# Globalising your inflation-linked portfolio

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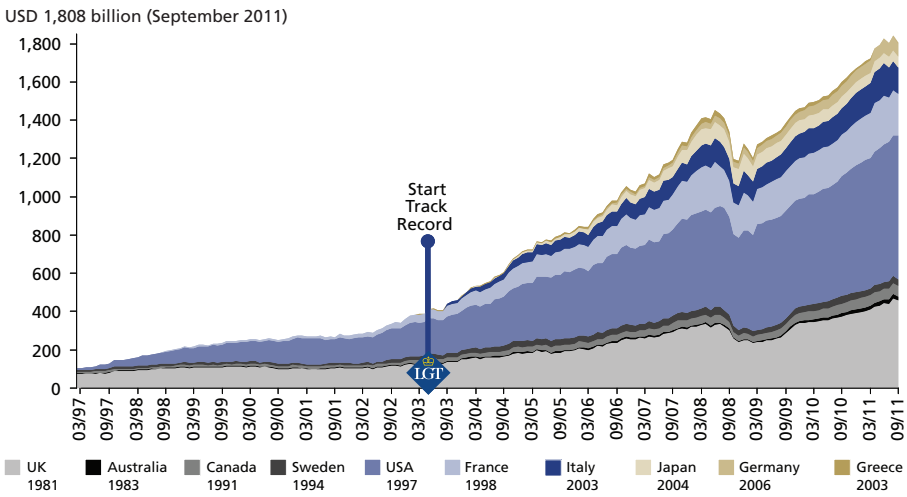
Inflation-linked government bonds are a relatively new asset class. Although the US state of Massachusetts issued a bond whose interest and principal payments were linked to a basket of goods as far back as 1790, a market for these products only really developed in 1981 when the UK started issuing part of its sovereign debt in the form of ILBs. Other industrial nations have since followed suit and regularly issue part of their new state debt in inflation-linked bonds, for example Australia, Canada, Sweden and the US. There are around 100 different bonds available worldwide. The US is the world's largest issuer of inflation-linked government bonds with a market share of around 40%, followed by the UK with just under 24%. Over the past five years, the volume of all outstanding inflation-linked government bonds has risen by some 60%, underlining the strong growth momentum in this asset class.

## How ILBs work

Inflation-linked government bonds are a good choice for portfolio diversification, as in addition to paying a fixed coupon they also compensate for inflation. The latter usually refers to the consumer price index normally used in the country in question. If this index rises by X per cent in a year, the nominal value of the bonds increases by X per cent, thus ensuring that the purchasing power of the invested capital is preserved. Given that the coupon is based on the increased principal, it is also indirectly linked to inflation.

While inflation sees the nominal value of these bonds rise, deflation leads to a reduction in the nominal value, given that in a deflationary environment the purchasing power is retained even if the nominal value is reduced. However, since this could put new investors off, some states even offer a "par floor". This means that in the case of bonds issued at 100%, they undertake to repay the nominal principal in full at maturity even if there has only been deflation throughout the entire term of the bond. Although this is taken for granted with fixed-interest bonds, it is more out of the ordinary in the case of ILBs. After all, persisting deflation – as we have seen in Japan for more than a decade – naturally leads to a

**Figure 1: Development of global market capitalisation**




Source: LGT/Barclays Capital

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disproportionately strong rise in the purchasing power of an ILB that offers repayment in full.

As we can see in Figure 2, the US and the European states offer this par floor, unlike Japan which – with some foresight – has not incorporated this protection into its bonds.

## "Break-even inflation" – a key figure

Given that states issue both nominal and inflation-linked bonds, both types as a rule have identical credit risk. The coupon yield of ILBs is mostly lower than that of nominal bonds because they also offer the compensation for inflation. Accordingly, this yield spread is nothing more than the currently priced-in inflation. This "break-even inflation" makes it possible to compare the bonds and shows the market's expectations with regard to inflation going forward.

This figure is very informative in that it allows investors to compare the priced-in inflation with their personal expectation, and they can thus very quickly and efficiently get a picture of which asset class seems more attractive. If an investor expects inflation to be higher than the market does, they should give preference to inflation-linked bonds as these will be undervalued by the market. In the case of 5-year EUR bonds, the priced-in inflation expectation currently stands at around 1.3% (as of January 2012). This shows how little inflation the market expects at present. If the average rate of inflation were to be exactly 1.3% per year over the next five years, the returns on both asset classes would be the same. If inflation were to be higher, ILBs would outperform their nominal counterparts.

However, it is important to remember in both cases that these are bonds, which are by their nature subject to an interest-rate risk, and rising interest rates can lead to price losses. Preference should therefore be given to bonds with medium-term maturities, or investment funds that focus on medium maturities. However, given that a significant proportion of the inflation-linked government bonds on the market were issued with 30-year terms to maturity due to demand from the insurance industry, pure index certificates or index funds often have a very high interest-rate risk and are therefore more volatile.

**Figure 2: Inflation-linked government bonds**

| | USA | Great Britain | France | Italy | Japan | Sweden | Canada | Germany | Greece | Australia |
|---|---|---|---|---|---|---|---|---|---|---|
| First issue | 1997 | 1981 | 1998 | 2003 | 2004 | 1994 | 1991 | 2006 | 2003 | 1985 |
| Number of issues | 31 | 17 | 12 | 10 | 16 | 5 | 6 | 4 | 2 | 4 |
| Market cap* (in bn USD) | 749 | 458 | 220 | 135 | 56 | 36 | 56 | 70 | 7 | 21 |
| Reference index | CPI all urban | UK RPI | Euro HVPI ex tobacco | | CPI | CPI | CPI all items | Euro HVPI ex tobacco | | CPI all groups |
| Index lag (in months) | 2-3 | 8 or 2-3 | 2-3 | 2-3 | 2-3 | 2-3 | 2-3 | 2-3 | 2-3 | 6 |
| Deflation-protection** | Par floor | No floor | Par floor | Par floor | No floor | Par/ no floor | No floor | Par floor | Par floor | Par floor |

* As of September 30, 2011, bonds with remaining terms to maturity > 1 year and market value > USD 100 million
** Many issuers offer capital protection on the nominal, irrespective of any deflation occurring

Source: LGT/Barclays Capital/Presentation Load

## Why adopt a global approach?

LGT Capital Management has already amassed more than nine years' experience in the management of inflation-linked government bonds. We are convinced that inflation is a global phenomenon, but nonetheless there is empirical evidence of phase shifts in its occurrence and strength. With a globally diversified portfolio, these differences can be ideally exploited, either to optimise performance or to increase protection against inflation.

Bond investors should heed the following risks:

- **Currency risk**
  With a global bond portfolio, one question that arises is how to deal with the currency risk. On the one hand, this can make a powerful contribution to performance, but on the other it increases the volatility of the underlying portfolio. In short, if an EUR investor is invested in USD, GBP, JPY, CAD, SKR, and AUD, the currency performance is much more important than the decision over whether to buy nominal or inflation-linked government bonds. Given that we wanted to offer our clients a global investment with protection against inflation and without currency speculation, the logical conclusion was to set up currency-hedged investment funds. We remain convinced of this today.

- **Interest-rate risk**
  Due to the high weighting of long-dated government bonds, a purely market-capitalised global benchmark in the inflation-linked government bonds segment is subject to increased risk from changes in interest rates. To illustrate this, let us look at the modified duration, the statistic that reflects this interest-rate risk. If a comparable global nominal bond benchmark stands at around 6%, the modified duration of a global, market-capitalised benchmark for

inflation-linked government bonds would be around 10%. This high interest-rate risk holds sway over the inflation risk, i.e. for such an investment the interest-rate trend is much more important than developments with regard to inflation. From our perspective, this is far from ideal.

At our behest, Barclays Capital, the leading benchmark provider in the ILB segment, set up a new index family in 2003: the country indices 1-10 years. These indices only take into account government bonds with a remaining term to maturity of at least one year and no more than ten years. With a global 1-10 year benchmark, the modified duration is reduced from 10% to around 6%. In our view, this tallies better with the needs of individual investors than a purely market-capitalised benchmark featuring all maturities, which tends more to cover the requirements of insurers and pension funds.

- **Credit risk**
  Finally, bond investors also have to contend with the risk inherent in the respective issuers – the so-called credit risk. Given that the ten industrialised nations that issue ILBs currently have ratings ranging from AAA (Germany, Australia, Sweden, Canada and the UK) to CC (Greece), it is important to determine the credit risk profile you want to achieve with your investment. LGT Capital Management invests client assets primarily in very good borrowers so as to reduce the credit risk and offer an investment that focuses on the protection against inflation, without mixing in risk. For us, first-class borrowers are usually issuers with AAA/Aaa ratings. Although individual borrowers – such as the US in 2011 or recently France – have been downgraded to AA+ by Standard & Poor's, we still regard this rating as very good and are sticking by these issuers. We have thus far always distanced ourselves from investments in borrowers such as Italy, Japan or Greece. At present, we are steering clear of investments in corporate bonds combined with inflation swaps and investments in structured inflation products in view of the fact that these entail taking on additional risks and would take us away from the original investment concept.

LGT Capital Management thus takes a more conservative path in managing inflation-linked government bonds than other providers. However, we can thus ensure that investors have efficient, risk-reduced access to this young asset class.

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