# REPUBLIC OF SOUTH AFRICA <br> DEPARTMENT OF FINANCE 

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## Taxation of inflation linked bonds

In terms of section 24J of the Income Tax Act, 1962 interest on bonds is taxed on a yield to maturity basis. It is important to note that both coupon payments and the difference between the acquisition cost and the nominal value of a bond is defined as interest and is taxable for income tax purposes. An inflation linked bond is a variable rate instrument for purposes of section 24 J . A "variable rate" is defined as a rate determined with reference to an interest or indexation rate or similar factor, being a rate or factor that varies or may vary during the term of the instrument. Furthermore, all bonds are included in the definition of an instrument for purposes of section 24 J . The effect of these provisions is that amounts in respect of adjustments for inflation in the case of inflation linked bonds will be treated as interest and subject to the accrual rules contained in section 24 J . The full amount of the inflation adjustment is therefore taxable, as is the case in Canada, New Zealand and the United States.

The tax liability is to be determined annually taking into account any adjustments to the principal amount and the coupon payments as a result of changes in the CPI. In determining the appropriate "yield to maturity" cash flows after the end of the year of assessment should be based on an assumed constant level of the known index as at year end. See the attached example illustrating the tax payable on an inflation linked bond.

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## ASSUMPTIONS

| Date of acquisition of the CPI bond | 30 May 2000 |  |
| :---: | :---: | :---: |
| Amount invested | R1 000000 |  |
| Amount of principal of CPI bond on date of issue | R1000 000 |  |
| Coupon dates | 30 November / 30 May |  |
| Date of maturity of bond | 30 May 2005 |  |
| Coupon rate as percentage of adjusted capital value | 5\% |  |
| Tax year | March to February |  |
| Consumer price index applicable to coupon payments | Month | Index |
|  | May 2000 | 100.0 |
|  | Nov 2000 | 103.0 |
|  | May 2001 | 106.1 |
|  | Nov 2001 | 109.3 |
|  | May 2002 | 112.6 |
|  | Nov 2002 | 115.9 |
|  | May 2003 | 119.4 |
|  | Nov 2003 | 123.0 |
|  | May 2004 | 126.7 |
|  | Nov 2004 | 130.5 |
|  | May 2005 | 134.4 |
| Calculated monthly yield to maturity rate for tax purposes | Year | Rate |
|  | 2001 | 0.468\% |
|  | 2002 | 0.596\% |
|  | 2003 | 0.759\% |
|  | 2004 | 0.991\% |
|  | 2005 | 1.398\% |
|  | 2006 | 2.398\% |
| Taxable income of holder of the CPI bond | Year | R |
|  | 2001 | 42,517 |
|  | 2002 | 73,216 |
|  | 2003 | 95,702 |
|  | 2004 | 131,298 |
|  | 2005 | 201,967 |
|  | 2006 | 94,525 |
|  |  | 639,225 |


| $\begin{gathered} \hline \text { IRR } \\ \text { monthly } \end{gathered}$ | Year | Month | Cashflows | Monthly accrual | Tax value | Taxable income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.46761\% | 2000 | 5 | (1,000,000) | 0 | 1,000,000 |  |
|  |  | 6 | 0 | 4,676 | 1,004,676 |  |
|  |  | 7 | 0 | 4,698 | 1,009,374 |  |
|  |  | 8 | 0 | 4,720 | 1,014,094 |  |
|  |  | 9 | 0 | 4,742 | 1,018,836 |  |
|  |  | 10 | 0 | 4,764 | 1,023,600 |  |
|  |  | 11 | 25,750 | 4,786 | 1,002,636 |  |
|  |  | 12 | 0 | 4,688 | 1,007,325 |  |
|  | 2001 | 1 | 0 | 4,710 | 1,012,035 |  |
|  |  | 2 | 0 | 4,732 | 1,016,767 | 42,517 |
|  |  | 3 | 0 | 4,754 | 1,021,522 |  |
|  |  | 4 | 0 | 4,777 | 1,026,299 |  |
|  |  | 5 | 25,750 | 4,799 | 1,005,348 |  |
|  |  | 6 | 0 | 4,701 | 1,010,049 |  |
|  |  | 7 | 0 | 4,723 | 1,014,772 |  |
|  |  | 8 | 0 | 4,745 | 1,019,517 |  |
|  |  | 9 | 0 | 4,767 | 1,024,284 |  |
|  |  | 10 | 0 | 4,790 | 1,029,074 |  |
|  |  | 11 | 25,750 | 4,812 | 1,008,136 |  |
|  |  | 12 | 0 | 4,714 | 1,012,850 |  |
|  | 2002 | 1 | 0 | 4,736 | 1,017,586 |  |
|  |  | 2 | 0 | 4,758 | 1,022,344 |  |
|  |  | 3 | 0 | 4,781 | 1,027,125 |  |
|  |  | 4 | 0 | 4,803 | 1,031,928 |  |
|  |  | 5 | 25,750 | 4,825 | 1,011,003 |  |
|  |  | 6 | 0 | 4,728 | 1,015,731 |  |
|  |  | 7 | 0 | 4,750 | 1,020,480 |  |
|  |  | 8 | 0 | 4,772 | 1,025,252 |  |
|  |  | 9 | 0 | 4,794 | 1,030,046 |  |
|  |  | 10 | 0 | 4,817 | 1,034,863 |  |
|  |  | 11 | 25,750 | 4,839 | 1,013,952 |  |
|  |  | 12 | 0 | 4,741 | 1,018,693 |  |
|  | 2003 | 1 | 0 | 4,763 | 1,023,457 |  |
|  |  | 2 | 0 | 4,786 | 1,028,243 |  |
|  |  | 3 | 0 | 4,808 | 1,033,051 |  |
|  |  | 4 | 0 | 4,831 | 1,037,881 |  |
|  |  | 5 | 25,750 | 4,853 | 1,016,985 |  |
|  |  | 6 | 0 | 4,755 | 1,021,740 |  |
|  |  | 7 | 0 | 4,778 | 1,026,518 |  |
|  |  | 8 | 0 | 4,800 | 1,031,318 |  |
|  |  | 9 | 0 | 4,823 | 1,036,140 |  |
|  |  | 10 | 0 | 4,845 | 1,040,985 |  |
|  |  | 11 | 25,750 | 4,868 | 1,020,103 |  |
|  |  | 12 | 0 | 4,770 | 1,024,873 |  |
|  | 2004 | 1 | 0 | 4,792 | 1,029,666 |  |
|  |  | 2 | 0 | 4,815 | 1,034,480 |  |
|  |  | 3 | 0 | 4,837 | 1,039,318 |  |
|  |  | 4 | 0 | 4,860 | 1,044,178 |  |
|  |  | 5 | 25,750 | 4,883 | 1,023,310 |  |
|  |  | 6 | 0 | 4,785 | 1,028,095 |  |
|  |  | 7 | 0 | 4,807 | 1,032,903 |  |
|  |  | 8 | 0 | 4,830 | 1,037,733 |  |
|  |  | 9 | 0 | 4,853 | 1,042,585 |  |
|  |  | 10 | 0 | 4,875 | 1,047,460 |  |
|  |  | 11 | 25,750 | 4,898 | 1,026,608 |  |
|  |  | 12 | 0 | 4,800 | 1,031,409 |  |
|  | 2005 | 1 | 0 | 4,823 | 1,036,232 |  |
|  |  | 2 | 0 | 4,845 | 1,041,077 |  |
|  |  | 3 | 0 | 4,868 | 1,045,945 |  |
|  |  | 4 | 0 | 4,891 | 1,050,836 |  |
|  |  | 5 | 1,055,750 | 4,914 | (0) |  |
|  |  | 6 |  | (0) |  |  |
|  |  | 7 |  | 0 |  |  |
|  |  | 8 |  | 0 |  |  |
|  |  | 9 |  | 0 |  |  |
|  |  | 10 |  | 0 |  |  |
|  |  | 11 |  | 0 |  |  |
|  |  | 12 |  | 0 |  |  |
|  | 2006 | 1 |  | 0 |  |  |
|  |  | 2 |  | 0 |  |  |
|  |  |  | 287,500 | 287,500 |  | 42,517 |



| $\begin{gathered} \hline \text { IRR } \\ \text { monthly } \end{gathered}$ | Year | Month | Cashflows | Monthly accrual | Tax value | Taxable income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.75852\% | 2002 | 2 | $(1,036,133)$ | 0 | 1,036,133 |  |
|  |  | 3 | 0 | 7,859 | 1,043,992 |  |
|  |  | 4 | 0 | 7,919 | 1,051,911 |  |
|  |  | 5 | 28,150 | 7,979 | 1,031,740 |  |
|  |  | 6 | 0 | 7,826 | 1,039,566 |  |
|  |  | 7 | 0 | 7,885 | 1,047,452 |  |
|  |  | 8 | 0 | 7,945 | 1,055,397 |  |
|  |  | 9 | 0 | 8,005 | 1,063,402 |  |
|  |  | 10 | 0 | 8,066 | 1,071,468 |  |
|  |  | 11 | 28,975 | 8,127 | 1,050,621 |  |
|  |  | 12 | 0 | 7,969 | 1,058,590 |  |
|  | 2003 | 1 | 0 | 8,030 | 1,066,619 |  |
|  |  | 2 | 0 | 8,091 | 1,074,710 | 95,702 |
|  |  | 3 | 0 | 8,152 | 1,082,862 |  |
|  |  | 4 | 0 | 8,214 | 1,091,076 |  |
|  |  | 5 | 28,975 | 8,276 | 1,070,377 |  |
|  |  | 6 | 0 | 8,119 | 1,078,496 |  |
|  |  | 7 | 0 | 8,181 | 1,086,677 |  |
|  |  | 8 | 0 | 8,243 | 1,094,919 |  |
|  |  | 9 | 0 | 8,305 | 1,103,224 |  |
|  |  | 10 | 0 | 8,368 | 1,111,593 |  |
|  |  | 11 | 28,975 | 8,432 | 1,091,049 |  |
|  |  | 12 | 0 | 8,276 | 1,099,325 |  |
|  | 2004 | 1 | 0 | 8,339 | 1,107,664 |  |
|  |  | 2 | 0 | 8,402 | 1,116,066 |  |
|  |  | 3 | 0 | 8,466 | 1,124,531 |  |
|  |  | 4 | 0 | 8,530 | 1,133,061 |  |
|  |  | 5 | 28,975 | 8,595 | 1,112,681 |  |
|  |  | 6 | 0 | 8,440 | 1,121,121 |  |
|  |  | 7 | 0 | 8,504 | 1,129,625 |  |
|  |  | 8 | 0 | 8,568 | 1,138,193 |  |
|  |  | 9 | 0 | 8,633 | 1,146,827 |  |
|  |  | 10 | 0 | 8,699 | 1,155,525 |  |
|  |  | 11 | 28,975 | 8,765 | 1,135,315 |  |
|  |  | 12 | 0 | 8,612 | 1,143,927 |  |
|  | 2005 | 1 | 0 | 8,677 | 1,152,604 |  |
|  |  | 2 | 0 | 8,743 | 1,161,347 |  |
|  |  | 3 | 0 | 8,809 | 1,170,156 |  |
|  |  | 4 | 0 | 8,876 | 1,179,032 |  |
|  |  | 5 | 1,187,975 | 8,943 | 0 |  |
|  |  | 6 |  | 0 |  |  |
|  |  | 7 |  | 0 |  |  |
|  |  | 8 |  | 0 |  |  |
|  |  | 9 |  | 0 |  |  |
|  |  | 10 |  | 0 |  |  |
|  |  | 11 |  | 0 |  |  |
|  |  | 12 |  | 0 |  |  |
|  | 2006 | 1 |  | 0 |  |  |
|  |  | 2 |  | 0 |  |  |
|  |  |  | 324,867 | 324,867 |  | 95,702 |

$\left.\begin{array}{|c|crr|r|r|}\hline \begin{array}{c}\text { IRR } \\ \text { monthly }\end{array} & \text { Year } & \text { Month } & \text { Cashflows } & \begin{array}{c}\text { Monthly } \\ \text { accrual }\end{array} & \text { Tax value }\end{array} \begin{array}{c}\text { Taxable } \\ \text { income }\end{array}\right]$

| $\begin{gathered} \hline \text { IRR } \\ \text { monthly } \end{gathered}$ | Year | Month | Cashflows | Monthly accrual | Tax value | Taxable income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.39756\% | 2004 | 2 | $(1,145,408)$ | 0 | 1,145,408 |  |
|  |  | 3 | 0 | 16,008 | 1,161,416 |  |
|  |  | 4 | 0 | 16,231 | 1,177,647 |  |
|  |  | 5 | 31,675 | 16,458 | 1,162,430 |  |
|  |  | 6 | 0 | 16,246 | 1,178,676 |  |
|  |  | 7 | 0 | 16,473 | 1,195,149 |  |
|  |  | 8 | 0 | 16,703 | 1,211,852 |  |
|  |  | 9 | 0 | 16,936 | 1,228,788 |  |
|  |  | 10 | 0 | 17,173 | 1,245,961 |  |
|  |  | 11 | 32,625 | 17,413 | 1,230,749 |  |
|  |  | 12 | 0 | 17,200 | 1,247,949 |  |
|  | 2005 | 1 | 0 | 17,441 | 1,265,390 |  |
|  |  | 2 | 0 | 17,685 | 1,283,075 | 201,967 |
|  |  | 3 | 0 | 17,932 | 1,301,006 |  |
|  |  | 4 | 0 | 18,182 | 1,319,189 |  |
|  |  | 5 | 1,337,625 | 18,436 | 0 |  |
|  |  | 6 |  | 0 |  |  |
|  |  | 7 |  | 0 |  |  |
|  |  | 8 |  | 0 |  |  |
|  |  | 9 |  | 0 |  |  |
|  |  | 10 |  | 0 |  |  |
|  |  | 11 |  | 0 |  |  |
|  |  | 12 |  | 0 |  |  |
|  | 2006 | 1 |  | 0 |  |  |
|  |  | 2 |  | 0 |  |  |
|  |  |  | 256,517 | 256,517 |  | 201,967 |


| $\begin{gathered} \hline \text { IRR } \\ \text { monthly } \end{gathered}$ | Year | Month | Cashflows | Monthly accrual | Tax value | Taxable income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2.39775\% | 2005 | 2 | (1,283,075) | 0 | 1,283,075 |  |
|  |  | 3 | 0 | 30,765 | 1,313,840 |  |
|  |  | 4 | 0 | 31,503 | 1,345,342 |  |
|  |  | 5 | 1,377,600 | 32,258 | (0) |  |
|  |  | 6 |  | (0) |  |  |
|  |  | 7 |  | 0 |  |  |
|  |  | 8 |  | 0 |  |  |
|  |  | 9 |  | 0 |  |  |
|  |  | 10 |  | 0 |  |  |
|  |  | 11 |  | 0 |  |  |
|  |  | 12 |  | 0 |  |  |
|  | 2006 | 1 |  | 0 |  |  |
|  |  | 2 |  | 0 |  | 94,525 |
|  |  |  | 94,525 | 94,525 |  | 94,525 |


| IRR monthly | Year | Month | Cashflows | Monthly accrual | Tax value | Taxable income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.90842\% | 2000 | 5 | $(1,000,000)$ | 0 | 1,000,000 |  |
|  |  | 6 | 0 | 9,084 | 1,009,084 |  |
|  |  | 7 | 0 | 9,167 | 1,018,251 |  |
|  |  | 8 | 0 | 9,250 | 1,027,501 |  |
|  |  | 9 | 0 | 9,334 | 1,036,835 |  |
|  |  | 10 | 0 | 9,419 | 1,046,254 |  |
|  |  | 11 | 25,750 | 9,504 | 1,030,008 |  |
|  |  | 12 | 0 | 9,357 | 1,039,365 |  |
|  | 2001 | 1 | 0 | 9,442 | 1,048,807 |  |
|  |  | 2 | 0 | 9,528 | 1,058,335 | 84,085 |
|  |  | 3 | 0 | 9,614 | 1,067,949 |  |
|  |  | 4 | 0 | 9,701 | 1,077,650 |  |
|  |  | 5 | 26,525 | 9,790 | 1,060,915 |  |
|  |  | 6 | 0 | 9,638 | 1,070,553 |  |
|  |  | 7 | 0 | 9,725 | 1,080,278 |  |
|  |  | 8 | 0 | 9,813 | 1,090,091 |  |
|  |  | 9 | 0 | 9,903 | 1,099,994 |  |
|  |  | 10 | 0 | 9,993 | 1,109,986 |  |
|  |  | 11 | 27,325 | 10,083 | 1,092,745 |  |
|  |  | 12 | 0 | 9,927 | 1,102,672 |  |
|  | 2002 | 1 | 0 | 10,017 | 1,112,688 |  |
|  |  | 2 | 0 | 10,108 | 1,122,796 | 118,312 |
|  |  | 3 | 0 | 10,200 | 1,132,996 |  |
|  |  | 4 | 0 | 10,292 | 1,143,289 |  |
|  |  | 5 | 28,150 | 10,386 | 1,125,524 |  |
|  |  | 6 | 0 | 10,225 | 1,135,749 |  |
|  |  | 7 | 0 | 10,317 | 1,146,066 |  |
|  |  | 8 | 0 | 10,411 | 1,156,477 |  |
|  |  | 9 | 0 | 10,506 | 1,166,983 |  |
|  |  | 10 | 0 | 10,601 | 1,177,584 |  |
|  |  | 11 | 28,975 | 10,697 | 1,159,307 |  |
|  |  | 12 | 0 | 10,531 | 1,169,838 |  |
|  | 2003 | 1 | 0 | 10,627 | 1,180,465 |  |
|  |  | 2 | 0 | 10,724 | 1,191,189 | 125,518 |
|  |  | 3 | 0 | 10,821 | 1,202,010 |  |
|  |  | 4 | 0 | 10,919 | 1,212,929 |  |
|  |  | 5 | 29,850 | 11,019 | 1,194,098 |  |
|  |  | 6 | 0 | 10,847 | 1,204,945 |  |
|  |  | 7 | 0 | 10,946 | 1,215,891 |  |
|  |  | 8 | 0 | 11,045 | 1,226,937 |  |
|  |  | 9 | 0 | 11,146 | 1,238,083 |  |
|  |  | 10 | 0 | 11,247 | 1,249,330 |  |
|  |  | 11 | 30,750 | 11,349 | 1,229,929 |  |
|  |  | 12 | 0 | 11,173 | 1,241,102 |  |
|  | 2004 | 1 | 0 | 11,274 | 1,252,376 |  |
|  |  | 2 | 0 | 11,377 | 1,263,753 | 133,164 |
|  |  | 3 | 0 | 11,480 | 1,275,233 |  |
|  |  | 4 | 0 | 11,585 | 1,286,818 |  |
|  |  | 5 | 31,675 | 11,690 | 1,266,833 |  |
|  |  | 6 | 0 | 11,508 | 1,278,341 |  |
|  |  | 7 | 0 | 11,613 | 1,289,954 |  |
|  |  | 8 | 0 | 11,718 | 1,301,672 |  |
|  |  | 9 | 0 | 11,825 | 1,313,496 |  |
|  |  | 10 | 0 | 11,932 | 1,325,429 |  |
|  |  | 11 | 32,625 | 12,041 | 1,304,844 |  |
|  |  | 12 | 0 | 11,854 | 1,316,698 |  |
|  | 2005 | 1 | 0 | 11,961 | 1,328,659 |  |
|  |  | 2 | 0 | 12,070 | 1,340,729 | 141,276 |
|  |  | 3 | 0 | 12,179 | 1,352,908 |  |
|  |  | 4 | 0 | 12,290 | 1,365,198 |  |
|  |  | 5 | 1,377,600 | 12,402 | (0) |  |
|  |  | 6 |  | (0) |  |  |
|  |  | 7 |  | 0 |  |  |
|  |  | 8 |  | 0 |  |  |
|  |  | 9 |  | 0 |  |  |
|  |  | 10 |  | 0 |  |  |
|  |  | 11 |  | 0 |  |  |
|  |  | 12 |  | 0 |  |  |
|  | 2006 | 1 |  | 0 |  |  |
|  |  | 2 |  | 0 |  | 36,871 |
|  |  |  | 639,225 | 639,225 |  | 639,225 |

