Don't make investment decisions on the basis of tax considerations.
-Wall Street Adage

Performance receives a lot of attention in our business. Generally speaking it is over emphasized, but it is an important piece of information that any well-informed investor needs. Unfortunately, for taxable investors, performance numbers come only in one size. They do not account for any income and/or capital gains taxes. And taxes obviously diminish investment returns.

The impact of taxes on investment returns is the topic of an article in the Spring 1993 issue of the Journal of Portfolio Management. The article, "Is Your Alpha big Enough to Cover Its Taxes" was written by Robert H. Jeffrey and Robert D. Arnott. In their study the authors analyzed the impact capital gains taxes have on investment returns.

For the purpose of their study the authors assumed a portfolio compounding at $6 \%$. This is the approximate rate at which common stocks have appreciated over the last 66 years. The higher returns of approximately $10 \%$ which one normally associates with the stock market include dividend income. For the purpose of this study dividend income was excluded (as was the income tax on that dividend). The analysis dealt with appreciation and the capital gains tax on any realized appreciation. The authors assumed an effective capital gains tax rate of $35 \%$ (federal and state tax combined). The state rates vary and so do individual tax circumstances so actual rates may vary from their assumed $35 \%$.

In one part of the study the authors show that:
$\$ 100$ compounding at $6 \%$ per year grows to $\$ 321$ in twenty years if there is no turnover and thus no tax diminution, but with just $5 \%$ turnover the after-tax terminal value drops by $12 \%$ to $\$ 284$. (About two-thirds of this shrinkage is due to the taxes themselves; the balance is lost compounding.) At $10 \%$ the terminal value falls another $7 \%$ to $\$ 263$. At a still modest (by present-day standards) $25 \%$ turnover, it slips $11 \%$ more to \$235.

The tax bite problem can be further explained by this theoretical example. A $\$ 100$ investment compounding annually at $6 \%$ would become $\$ 179.08$ in ten years and $\$ 320.71$ in twenty years. If at the end of ten years the gain to date were realized and $35 \%$ taxes paid (\$27.68), there would only be $\$ 151.40$ to reinvest and compound for the next ten years. Then continuing, and still at $6 \%$, on to twenty years the overall result would be $\$ 271.13$ or a $5.11 \%$ average annual compound rate of return. To reach the same $\$ 320.71$ result in the beginning of this example the second ten year rate of return would have to be $7.80 \%$.

Jeffrey and Arnott found that the more the portfolio is traded the greater the annual pretax asset growth required to maintain a $6 \%$ after-tax growth:

At just 5\% turnover, 6.7\% growth (70 additional basis points) is needed to offset the taxes. At 10\% turnover, $7.2 \%$ growth ( 120 additional basis points) is required. The breakeven incremental pretax growth increases to 215 basis points at $25 \%$; to 278 at $50 \%$; and to 323 at $100 \%$ or higher turnover.

Without question, capital gains taxes significantly reduce returns. It is very difficult for managers to overcome the burden of taxes resulting from their trading activity.

Gross performance numbers are one thing but after tax performance numbers are another. The Wall Street Adage does need some tempering but this does not mean investors should keep riding a dead horse. It does mean that tax-paying investors should consider tax consequences. But more about that in a later edition of "As We See It."

July 1993

