

be paid on this saving. The net (aftertax) basis for investment does generate annual income, but these realized gross yields are immediately subject to tax under the "standard" tax approach. The individual does have a final fund at age 65 after all this income taxation, and no further income tax is levied on this accumulated net wealth at time of withdrawal.

To illustrate, assume that our individual intends to save \$400 from gross income. Income taxes first must be paid, and \$260 will remain as the basis for retirement saving if our taxpayer faces a 30-percent marginal tax rate. The taxpayer invests in 6-percent corporate bonds, subject to an annual levy on current earnings of the same 30-percent marginal tax rate. If our saver presently is 35 years old, his final fund at age 65 from this single contribution will be \$962. In order to compare alternative tax effects, we must relate this final fund to the initial gross saving of \$400. Our individual finds that because of income taxes his effective net (aftertax) yield is 2.97 percent of his initial \$400.

Now, assume that the individual income tax is amended to permit an alternative tax treatment (designated option B) of personal saving. This alternative summarizes the essential features of the "personal-pension" deduction both under the U.S. Self-Employed Individuals Tax Retirement Act and the universal Canadian personal saving program. First, the individual can deduct his allowable personal-pension saving from current taxable income, thereby avoiding any present tax liability. Second, earnings on investment are subject to tax liability only at ultimate withdrawal. Taxes also are levied on the original principal on withdrawal.

Our figurative saver now can invest his entire \$400 in the same 6-percent corporate bonds. He will find at the end of 30 years that his gross final fund has grown to \$2,297. Our individual now must include these moneys in reportable income at time of withdrawal. Assume that the entire final fund is withdrawn at age 65, and that the individual's marginal tax rate is 18 percent. This reduced marginal tax rate reflects the pensioner situation of lower total reportable income in retirement years. For his efforts, the taxpayer now has his \$1,884 net purchasing power at withdrawal. This represents an effective net (aftertax) yield of 5.30 percent on the original \$400 of gross intended saving.

One compares the net—after all taxes—final retirement moneys, illustrating the differential effect of alternative tax treatment.

R = Dollars of retirement saving from gross income (\$400).

r = Marginal tax rate during contribution year (0.30).

i = Nominal annual gross yield on investment (0.06).

q = Marginal tax rate on investment annual gross yield (0.30).

t = Marginal tax rate at time of withdrawal (0.18).

m = Number of years between contribution and withdrawal (30).

Standard option A: $[(1-r)R][1+i(1-q)]^m$ A = net final fund.

Deduction option B: $(1-t)R(1+i)^m$ B = net final fund.

$$Z = \frac{B}{A} = \frac{(1-t)(1+i)^m}{(1-r)[1+i(1-q)]^m} = \left(\frac{1-t}{1-r}\right) \left[\frac{1+i}{1+i(1-q)}\right]^m$$