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Examining the ups and downs, ins and outs, of Inflation-Linked Bonds

In the past few years, the performance of South Africa's inflation-linked bonds (or ILBs as they're known) has been very disappointing, not even beating inflation – as shown in the table on the following page. Some investors may be surprised to see just how low their total returns have been, and that it has been six years since they have offered a positive real return (a total return above the rate of inflation). This has posed a considerable challenge for both asset managers and investors, given that typically we would expect more stable, positive real returns from fixed income assets that pay a steady, interest rate-based income. Additionally, inflation-linked bonds often form the core holding of unit trust funds that aim to deliver a specific return above inflation over time. Many conservative investors depend on ILBs to protect their income against inflation. So just what has undermined these usually dependable, lower-risk instruments?

ILB returns have not beaten inflation for 6 years

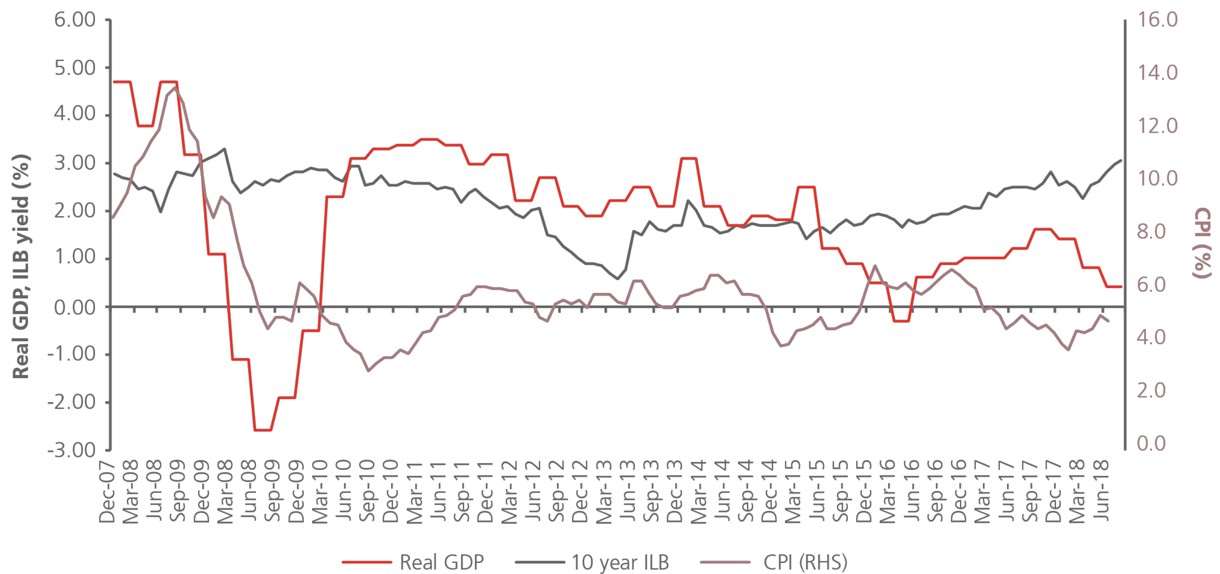
Time Period	ILB Returns*	SA Inflation (CPI lagged)	Difference
1 Year	4.5%	5.1%	-0.6%
2 Years	1.0%	5.0%	-4.0%
3 Years	2.2%	5.4%	-3.2%
4 Years	3.0%	5.2%	-2.2%
5 Years	4.7%	5.4%	-0.7%
6 Years	4.4%	5.4%	-1.0%
7 Years	6.2%	5.4%	+0.8%
8 Years	6.8%	5.5%	+1.3%
9 Years	7.3%	5.3%	+2.0%
10 Years	7.4%	5.2%	+2.2%

Source: JSE
*Composite Inflation Linked Bond Index; Nominal annual total return to 30 November 2018

The problem: rising real yields and lower inflation

To understand the reasons behind this poor performance, we have to examine the sources of ILB returns, which are twofold: changes in the real yield and inflation. Graph 1 tracks both of these elements, as well as real GDP growth, since 2008. The black line shows how, since 2015, 10-year real ILB yields have doubled from around 1.5% to 3.0%, close to the highest level they have reached in the past decade. While this may seem trifling, it is a significant move in the South African market.

Graph 1: ILB yields rise as CPI, growth slow



Source: Bloomberg, IRESS, Prudential Investment Managers

As with any bond-type instrument, as their real yields have risen, the prices of ILBs have fallen, eroding investors' capital value and ILB returns. And with ILBs being very sensitive to interest rate movements, a small increase in their real yield causes a larger drop in their price. The grey-brown line in Graph 1 highlights how inflation, the second component of ILB returns, has steadily fallen from 7.0% year-on-year at the beginning of 2016 to as low as 3.8% year-on-year in March 2018 as a result of the combination of a slump in economic growth and a rally in the rand from its lows following Nene-gate in late 2016 (a strong rand depresses imported goods prices).

More recently, inflation has begun rising again as the rand has weakened. Falling inflation has pushed returns lower because investors in ILBs automatically receive an adjustment to their principal linked to the current inflation rate (determined in South Africa by the consumer price index, or CPI). This is what acts as the "guaranteed" protection against inflation over time. So this component of investor returns rises or falls in line with the latest CPI data, and it has been getting smaller during most of this three-year period.

When you examine these two return components together, the rise in ILBs' real yields (and concomitant fall in capital value) has been larger than the increase provided by the inflation adjustment. During

the recent period real yields have kept rising even though the country's real economic growth rate has been declining.

We can see the disconnect in Graph 1 as well, where the gap between real yields and real growth (shown by the red line) is currently at around 2.5 percentage points, the largest since the Global Financial Crisis (GFC) in 2009. This is despite the close link over the long term between movements in real yields and the real economic growth rate, with yields typically falling as the country's GDP decelerates. This makes intuitive sense, as we would expect lower real returns from government assets like ILBs when the economy slows and interest rates fall.

A disconnect between growth, inflation and interest rate relationships

So why would the government have to pay such a high real yield of 3% on its 10-year ILBs when inflation is subdued and economic growth barely positive? This anomaly points to a decoupling between the real return on assets and the real cost of capital. One factor playing a role could be the recent informal change in the South African Reserve Bank (SARB)'s monetary policy target, as the SARB has moved from keeping inflation contained just below the 6% upper limit of its 3-6% target band to a much stricter 4.5% target, the midpoint of the band.

This effort to rein in inflation expectations even further has required tighter monetary policy, meaning that the SARB has not lowered interest rates during the economic downturn as much as would normally have been expected.

Looking back to previous years, while CPI fell from 7.0% year-on-year in February 2016 to 3.8% year-on-year in March 2018, and then rose back to just over 5.0% year-on-year in October 2018, the SARB cut the country's base interest rate, the repurchase (or "repo") rate, by only 0.50 percentage points over that period and implemented a somewhat controversial 0.25 percentage point hike in November 2018.

Another factor that may be keeping real yields elevated is the higher risk perceptions associated with South Africa's credit rating. Our sovereign rating has been downgraded to non-investment

grade by two of the three global ratings agencies, and the government and state-owned enterprises are struggling with elevated levels of debt that could be making investors more risk-averse than in the past. The weak economic growth has made it difficult to stabilise debt levels and they have continued to rise. Political risk has also been high for an extended period of time.

Meanwhile, the supply of ILBs has been increasing as the South African government has been forced to issue larger quantities of debt in line with its expanding budget deficit. National Treasury aims for ILBs to make up around 25% of the total debt it issues. At the same time, however, investor demand for ILBs appears to be on the decline in the face of smaller numbers of institutional investors who require long-term inflation protection, like defined-benefit pension funds and investors in the independent power producer (IPP) projects. ILB auctions have been poorly bid or have even failed. So this supply/demand imbalance could also be helping to keep real yields elevated.

Improving returns on the horizon?

However, ILB returns could be set for an improvement. Inflation has troughed and accelerated, with the consensus expecting 5.0% to 5.5% inflation over the next two years. At the same time, the economy has emerged from its technical recession, moving into a recovery phase. So we should expect the gap between real GDP growth and real yields to start to close, with growth gathering pace and real yields declining. Importantly, the current 3.0% real return offered by 10-year ILBs (as at 30 November 2018) if you hold to maturity is very attractive (or cheap) compared to their long-term fair value. Theoretically, over time their valuation should fall back towards fair value, and our analysis points to a higher real return than 3.0% if real yields decline.

Although there is no way to know exactly when this will happen, there only needs to be a modest fall in real yields for ILBs to deliver stronger returns over time. Even without a fall in real yields, R100 invested in a 10-year ILB at a 3% yield with inflation conservatively estimated at 5% over the period, would be worth R220 at maturity (assuming the coupons are reinvested). This type of return would mean that ILBs had certainly resumed their role of protecting investors against the dangers of inflation over time.

What are inflation-linked bonds?

- Inflation-linked bonds (ILBs) are essentially loans where the principal and interest payments are contractually linked to an inflation measure. In South Africa this is the consumer price index (CPI). Governments are the primary issuers of ILBs around the world. Although they were first issued in Massachusetts in the 1780s, the modern ILB market only really began in the 1980s when the UK government first started selling them on any scale. The South African government, meanwhile, began issuing ILBs in 2000. Today they are widely traded, with US Treasury Inflation-Protected Securities (TIPS) making up the largest portion of the global ILB market.
- The structure of ILBs means that they provide investors protection against rising inflation over time. They work by regularly adjusting the principal amount invested by an investor by the latest CPI rate, so their principal value rises over time (or can decrease in a deflationary environment, although this is rare). At the same time, the investor receives a regular coupon payment (the interest).
- Although the interest rate stays fixed, because the interest is paid on the rising inflation-adjusted principal value, the rand value of the interest paid also rises over time, effectively also linking the coupon to inflation.
- Once an ILB is issued and listed on the JSE, its value moves up and down in response to changing market conditions and sentiment, just like any listed security. Not surprisingly, its price is sensitive to changes in the inflation and interest rates (among other factors).
- Thus, when real yields rise, the price of the ILB will go down and vice-versa. This is how ILB returns can suffer during low-inflation, slow-growth conditions. Besides offering protection against inflation, ILBs also serve as an excellent diversifier in a multi-asset portfolio due to their low correlation to other asset classes.

- When we look at the movement of ILBs compared to local equity, listed property and even nominal bonds, we find that they exhibit a low tendency to move in the same direction as these other asset classes. Therefore, they would typically lower the overall volatility of portfolio returns.

For more information, contact your financial adviser or our Client Services team on 0860 105 775 or at query@prudential.co.za.

https://www.prudential.co.za/insights/articlesreleases/examining-the-ups-and-downs-ins-and-outs-of-inflation-linked-bonds/