Inflation is back and so is momentum investing

May 2022

Dr. Michael Stamos, CFA
Head of Global R&D, Multi Asset

Nicolas Hengstebeck, MBA
Global Head of Product Specialists, Multi Asset

After decades of slow price growth across developed markets, inflation has now reached its highest levels in more than 40 years. Investors worry about how to preserve their wealth and generate real returns in this inflationary environment. One proven option is the exploitation of momentum investing across asset classes.

Key takeaways

- We have recently begun experiencing inflation pressures not seen for 40 years. Unsurprisingly, in the past couple of months real assets such as commodities have done well, but so have Cross-Asset Momentum-type strategies. On the other hand, equities – and not just bonds – produced some losses.
- Our long-term analysis, going back to 1964, shows that the above matches with what has happened in past episodes of high inflation.
- Our interpretation of why momentum is doing well is that high inflation is in fact akin to momentum in consumer prices. This consumer price *momentum* leads to persistent reactions in the economy, central bank actions and private investment decisions, that in turn drive market-price trends.

Even before the invasion of Ukraine by Russian armed forces in February 2022, inflation was a topic of public concern and discussion. Indeed, inflationary pressures started building in the summer of 2021, when global supply chains were interrupted because of measures triggered by the global pandemic. At the onset of rising inflation, authorities were convinced of its transitory nature, and expected a fairly quick return to target levels of about 2%. However, inflation today is much higher than expected, and is forecasted to remain above the levels of recent decades for the foreseeable future.

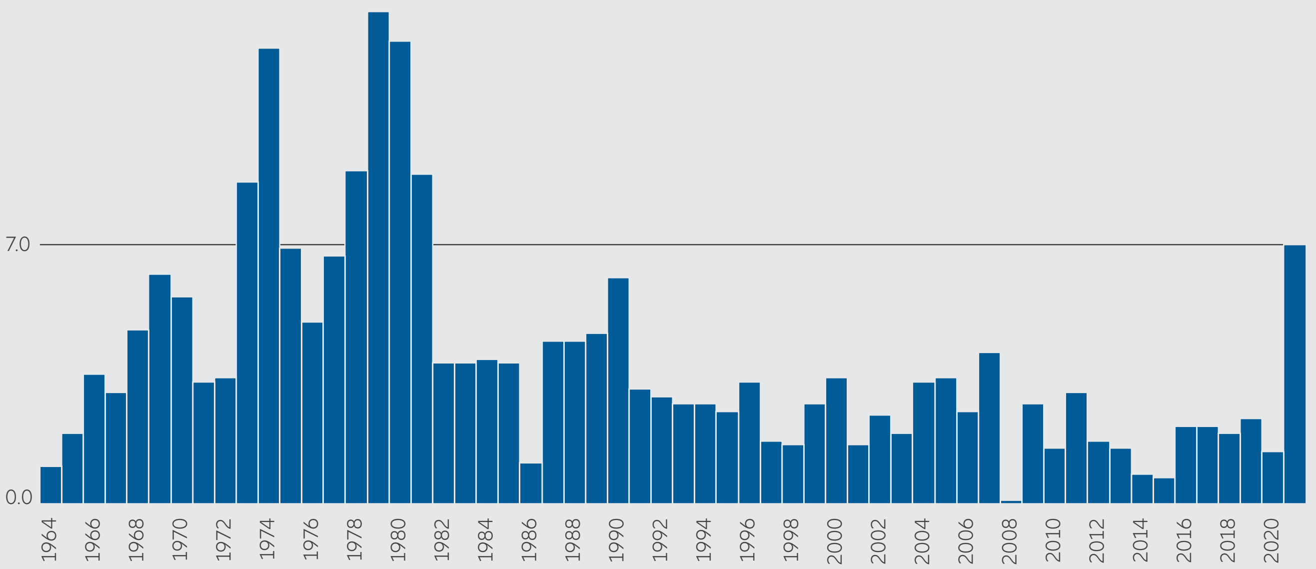
Given the challenges investors face to achieve real returns with reasonable risk appetites in an inflationary environment, we conducted an analysis of which factors and strategies are likely to enable investors to preserve their wealth, and generate satisfactory real returns, during such periods. Our analysis shows that a sophisticated momentum strategy across asset classes and geographies is a good approach to consider, particularly if one expects inflationary pressures to persist over the medium term.

Allianz Global Investors

Inflation Continues to Surprise on the Upside

After decades of low inflation across developed markets, recent inflationary pressures have reached levels unheard of for generations. While these observations are worrying, and pose challenges for investors looking for real returns, **it is important to differentiate within the analysis between headline inflation and core inflation rates.** Core inflation rates usually exclude more volatile components of the inflation basket, such as food and energy prices, which in the context of the Russian invasion of Ukraine are the main drivers of current headline inflation rates. However, even looking at only core inflation rates, we currently observe these at over 6% in the US, and above 3% in the euro area. Current forecasts by central banks expect inflation to stay elevated at least during 2022, and anticipate – compared to what we have become used to in recent years and decades – a somewhat higher inflationary environment in the medium term. Conscious of the fact that previous inflation forecasts have grossly underestimated the current inflationary environment, investors should think about strategies to preserve wealth, and generate real returns. **One proven option is the exploitation of momentum investing across asset classes.**

Chart 1: Recent acceleration of inflation in the USA (Annual US Consumer Price Index Growth)



Source: Allianz Global Investors, Bloomberg using US Consumer Price Index Urban Consumers seasonally adjusted index as of May 2nd, 2022.

Momentum-driven Investing with Strong Tailwinds

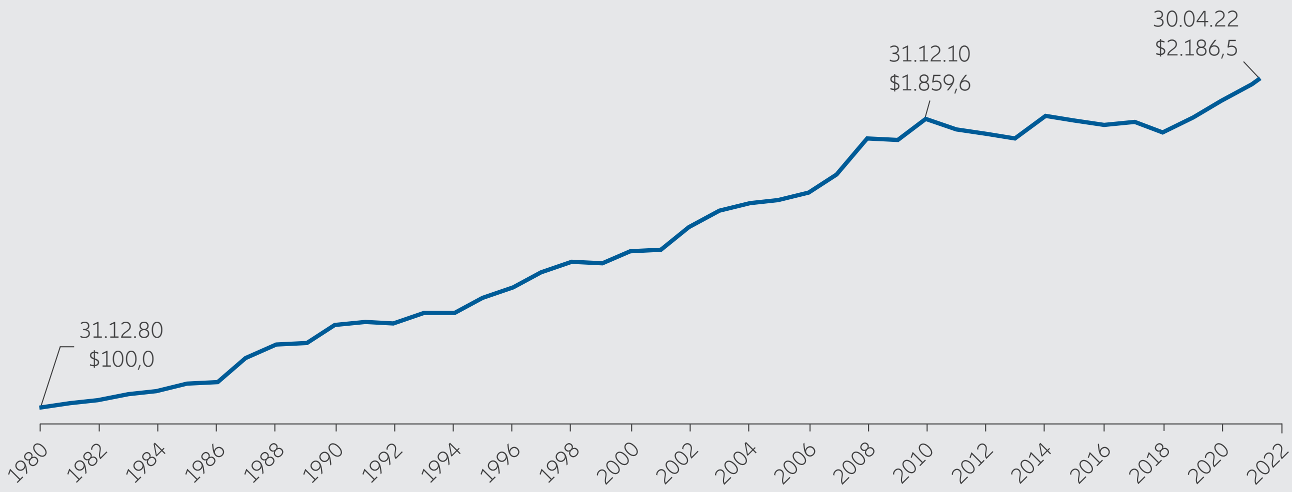
Momentum or trend investing[1] is based on a simple idea: the performance of an asset will continue *in the same direction*. An asset's price that has increased will continue to increase. An asset's price that has decreased will continue to decrease. Momentum, defined as the performance of an individual stock over the past 12 months, was first studied in detail for individual equity market securities. Carhart (1997)[2] expanded Fama-French's pioneering Three-Factor Model (market, size, value) (1992)[3] to include momentum. These and other researchers identified positive- and negative-trend continuation that, on average, lasts around three to 12 months. Since then, this definition of momentum has been adopted as the standard, with one variation – the 12 months excludes the most recent month, in order to appropriately reflect short-term reversal effects, or delayed implementation of the momentum signal in the portfolio.

Momentum investing can yield considerable returns by exploiting trend-following patterns in capital markets.

Using this definition of momentum, Asness et al. (2013)[4] also examined stock market indices, bond market indices, commodities and currencies, and found evidence of trend continuation patterns. Our analysis of historic data supports the claim that momentum investing can yield considerable returns, by exploiting trend-following patterns in capital markets. Only periods where we see strong trend-reversal patterns pose challenges to momentum investing. Nevertheless, on a medium-term and particularly on a long-term horizon, momentum investing usually generates strong performance patterns.

Today it is interesting to observe that trend-following strategies did very well in the recent period. For instance this can be seen in the performance shown in Chart 2. The depicted BarclayHedge CTA Index tracks the performance of so-called CTA funds since 1981 and recently made new all-time highs. CTA funds are a category of funds that are able to go long and short different asset classes. We believe what helped them was the ability to capture the down-trend in bond markets and the up-trend of commodities markets.

Chart 2: Momentum Investing with strong track record recently after a flat stretch: Performance of CTAs over time



Source: Allianz Global Investors, Bloomberg using BarclayHedge CTA Index as at April 30th.

Long-Term Analysis: Asset Class and Factor Returns in Inflationary Periods

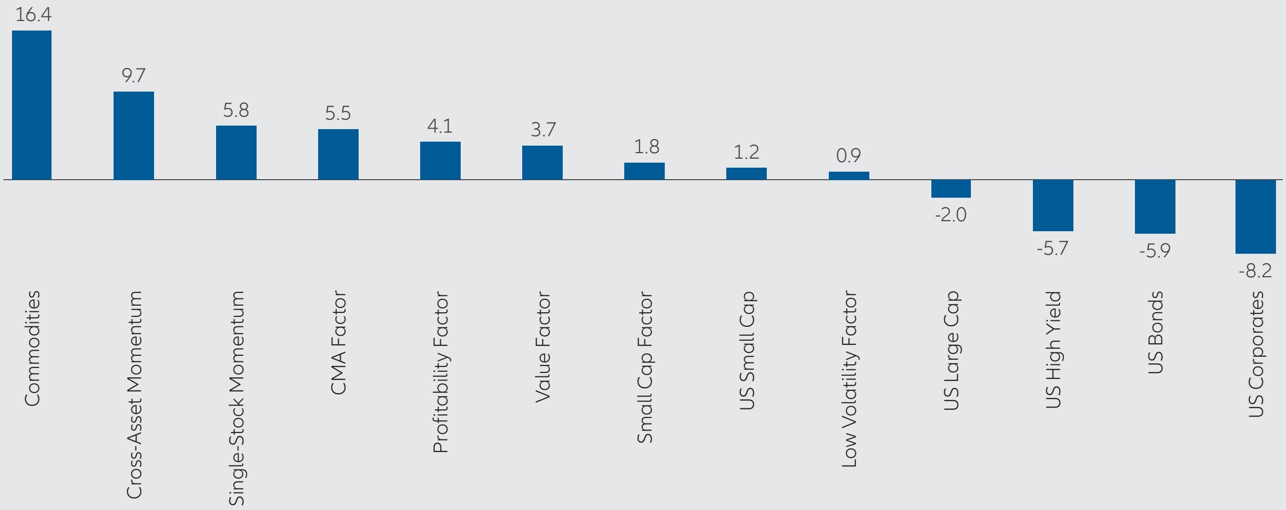
Based on our observations that inflation rates in developed markets are likely to stay elevated for the foreseeable future, we asked ourselves how asset classes and factor strategies have performed during previous periods of high inflation. In our analysis, we reviewed the past 58 years of available data in the US. We began with 1964 due to the availability of asset class and factor returns data since then, and because it seems reasonable to omit the post-war period. For asset classes, we use Ibbotson database returns, except for commodities where we use the Bloomberg Commodity Total Return Index; for equity risk premia we use the data from Prof. Ken French's website (Kenneth R. French - Data Library (dartmouth.edu)). As for Cross-Asset trend-following, we compute our own index based on our proprietary trend-following model that is applied to eight major asset classes: Ibbotson US Large Cap Index, Ibbotson US Small Cap Index, Ibbotson US High Yield Index, Ibbotson US Corporates Index, Ibbotson US Government Bonds Index, Oil Futures Index, Gold Futures Index, US Dollar Index. We use our own proprietary model as there is no CTA index that stretches back to before 1981. However, the period before 1981 had the highest inflation readings in modern history; we are thus particularly interested in these years. To make the performance of all investment options comparable, we scale all asset class returns to have a volatility of 10 percent.

We focus on high-inflation years, defined as years with a consumer inflation of above 5%. Such years have been relatively rare as can be seen in Chart 1; overall, we counted 12, which amounts to roughly one-fifth of the entire dataset. 2021 was obviously one such year, with 7.0 percent inflation; before that, we have to go back to 1990 with 6.1 percent, and then 1981 with 8.9 percent inflation. 1981 was the last of a string of high-inflation years, beginning with 1969.

We find that commodities delivered the best excess returns above cash, with 16.4 percent on average during high-inflation years. This tallies somewhat with the common wisdom that commodities are in fact part of consumer price indices and production price indices. The second-best result is generated by the simulated Cross-Asset Momentum strategy, that has produced an excess return (above cash) of 9.7 percent. On the other end of the spectrum are traditional asset classes such as bonds and equities, which delivered negative excess returns in the range of -2 to -8 percent. **The fact that momentum investing can deliver in years when major asset classes have a negative return makes it more valuable during these periods.** Also noteworthy is that other equity risk premia have a positive return in inflationary times, and that single-stock momentum delivered the second-best return.

While these results may be surprising to some, particularly when incorporating the magnitude of outperformance of Cross-Asset Momentum vs. other factors, such as value, profitability, small cap or even single-stock momentum, we believe that these observations can be intuitively explained. The most straightforward explanation relates to fixed income markets. In an environment of high and rising inflation, central banks are usually required to increase interest rates, thereby triggering a trend of declining prices for fixed income instruments, and therefore forming a strong negative trend across fixed income markets. When thinking about commodity markets and the role that input prices for commodities play in the context of headline inflation, we also usually observe a correlation between high and rising inflation rates and rising commodity prices in a positive trend pattern. For equity and currency markets the situation can be more varied and depend to some extent on factors other than inflation, such as geopolitics or economic issues.

Chart 3: Excess-Return p.a. (%) in years with high inflation (inflation > 5% during 1964–2021)



Source: Allianz Global Investors. For asset classes, we use Ibbotson database returns, except for commodities where we use the Bloomberg Commodity Total Return Index; for equity risk premia we use the data from Prof. Ken French's website. As for Cross-Asset trend-following, we compute our own index based on our proprietary trend-following model that is applied to eight major asset classes: Ibbotson US Large Cap Index, Ibbotson US Small Cap Index, Ibbotson US High Yield Index, Ibbotson US Corporates Index, Ibbotson US Government Bonds Index, Oil Futures Index, Gold Futures Index, US Dollar Index. We use our own proprietary model as there is no CTA index that stretches back to before 1981.

Table 1 shows a deeper dive into performance patterns during high-inflation years. It is interesting to see the hit ratio on the high side for commodities and Cross-Asset Momentum. With respect to diversification benefits relative to bonds and equities, it is commodities, Cross-Asset Momentum and single-stock momentum that have the lowest and negative correlations. Table 2 presents annual returns for each individual high-inflation year. It can be seen that there is no absolute certainty and that, even if an inflation hedge performs well on average during these periods, the hedge may not work each and every year. Sometimes there are even sizeable drawdowns.

Table 1: Statistics of Excess Returns (above cash) in High-Inflation Years (Inflation > 5%) asset/strategy returns scaled to have 10% volatility

	Average Return (%)	Worst year (%)	Correlation to US Bonds	Correlation to US Equities	Hit Ratio (%)
Commodities	16.4	-14.2	-0.04	-0.24	83
Cross-Asset Momentum	9.7	-10.6	-0.27	-0.67	92
Single-Stock Momentum	5.8	-10.5	-0.45	-0.18	67
CMA Factor	5.5	-12.5	0.60	-0.38	67
Profitability Factor	4.1	-8.9	-0.28	0.55	58
Value Factor	3.7	-15.7	0.39	-0.13	67
Small Cap Factor	1.8	-14.9	-0.29	0.36	58
US Small Cap	1.2	-22.0	-0.25	0.81	50
Low Volatility Factor	0.9	-12.4	0.25	-0.62	58
US Large Cap	-2.0	-28.9	0.04	1.00	33
US High Yield	-5.7	-26.6	0.25	0.61	33
US Bonds	-5.9	-18.7	1.00	0.04	25
US Corporates	-8.2	-22.4	0.90	0.33	17

Source: Allianz Global Investors as of May 2nd, 2022 using data as described in text and Chart 3.

Table 2: Single-Year Excess Returns (above cash) in High-Inflation Years (Inflation > 5%)

	1969	1970	1973	1974	1975	1977	1978	1979	1980	1981	1990	2021
Commodities	5.3	13.8	74.5	25.6	-5.9	4.4	16.1	42.5	8.0	-14.2	11.0	15.7
Cross-Asset Momentum	20.9	12.3	9.4	21.9	-10.6	11.5	14.5	17.1	2.3	9.6	2.5	5.0
Single-Stock Momentum	5.6	-2.2	16.4	4.6	-10.5	9.9	6.6	14.8	20.7	-4.6	10.2	-1.3
CMA Factor	-4.2	25.0	7.4	23.1	0.5	0.0	4.3	-1.5	-12.5	11.1	1.1	11.8
Profitability Factor	12.3	-3.3	-8.9	-4.6	1.0	2.5	5.2	-3.4	14.4	-1.5	7.8	27.6
Value Factor	-6.3	13.7	11.1	6.3	5.9	4.8	0.4	-1.6	-15.7	16.0	-6.4	16.1
Small Cap Factor	-10.5	-9.2	-14.9	0.4	14.2	18.1	10.2	15.6	3.6	5.4	-10.4	-0.7
US Small Cap	-18.4	-13.9	-22.0	-16.2	27.2	11.7	9.4	19.1	16.5	-0.6	-17.1	19.4
Low Volatility Factor	7.4	10.3	7.8	2.3	-12.4	-3.7	-4.1	-8.5	-7.9	11.2	5.2	3.0
US Large Cap	-12.7	-2.3	-18.2	-28.9	26.2	-10.3	-0.6	6.7	17.6	-16.6	-9.2	23.9
US High Yield	-12.5	1.3	-0.3	-26.6	11.0	2.7	-8.8	-10.0	-7.4	-4.7	-18.4	5.5
US Bonds	-18.4	25.5	-6.1	-6.0	4.8	-9.4	-9.5	-16.0	-18.7	-13.6	4.5	-8.4
US Corporates	-20.4	16.3	-8.2	-15.5	12.1	-4.8	-10.2	-20.4	-19.6	-22.4	-1.6	-3.7

Source: Allianz Global Investors as of May 2nd, 2022 using data as described in the text and Chart 3.

Momentum-based Strategies can be Strong Return Contributors in all Market Phases

Inflation has continued to surprise on the upside for almost 12 months now, and inflation rates may stay elevated as long as inflationary pressure remains, especially if a wage-price spiral is set in motion. For investors to hedge portfolios against losses in real terms, we recommend considering asset classes and strategies that have a proven performance pattern in inflationary times. It is also important to scrutinize the overall portfolio allocation, and to have a risk-factor mix that allows performance in inflationary times, but also not to lose sight of non-inflationary times.

We believe that bespoke momentum-based strategies can be a strong return contributor in all market phases that exhibit strong trends when it comes to economic growth or inflation. This is because extended moves in the real economy are likely correlated with strong momentum in asset prices. Furthermore, Cross-Asset Momentum has the potential to perform independent of market direction, as these strategies are not bound to go long only but may also go short in markets with negative trends.

AllianzGI: Decades-long Expertise in Multi Asset Investing

We at Allianz Global Investors are pioneers in Multi Asset investing. Over the last decades we have evolved to become a globally recognized provider of multi-asset funds with sophisticated Multi Asset momentum strategies.

[1] The terms momentum and trend are considered synonyms and are used interchangeably.

[2] Carhart, 1997, On Persistence in Mutual Fund Performance, The Journal of Finance. 52 (1): 57–82.

[3] Fama/French, 1992, The Cross-Section of Expected Stock Returns, Journal of Finance 47, 427–465.

[4] Asness/Moskowitz/Pedersen, 2013, Value and Momentum Everywhere, The Journal of Finance, Vol. LXVIII, No. 3, June 2013.