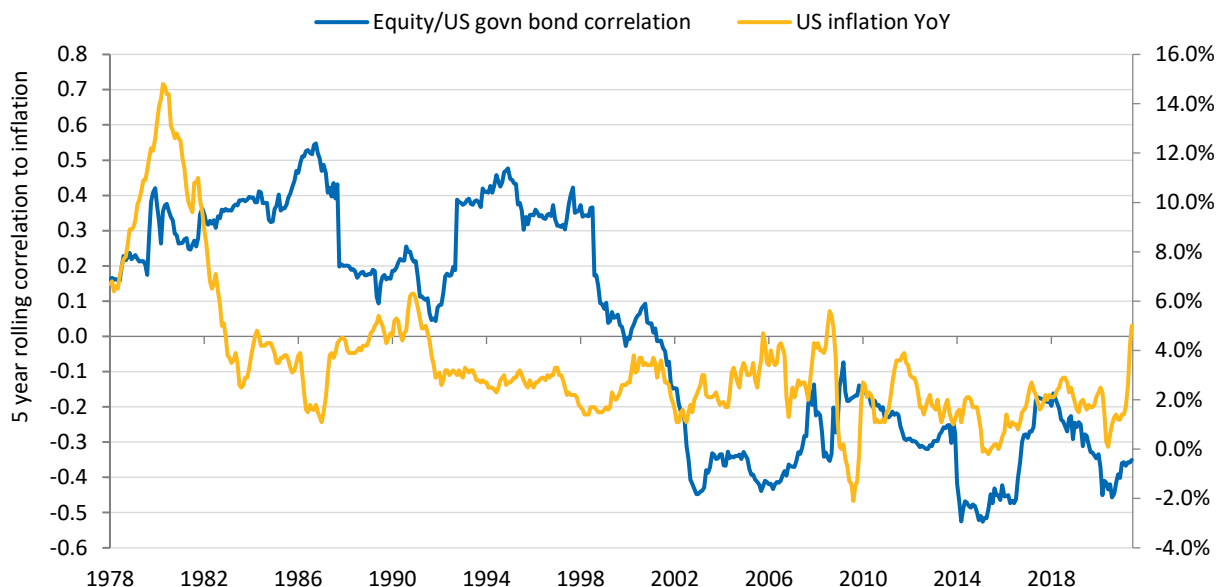
Inflationary period	Average US inflation rate	Annualised real returns				
		Global equities	Commodities	US REITs	US government bonds	US credit
Jan 73 – Mar 90	6.7%	4.2%	7.2%	6.8%	2.7%	2.5%
Mar 90 – Jun 09	3.1%	3.0%	1.8%	6.4%	4.9%	5.1%
Jun 09 – Jun 21	1.9%	10.2%	-6.0%	12.5%	1.2%	4.2%

Source: Bloomberg. Aegon AM. Calculated using monthly returns in US dollar terms over time period from January 1973 to June 2021.

Inflation and correlation

From a strategic asset allocation perspective, it is also important to look at how the asset classes interact with one another in the different inflationary environments. A full study of this is out of scope for this article but as the chart below shows, historically the diversification benefits of equities and government bonds have been lower in high inflation and interest rate environments.

Chart 2: Global equity and US government bond correlation



Source: Bloomberg. Aegon AM. Correlations calculated using monthly returns of global equities and US government bonds over rolling five-year time periods from January 1973 to June 2021.

The chart shows that US equities and government bonds exhibited a higher level of correlation, and therefore less diversification benefits, between 1973 to 1990 where the inflation environment was higher and more volatile. Around 2000 the correlation turned negative and stayed until present. This corresponds with a period in which central banks took drastic measures in times of economic headwinds (e.g. 2000-2001, 2008-2009, 2020) and where government bonds profited from falling interest rates. Therefore, investor portfolios made up predominately of equities and government bonds can look to diversify their asset allocation to mitigate the effect of higher and more volatile inflation, in particular looking at so-called real assets such as commodities, property and infrastructure which are expected to have some relationship to changes in inflation. We recommend conducting a full ALM study to understand how a portfolio is affected by inflation risk. In particular, focusing on those simulations with the highest inflation rates.

Conclusion

Although we believe the current inflationary pressures are transitory in nature, inflation can be a notoriously hard economic variable to predict. For investors worried about inflation risk, the first step is to understand how inflation affects your portfolio and your investment time horizon.

For investors with long-dated inflation-linked liabilities, inflation-linked bonds and/or inflation swaps can be used to explicitly hedge the risk. For investors, worried about higher rates of inflation over the short-term, our analysis shows that historically commodities have tended to perform well in times of inflation spikes but that the performance of most other asset classes is mixed at best and for equities has been poor. Therefore, it is important to carefully consider what is driving the increase in inflation over any period.

Over the longer term, most asset classes have historically generated positive real returns in different long term inflationary environments. However, given the current levels of nominal and real yields, we would have concerns over the ability of nominal government bonds to produce positive real returns going forward, at least in the short to medium term. Historically, the diversification benefits of equities and government bonds are eroded in times of higher inflation and interest rates, which we believe is a further argument for a portfolio that is well diversified across asset classes. Longer term investors can utilise ALM studies to fully understand their inflation risks, in particular focussing on those simulations with the highest rates of inflation over the longer term.

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