**DRW Investment Research**

# RSA Retail Savings Bonds: Fixed or Inflation Linked Rates?


## An Overview and Investment Considerations

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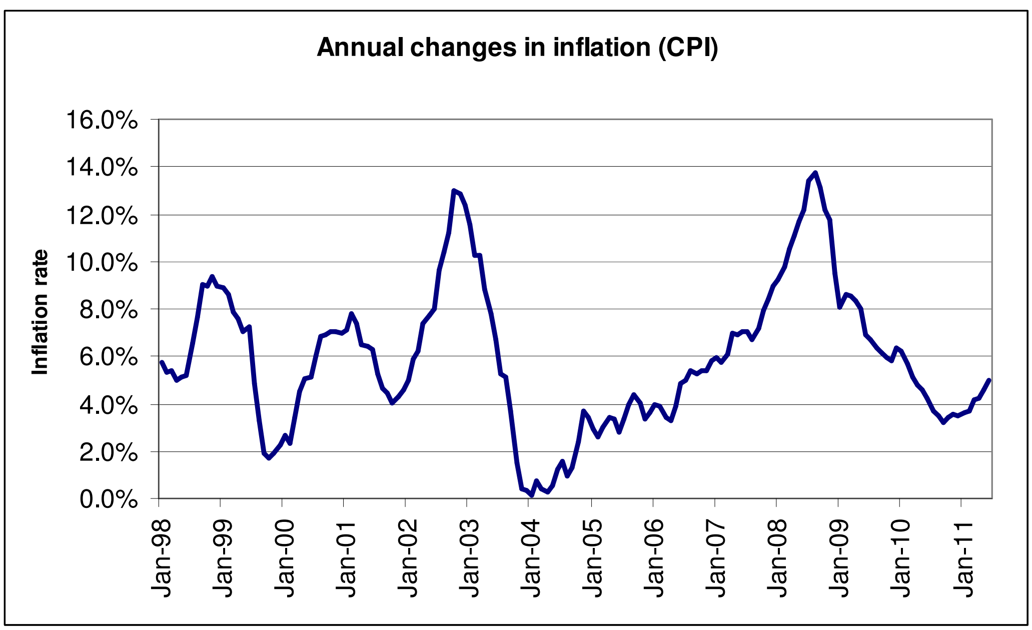
## 1. Consumer Price Index (CPI)

- The inflation rate refers to the changes in the prices of a representative basket of goods and services (as determined and measured by Statistics South Africa) over a twelve-month period.

- Inflation is highly cyclical over time; i.e. a period of lower inflation rates is followed by a subsequent period of higher inflation and *vice versa*. Note that when economists are making comments such as “inflation is dropping” it refers to the rate of price increases in the economy is slowing, not that prices are actually declining – the latter situation is referred to as *deflation*, which in a South African context will be an extremely rare phenomenon.




Source: Stats SA, DRW Investment Research

## 2. Inflation as an investment benchmark

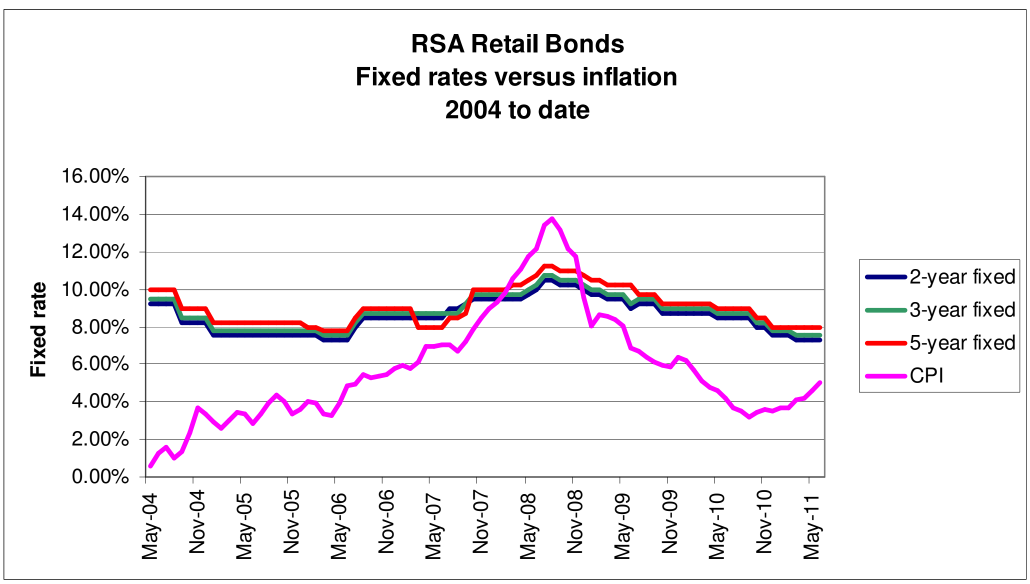
- The ultimate test or benchmark for any investment decision is the potential ability of the investment proposition to outperform inflation after costs and tax. Moreover, especially longer-term interest rates in the economy will be based on expected inflation trends in the future. Inflation expectations obviously play a significant role in the monetary policy decisions by the South African Reserve Bank (SARB).

- Notwithstanding the importance of inflation considerations in investment decisions it is notoriously difficult to predict the actual extent of inflation troughs or peaks. For example, SARB uses sophisticated econometric models to run inflation forecasts to aid the Monetary Policy Committee (MPC) with their interest rate decisions. While the models normally succeed in predicting the inflation trend it cannot provide accurate inflation estimates, especially when inflation is driven by external price shocks (supply-side factors). Therefore it is not uncommon that actual inflation rates will overshoot market expectations at particular points in time.

## 3. RSA Retail Savings Bonds and Investment Options

### 3.1 Fixed Rates for a two-year, three-year and five-year terms

- The chart below depicts the fixed rates for the various investment terms since the introduction of the retail savings bonds in May 2004. It is clear that the margin between the fixed rates and the actual inflation rate (real rates) is not constant and actually varied between a positive 9% and negative 3% real rate of return at various points in time. Obviously, a fixed rate for a specific investment term should be discounting the expected inflation rate in the future, yet how successful was this strategy when comparing the rate of return with the actual inflation that transpired over the duration of the investment?




Source: The National Treasury, Republic of South Africa, DRW Investment Research

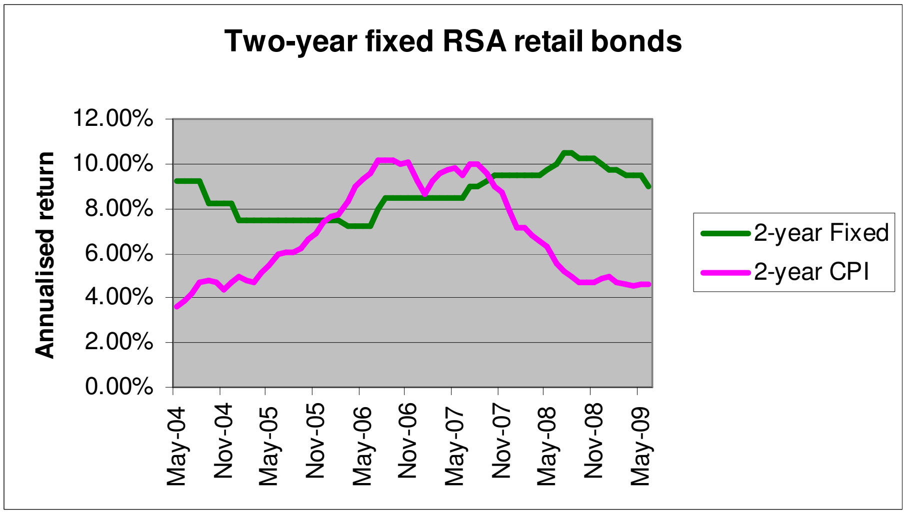
*Actual performances of fixed rate investments (May 2004 – June 2011)*

I compared the fixed rate investors would have received with the actual inflation rate every month since May 2004 for a two-year, three-year and five-year investment period. The maturity date for all investments was June 2011, thus the final starting date for a two-year investment was June 2009, and June 2008 and June 2006 for a three-year term and five-year term respectively.

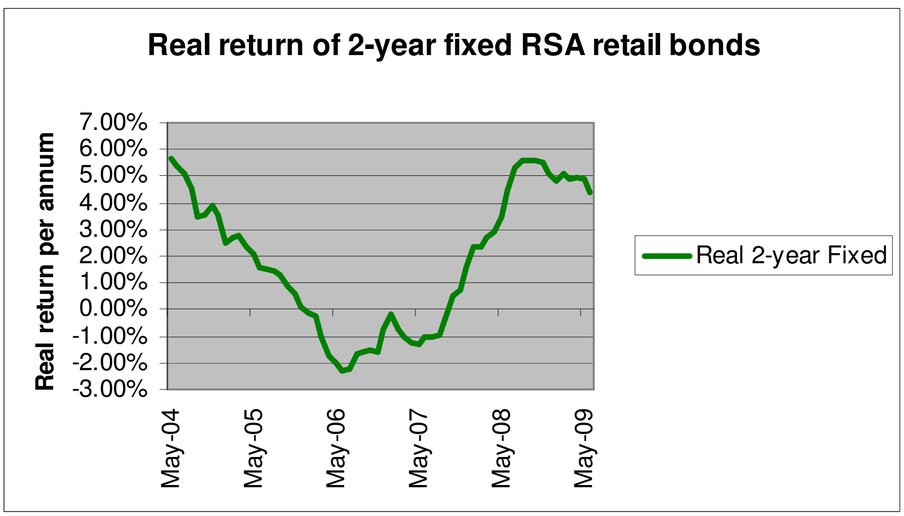
- Two-year term investors would have received a healthy real return if they invested from May 2004 until May 2005 (investments maturing from May 2006 until May 2007). Thereafter the real rates were in a declining trend and in fact investors experienced negative real returns if they invested from January 2006 until September 2007 (investments maturing January 2008 until September 2009).

- Three-year term investors would have experienced a similar fate during investment periods starting in June 2005 until September 2006 (maturing June 2008 until September 2009). However, investors during 2004 and from 2008 onwards would have received 3-4% real returns.

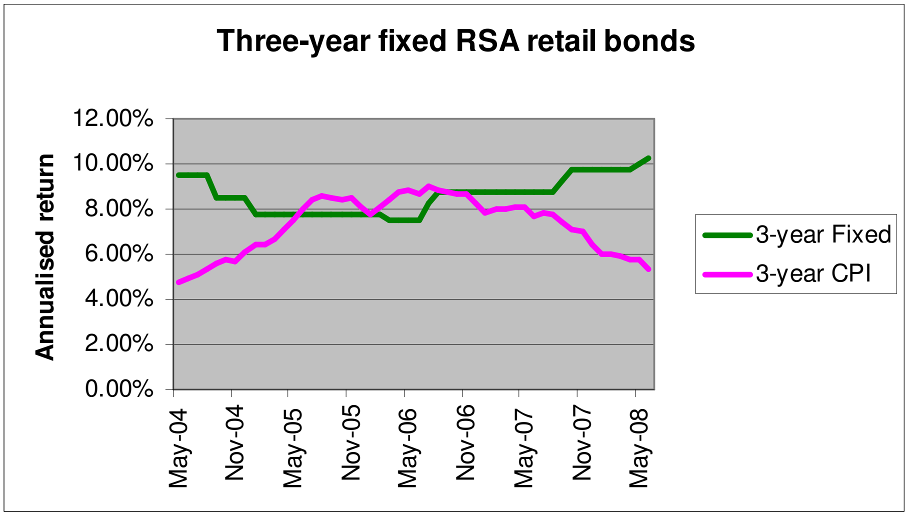
- Five-year investors never experienced negative real returns over the investment term although the most recent 5-year investments yielded only marginally positive real rate of return.




Source: Stats SA, DRW Investment Research




Source: DRW Investment Research

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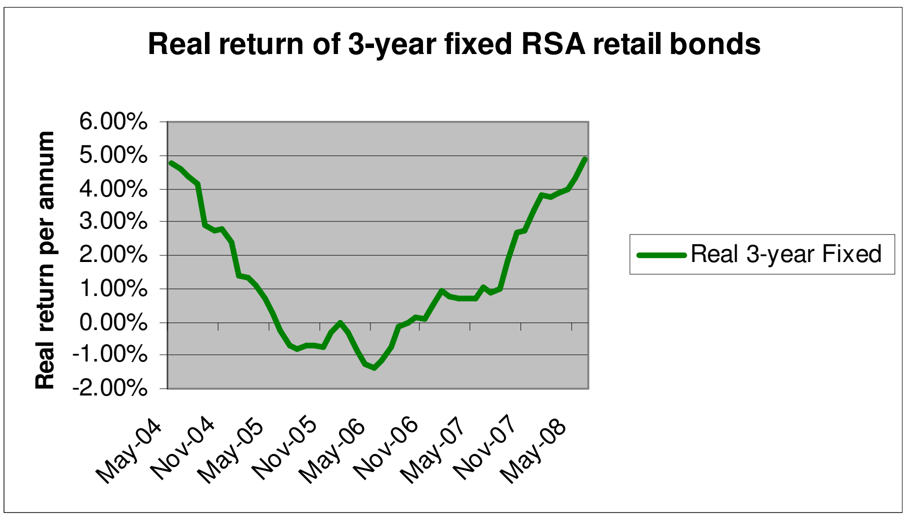
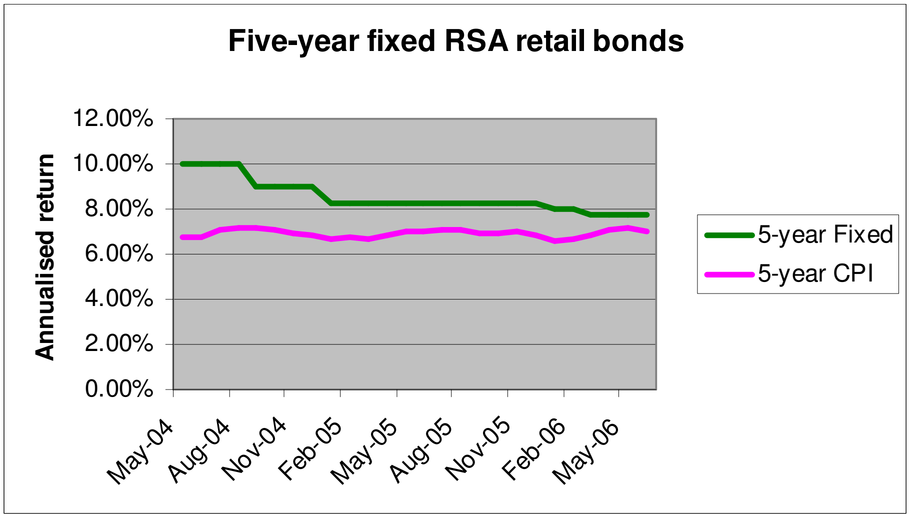
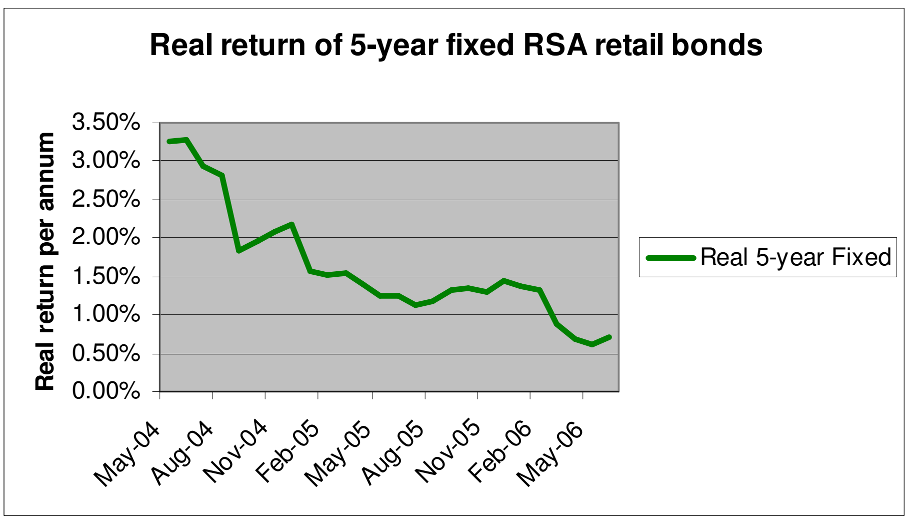



Source: DRW Investment Research




Source: Stats SA, DRW Investment Research




Source: DRW Investment Research

### 3.2. Inflation linked rates for three-year, five-year and ten-year terms

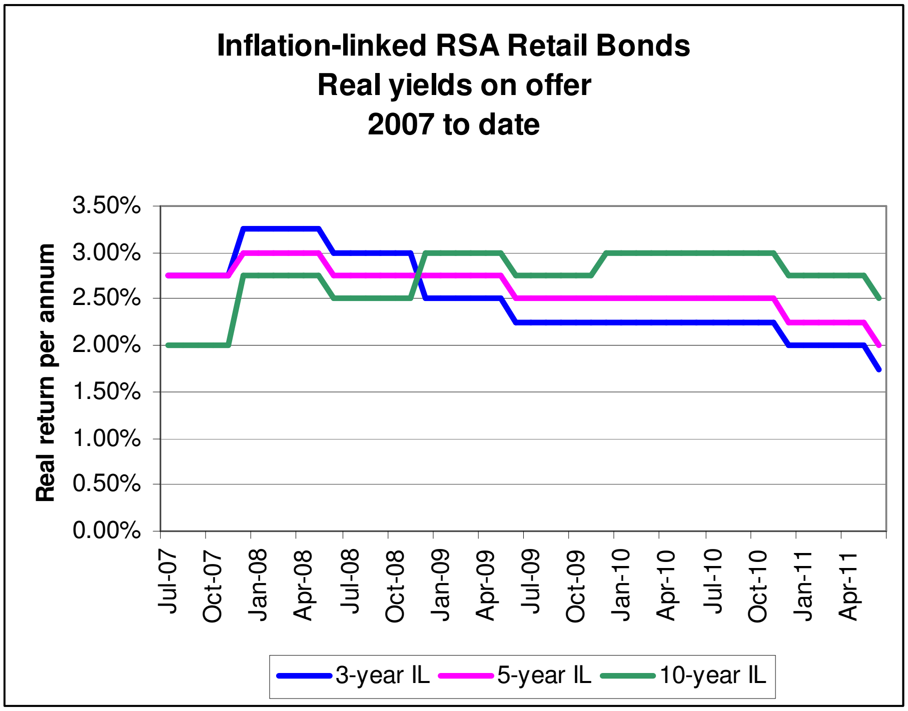
- Unlike the fixed rate structure, the capital value of the inflation linked investment is adjusted for inflation twice a year (November and May).

The following inflation-adjustment mechanism applies to the inflation linked retail savings bond:

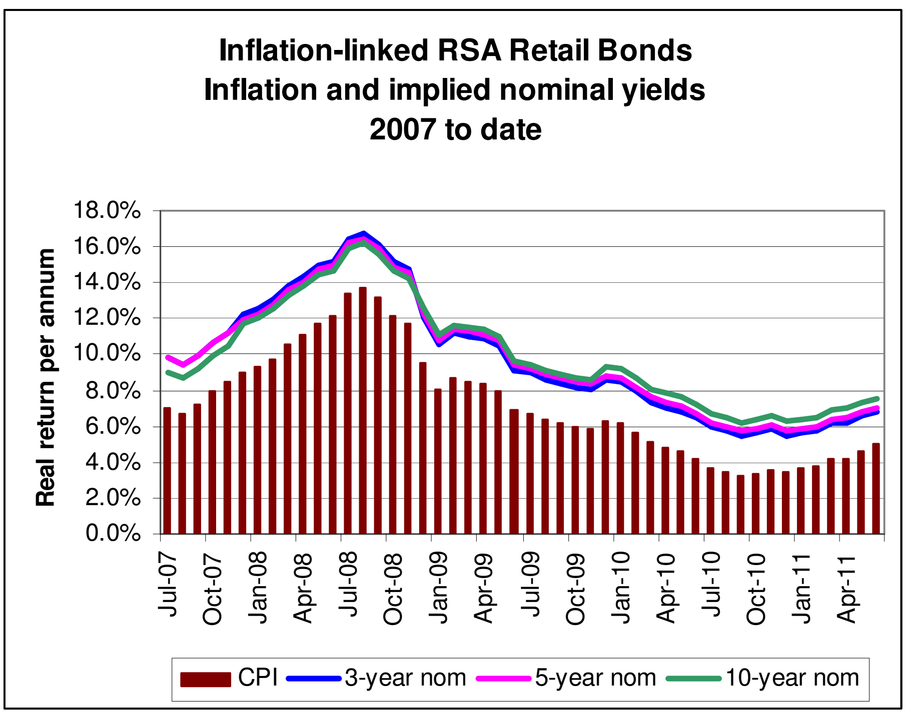
- For example, an investor invested R100,000 in the 10-year inflation linked retail savings bond in January 2010 with a 3% real coupon (interest) at the time. For calculation purposes a CPI index base rate is determined on a monthly basis. Let us assume the CPI base rate in January 2010 was 100 index points.

| Date | CPI Index ratio | Investment value | Coupon |
|---|---|---|---|
| Jan-10 | 100.00 | 100,000 | |
| Feb-10 | 100.11 | | |
| Mar-10 | 100.36 | | |
| Apr-10 | 101.22 | | |
| May-10 | 101.37 | 101,374 | 1,520.62 |
| Jun-10 | 100.88 | | |
| Jul-10 | 99.96 | | |
| Aug-10 | 99.10 | | |
| Sep-10 | 97.09 | | |
| Oct-10 | 96.66 | | |
| Nov-10 | 96.80 | 96,798 | 1,451.97 |
| Dec-10 | 96.04 | | |
| Jan-11 | 103.65 | | |
| Feb-11 | 103.84 | | |
| Mar-11 | 104.52 | | |
| Apr-11 | 105.49 | | |
| May-11 | 106.01 | 106,011 | 1,590.17 |

- Thus, with the inflation linked retail savings bond the investment value and actual coupon will adjust with the prevailing CPI index value (inflation rate). The coupon rate, however, (in this example 3%) is fixed. Note that the coupon may actually decline from a previous coupon payment period if the inflation rate is trending downwards. Notwithstanding these short-term base effects the investor will receive over the duration of the investment term the actual inflation adjustment both in value and interest payments (coupon).



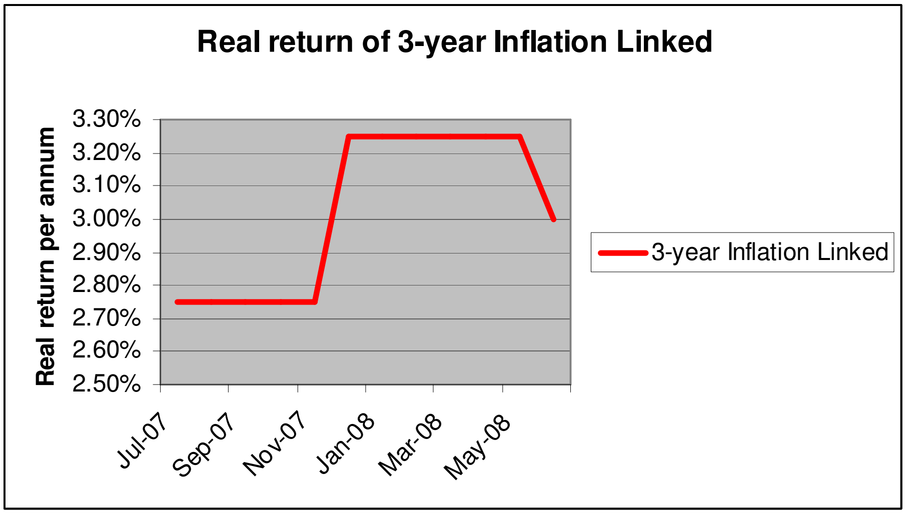

Source: The National Treasury, Republic of South Africa, DRW Investment Research




Source: Stats SA, DRW Investment Research

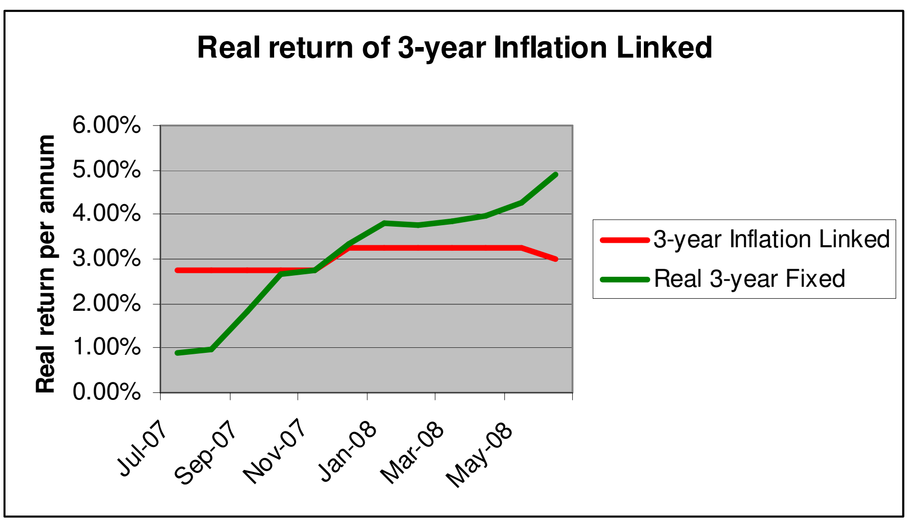
*Comparison of inflation linked with fixed retail savings bonds*

- The inflation linked retail savings bond was introduced from July 2007 onwards. Since inflation linked bonds are issued for three-, five- and ten-year terms one can evaluate only the three-year term inflation linked investments thus far (starting July 2007 and ending June 2008).




Source: DRW Investment Research

- The investor that invested in the inflation linked option was better off than the fixed rate investor in a period of rising inflation rates, but in the subsequent period where the inflation rate was trending downwards underperformed the fixed rate investor.




Source: DRW Investment Research

## 4. Investment Considerations

- Over the very long term there should not be much difference in the real yields offered by the fixed rate and inflation linked rate investment options. In the former the actual real yields will widen in times of declining inflation rates, but narrow when inflation rates are trending upwards and, in fact, may turn negative if the inflation rate is peaking above market expectations.

- When the primary objective of the investor is to maximise his or her immediate income needs, the fixed rate option will always be the preferred choice.

  For example, if the fixed rate option for a five-year term is 8.25% and the equivalent five-year inflation linked is 2% and R100,000 is invested the fixed rate investor will immediately earn interest of R688 per month (equivalent) while the inflation linked investor will earn initially only an equivalent of about R170 per month on the investment. Over the duration of the investment the inflation linked investor will enjoy escalating income and capital valuation in line with inflation trends.

  For illustrative purposes let us assume that the inflation rate is 8% over the five-year term. At maturity the fixed rate investor will be repaid his or her initial investment (R100,000) while in total R41,250 interest was paid to the investor during the duration of the investment. The inflation linked investor will receive at maturity an amount of about R149,000 while total interest of R12,285 was paid out during the duration of the investment.

  - Thus, the inflation linked option will be preferred to secure real long-term investment growth. Similar to property or equity investing, the primary objective is not to maximise the immediate cash flow out of the investment, but to grow these cash flows above the inflation rate over time. Obviously, unlike equity or property investing, the real rate of return is secured and therefore may yield lower real returns than property and equity investing.

- Preferable term for inflation linked investing – the longer, the better. Thus, if liquidity is not a concern then the ten-year term option should in most instances be preferred above the five-year or three-year terms.

- Preferable term for fixed rate investing – The choice will really depends on inflation expectations. If one suspects that inflation will trend higher (lower) than is currently expected by the market, one should opt for the shortest (longest) term. Nonetheless, it is much easier said than done, for example one should ask oneself why one's views would be more correct than the informed market's opinion!

- The "Re-start" recently introduced for the fixed rate option mitigated to a certain extent the "term dilemma" for fixed rate investors, simply because one could opt for the highest yield on offer (currently the five-year term) and after twelve months change the terms of investment if necessary.

- The RSA retail savings bond is marketed as an easy, accessible, commission-free product. Ironically, with the development and enhancement of the retail savings bond product over the past number of years, investors actually may need financial advice to assist them in understanding the implications of the various investment options!

**Sources:**

RSA Retail Bonds. Available at: https://secure.rsaretailbonds.gov.za/

The National Treasury, Republic of South Africa, RSA Retail Savings Bonds User Manual

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