

AF4 2023/2024

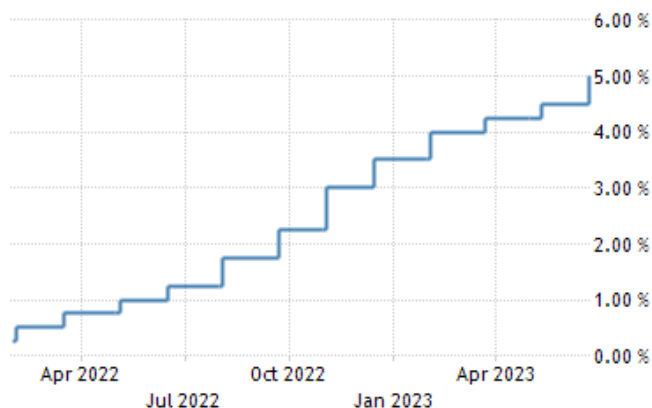
Asset Classes: Cash

The milestones for this part are to understand:

- The main cash investments
- Inflation, its causes and effects
- Compounding, Discounting and Interest rate calculations.
- Foreign currency deposits
- The London Money Market

Cash is the most basic of investments. It forms the foundation of most individual's personal wealth since everyone needs an emergency fund.

Cash on its own produces nothing. Put £1,000 under the bed and 10 years later it is still £1,000 but inflation would have reduced its purchasing power. Cash as an investment means putting it into an interest paying account offered by a bank, building society or National Savings. The rate is primarily influenced by the Bank of England's bank rate



This chart shows how the base rate has changed since the start of 2022.

The most recent increases culminating with a rise to 5% in July 2023 are intended to curb inflation. This has led to better return by banks with rates of between 2.5% and 4.5% on offer.

This is still much lower than inflation.

National Savings

An alternative to a bank of building society account is National Savings, The following is a link to their page to get details of their products.

<https://www.nsandi.com/>

Rates and products change from time to time so it is a good idea to keep an eye out for these.

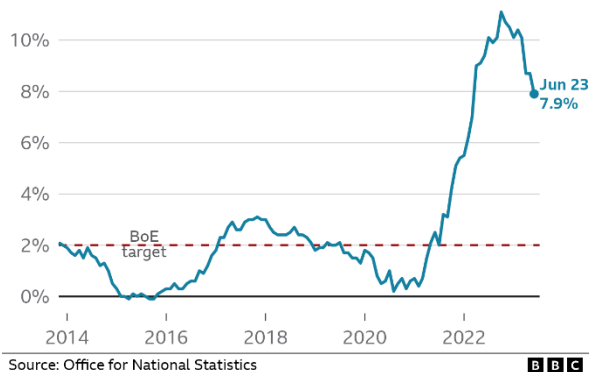
NSI products are government backed so they are not limited by the FSCS compensation cap.

Let's talk about inflation

Inflation is the percentage increase in prices over a 12 month period. In the UK the main measure is the **Consumer Price Index (CPI)**. This is produced monthly and is based on a basket of goods and services. Since it compares price levels with those of 12 months ago a fall in the headline rate does not mean that prices have fallen, a flat white in Costa will still cost more than it did 12 months ago, it simply means that they aren't rising as quickly. For example if in October 2023 inflation has fallen to 3% it simply means they aren't rising as much as 12 months ago. This is called **disinflation**. If prices were falling the index would be negative, e.g. -2%. This called **deflation**.

The Government has set the Bank of England an inflation rate target of 2% and as shown in the chart up until 2023 it was reasonably successful. However, since the start of the covid pandemic inflation has risen rapidly.

UK inflation at 7.9% in June 2023



From an investor's view point an inflation rate of 7.9% means that any investment returning less than this results in a fall in its real value. This is a dilemma for deposit holders because even the highest rate is nowhere near the rate of inflation.

What causes inflation to rise?

There are two main causes of inflation:

- Cost-Push
- Demand-Pull

All developed economies experienced a rise in inflation in 2022 mainly due to the rise in oil and gas prices following the invasion of Ukraine. This caused a rise in energy bills for domestic and commercial users. Similarly grain supplies fell and prices rose. These are examples of **cost-plus inflation**. Prices of commodities rise as a result of external factors which then increases the price of other goods.

Demand-Pull inflation typically occurs when an economy is booming and experiencing a high rate of growth in its GDP. The demand for materials and labour increases as business activity keeps growing so prices rise. Currently (July 2023) the rise in the UK's GDP is sluggish but in some sectors such as hospitality and building there is a shortage of workers, so wages are rising as employers try to attract more applicants. Again this is demand-plus.

Economists who believe in **Monetary Theory** argue that inflation is solely caused by an increase in the **money supply**. When a bank issues a loan it effectively creates money and if it is easy to borrow then prices will rise. The main effect is on the price of assets, e.g. house prices. Following the 2008 crisis the UK government instructed the Bank of England to “create money” and use this to buy gilts and bonds from banks and other institutions. The intention was that as these would have free cash to lend out it would stimulate the economy. Unfortunately, most of this went to lower risk loans such as domestic and commercial property which resulted in an increase in prices.

Is inflation necessarily bad?

A slow but steady rise in prices is beneficial for an economy. The UK government has set an annual inflation target of 2% and mandated the Bank of England to achieve that. Falling prices, deflation, is just as dangerous as high inflation. If prices were continually falling then there would be a reluctance to buy or invest now as the cost would be lower in 12 months time.

Inflation usually benefits borrowers as it reduces the real value of the debt. Conversely it is bad for lenders as their capital is reduced in real terms.

How can inflation be controlled

Interest rates are the main weapon, and the Bank of England is free to set its base rate independent of government. This is usually effective to control demand-pull inflation as rising rates tend to dampen down the economy and prices fall. Similarly if the economy is sluggish then it will probably reduce rates to try and stimulate borrowing and increase growth.

Cost-push is much harder to control and that is the situation we are currently in. The rise in energy prices is outside the control of the government. Whilst demand-pull tends to be associated with a growing economy, cost push inflation will tend to slow down growth in the economy.

As energy and input prices rise businesses will increase prices and/or reduce costs. This in turn may lead to a fall in revenue as consumers have less money to spend as their budgets are hit by the same input costs. At the same time workers may seek to increase their wages to maintain their living standards which could lead to an increase in costs which in a **wage-cost spiral**. A combination of high inflation and a slow growing economy is called **stagflation** which is what the UK experienced for most of the late 1970's

All this presents the Bank of England with a dilemma. A double-digit inflation rate would normally result in base rate being around 8% but if they were to do that the economy would slow down and would probably cause a recession. All it and the government can do is to hope that the Ukraine situation is settled and price rises return to their normal levels.

What does this mean for investors?

For the past 25 to 30 years inflation has been relatively benign. No one knows whether we are experiencing is a blip or whether high inflation is going to become embedded. What is

certain is that inflation destroys wealth and high inflation destroys wealth quickly. Of all the asset classes cash deposits are the most exposed to inflation risk. The other classes are also subject to this risk therefore the primary aim of an advisor should be to select investments that have a reasonable chance of at least matching inflation.

Foreign currency accounts

It is possible to hold cash in another country's currency, for example US Dollars or Euro. This exposes individuals to currency risk which can work both ways.

Tom bought \$10,000 in 2008 when the exchange rate was \$1.95/£1.
This cost him £5,128

In December 2022 the exchange rate was \$1.22/£1 so his holding in GBP is now £8,196

Conversely if Tom now bought a further \$10,000 for £8,196 and the rate moved to \$1.40/£1 the sterling equivalent would be £7,142

Compounding and discounting.

With AF4 you must show your workings and that means you must show the formula even if you use a scientific calculator. **These calculations can be used for any asset class**

Compounding

This works out how much a given sum will grow to if we know the rate of return and the term. The formula is:

$$FV = PV(1+r)^t$$

Where FV = future value, PV = starting value, r = interest rate and t = term.

Henry has £10,000. How much will this be worth in 10 years time assuming a rate of 5.5% is achieved.

$$\begin{aligned} &£10,000(1+0.055)^{10} \\ &£10,000(1.055)^{10} \\ &£10,000 \times 1.708 \\ &£17,080 \end{aligned}$$

Discounting

This works out how much you need to invest to achieve a target sum. The formula is:

$$PV = \frac{FV}{(1+r)^n}$$

Jane needs £20,000 in 8 years time. Assuming she can get a return of 4.75% how much does she need to invest today?

$$\frac{£20,000}{(1+0.0475)^8}$$

$$\frac{£20,000}{1.0475^8}$$

$$\frac{£20,000}{1.45} = £13,793$$

Calculating Interest Rate or rate of return

Here you will be given the starting and end values and you will be asked to calculate the return that was achieved. The formula is:

$$R = (FV/PV)^{1/n} - 1$$

Yves started with £12,000 eight years ago. It has now increased to £20,000. What annual rate of return has been achieved?

$$(\frac{£20,000}{£12,000})^{1/8} - 1$$

$$£1.667^{1/8} - 1$$

$$£1.667^{0.125} - 1$$

$$1.065 - 1 = 0.065$$

$$0.065 \times 100 = 6.5\%$$

The Money Market

The London money market provides short term loans to banks, companies and the Government.

Loans can be anything from 1 day to 1 year. Most loans are offered using discount arrangements. Bank A lends £2m to Bank B for four days. Bank A pays 99.8% of £2m and will receive £2m in four days' time.

This provides liquidity to the system and one of the triggers of the 2008 crisis was that banks were reluctant to lend to each other. The Bank of England sits at the top of the money market system and is the “lender of last resort.”

There are three main types of instrument in the London Money Market:

Treasury Bills issued by the Government

Certificates of Deposits issued by banks

Commercial Bills issued by companies

Individual investors cannot invest directly into the money market but money market funds are available within unit trusts and OEICs

That concludes this first part so you should now understand:

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