

## RUSSELL WALKER

## **Excel(lence)** with Interest

James works as a financial advisor at Bank Private, advising special clients on investment strategies for trust funds, and wealthy individuals. Mr. Antonio Fernandez, a client of James' is considering a long-term, low-risk investment with Bank Private. Bank Private offers special products for trust funds that pay an above-average interest rate, fixed for many years.

Mr. Fernandez, through his trust fund, is interested in investing \$1,000,000.00 USD. Bank Private is offering a fixed rate of 5.5% (compounded annually) for 20 years.

James is preparing the financial projections for Mr. Fernandez. The following is needed:

- 1. Assuming all interest earned is left in the trust account and reinvested at the prevailing interest rate of 5.5%, calculate the account balance at the end of each year.
- 2. Calculate the amount of interest earned in each year, assuming that interest is re-invested annually.
- 3. The interest earned on the account is taxable income. The marginal tax rate is taken as 35%. Calculate the taxes owed in each year. Assuming the taxes are paid from the interest earned, provide updated account projections.
- 4. Graph the account balance, interest earned, and taxes owed.
- 5. Calculate the total dollars in interest earned over the 20 years.
- 6. Calculate the total taxes owed over the 20 years.

Mr. Fernandez reports that due to special tax shelters, the trust has a marginal tax rate of 28% for annual interest income below \$100,000. Beyond this limit, the marginal tax rate is 35%. He requests that the above details be updated to reflect this.

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