# Inflation cheat sheet

# How to invest when inflation is high

## Don't expect high inflation to fall anytime soon

### Inflation forecasts have risen in much of the developed world[1]

Consensus CPI forecasts

| | US | Euro zone | UK | China |
|---|---|---|---|---|
| **2020** | 1.2% | 0.3% | 0.9% | 2.5% |
| **2021** | 4.7% | 2.5% | 2.5% | 1.0% |
| **2022** | 4.4% | 2.4% | 4.0% | 2.2% |

### US inflation is particularly high[2]

- Headline CPI was up 7.0% year-over-year in December 2021 – the biggest jump since 1982.
- Core CPI was up 5.5% in the same period – the strongest reading since 1991.

### Why is this happening?

- Inflation was so low in early 2020 that any increase will appear to be large.
- But is there more to it than this "base effect"? And is higher inflation more than just transitory?
- US Federal Reserve Chairman Jerome Powell thinks it's "probably a good time to retire that word" (transitory).
- We have identified multiple factors pushing up inflation in the short and long term (see below and next page).

## 3 factors pushing inflation higher in the *short* term

### A shrinking global output gap

Economic activity has been picking up, and the output gap is getting smaller. This is an inflationary combination.

### Major supply chain disruptions

The Covid-19 pandemic disrupted the flow of goods around the world – from lumber to semiconductors. It may take longer than originally anticipated to fix these disruptions. When goods are harder to source, price inflation is not far behind.

### Rising oil price[3]

The oil price is key to long-term inflation expectations. WTI reached almost USD 85 per barrel in October 2021, the highest level in almost seven years. While the oil price has come down somewhat, it's still sharply higher than a year ago.

See "Key terms to know" for helpful definitions

1. Source: Bloomberg. Data as at December 2021. Consensus data reflect estimates for *average* inflation in a full calendar year. They are not directly comparable to current inflation readings.
2. Source: Bureau of Labor Statistics. Data as at December 2021. Current inflation figures reflect year-on-year rates for the latest (*single*) month.
3. Source: Marketwatch. Data as at January 2022.

## 4 factors pushing inflation up over the *long* term

### Monetary policy

Central banks have flooded the banking system with liquidity, and the money supply is outpacing the growth in economic output. Plus, central banks have implied that they are willingly staying "behind the curve" (see "Key terms to know" for a definition).

### Deglobalisation

International trade (typically a price equaliser) is losing steam. Countries are also seeking to be self-sufficient with essential goods, which could push prices up as countries compete for raw materials.

### Changing labour force

The wage share has been growing for some time, giving workers more money to spend on goods and services.

### Combating climate change

In the medium term, going green may mean less access to "cheap" energy, an increase in environment-related regulations and other inflationary factors. Yet over the long run, this investment will hopefully lead to higher economic output and lower inflation.

## What's good about inflation

**Some inflation is a good thing for economies – and for equities**

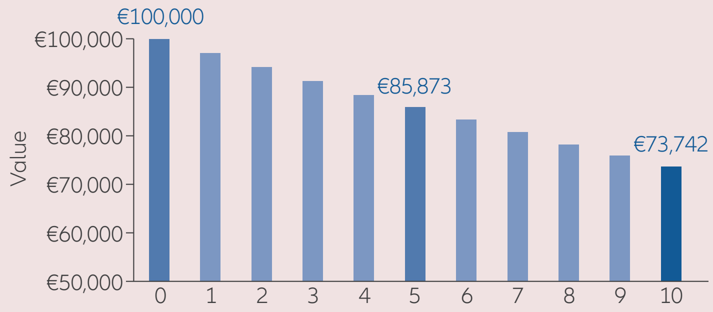
- A healthy economy grows at a sustainable rate, and inflation is a typical by-product of economic growth.
- A moderate amount can also be good for the stockmarket, largely because reasonably higher prices can lead to higher earnings for companies.
- We found that for the S&P 500 Index, the highest equity valuations were observed for inflation rates of between 2% and 4%. But when inflation is beyond 5% or so, we tend to see lower earnings and lower levels of consumption overall.
- However, these high valuations (and higher inflation) have followed years of very "loose" monetary policy from central banks. Central banks are now determined to take action against inflation, which may put pressure on valuations as well.

## What's bad about inflation

**Even a small amount erodes purchasing power**

- A 3% inflation rate can reduce the value of an asset by nearly 25% in just 10 years.
- That's why inflation has been called a "stealth threat" to portfolios.

Effect of 3% annual inflation rate on initial EUR 100,000 hypothetical investment




Source: Allianz Global Investors. Hypothetical example for illustrative purposes only.

## How investors can fight inflation

### Save more and invest earlier

Given that any level of inflation will shrink your future purchasing power, one of the best ways to combat inflation is to save more and invest earlier. This gives your portfolio the opportunity to take advantage of the power of compounding.

### Look at what your investments are yielding after inflation is factored in

Instead of just focusing on an investment's nominal yield, look at its real yield. For example, if the nominal yield on a bond is 3%, but the inflation rate is 2%, the real yield is 1%. With many nominal yields at or near historically low levels, some real yields can even be in negative territory. Over time, this means inflation could cause some investors to lose money.

### Consider inflation-hedging assets

- Inflation-linked bonds – such as Treasury inflation-protected securities in the US and gilts in the UK – directly benefit from rising inflation expectations, since they are designed to help protect investors from inflation.
- An active fixed-income investor can seek returns regardless of the inflation environment – which is critical given the uncertain inflation outlook.
- Equities have historically provided good returns when inflation is moderate – in part because reasonably higher prices can lead to higher earnings for companies, and investors tend to pay more for earnings growth.
- During periods of higher inflation, commodities and gold have historically done very well.
- Institutional investors may want to consider private-market assets to hedge against – or even benefit from – a sustained return to inflation.

## Key terms to know

**Base effect:** term sometimes used when measuring inflation. When comparing two points in time, if the inflation rate is unusually low at one end (the "base"), even a small rise can appear to be an outsized increase in the inflation rate.

**Behind the curve:** term used to describe when central banks deliberately do not raise interest rates fast enough to head off inflation.

**Break-even inflation rate:** the sum of the expected inflation rate and the inflation premium. Signifies the average inflation rate where an investor would achieve the same return from either a) receiving the fixed average inflation rate or b) receiving the actual inflation as a variable cash flow.

**CPI (consumer price index):** usually refers to headline CPI, also known as headline inflation. This is a key inflation metric for the US and UK, among other regions. Refers to the full hypothetical "basket" of goods and services vs core CPI/core inflation. Because headline inflation is volatile, it is considered not very predictive over the short term.

**Core CPI (consumer price index), core inflation:** calculated by subtracting volatile food and energy prices from headline inflation.

**CPI-U (consumer price index for all urban consumers):** measures the average change over time in the prices paid by US urban consumers for a market "basket" of consumer goods and services.

**Deflation:** when inflation falls below 0%.

**Disinflation:** when the rate of inflation falls, but doesn't go into negative territory.

**Expected inflation rate:** represents market participants' expectation of the average yearly rate of inflation – ie, the change of the underlying price index.

**HICP (harmonised index of consumer prices):** CPI as calculated in the European Union (EU). Types of HICP include MUICP (the monetary union index of consumer prices, covering the euro area); EICP (European index of consumer prices, for the whole EU); national HICPs (for each of the EU member states); EEACIP (European Economic Area index of consumer prices): an additional HICP index for the European Economic Area (EEA) that covers the EU, Iceland and Norway.

**Hyperinflation:** a disruptively rapid rise in inflation, generally more than 50% per month.

**Inflation expectations:** the expectations of consumers and businesses on the future rate of inflation. High inflation expectations can actually push inflation up.

**Inflation risk premium:** the compensation for unexpected inflation or deflation. It is similar to an insurance premium against unexpected moves.

**Loose/easy monetary policy:** economic shorthand for how central banks expand the supply of money (via low rates, asset purchases and more) to stimulate economic growth. Also known as expansionary or accommodative monetary policy.

**Money supply:** measures an economy's supply of cash, liquid bank accounts, long-term deposits, etc. When the money supply outpaces economic output, inflation generally follows because there is more money chasing the same amount of goods and services.

**Nominal:** before inflation is factored in (as in nominal yield, nominal growth rate, etc).

**Output gap:** the spare capacity in the economy – the difference between actual growth and potential growth. In recent years, the global economy was operating below its full potential, so the output gap increased. This is typical during economic slowdowns or recessions. Now, the output gap is shrinking.

**PCE:** the price of goods and services consumed by all households, and by nonprofits serving households. PCE has tended to be lower than CPI.

**Real:** after inflation is factored in.

**Reflation:** when deflation stops or reverses.

**Stagflation:** a period of high inflation, slow economic growth and high unemployment.

**Wage share:** the portion of economic output that gets paid to workers in the form of compensation.

**West Texas Intermediate crude oil (WTI):** one of the standard ways to track oil prices.

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